Student Name _____

Teacher Name _____

School _____

System _____



Tennessee Comprehensive Assessment Program

Achievement Test ~ Grade 8

Item Sampler

Table of Contents

Introduction 3

What is the TCAP Achievement Test? 3

What are the questions testing? 3

Who will be tested? 3

How long will the tests take? 3

How do I use the sample questions? 3

How will the tests be scored? 4

May calculators be used? 4

Which test accommodations may be used? 4

Here are some tips for preparing students for the test. 4

Reading/Language Arts 5

Mathematics 75

Science 91

Social Studies 118

Answer Key 158

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Introduction

What is the TCAP Achievement Test?

The TCAP Achievement Test is a multiple-choice test designed to measure student achievement in certain skills in four content areas: Reading/Language Arts, Mathematics, Science, and Social Studies. The sample questions in this on-line Item Sampler are representative of the item types and item formats that will be used in the actual test, including those questions with and without art.

What are the questions testing?

Questions are written to test student performance in state content standards. The State Content Standards and Performance Indicators were developed by the Tennessee Department of Education. These Standards and Performance Indicators are listed on the State Department of Education Web site at http://www.state.tn.us/education/curriculum.shtml.

Who will be tested?

All students in grades 3 through 8 will be tested.

How long will the tests take?

The length of the tests will vary, depending on the grade level. The time limits are generous and allow most students time to finish. Extended time limits only apply to students who are eligible for special or English Language Learner (ELL) accommodations.

How do I use the sample questions?

These questions provide information about the TCAP Achievement Test. The questions in the on-line Item Sampler are representative of questions that will be on the TCAP Achievement Test.

In a classroom learning session, these questions can be used to prepare students for the actual test. Item types with and without art are presented to better familiarize students with the actual test format.

An answer key for the sample questions is provided at the end of this on-line Item Sampler.

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How will the tests be scored?

The test answers will be machine scored. Results from the test provide information about how well students performed on the content being tested.

May calculators be used?

Calculators may be used on Part 1 and 2 of the Mathematics portions of the TCAP Achievement Test (grades 3–8) as per system policy.

Which test accommodations may be used?

The Achievement Test may be administered using various procedures that are used during the student's daily educational program. Certain conditions must be met for students to be eligible for special and ELL accommodations.

Here are some tips for preparing students for the test.

Remind students to:

Relax: It is normal to be somewhat anxious before the test. Remember that the score is only one of a number of measures of performance.

Listen: Listen to and read the test directions carefully.

Plan Use of Time: First, answer all the questions you are sure about. Do not spend too much time on any one question. If a question seems to take too long, skip it and return to it later if you have extra time.

Pause and Think: If you are not sure how to answer a question, carefully read it again. Rule out answer choices that you know are incorrect and then choose from those that remain.

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Reading/Language Arts



Directions **The following passage is a rough draft of a student's essay. It contains mistakes. Read the essay and answer Numbers 1 through 6.**

The Tool Belt

(1) My aunt handed me my great-grandmother's tool belt. (2) Five faded ribbons dangled from it and each ribbon had a small clip at the end that held a tool: a pair of dainty scissors, a narrow brass cylinder, a small square box, a tiny tape measure, and several threads of all colors looped around the last clip. (3) I compared it to mine, which held my hammer, screwdrivers, and tape measure.

(4) "This is a tool belt?" I asked.

(5) "It is called a *chatelaine*," my aunt replied, "and yes, it is a lady's tool belt. (6) *Chatelaine* is the French word that means 'lady of the castle.' (7) For all of her sewing projects, these are the tools your great-grandmother used."

(8) *Chatelaines* were first used in ancient Rome and were called *equipage*. (9) Women wore keys at the end of a decorative pin that was attached to a belt worn around their waists. (10) These keys unlocked small storage cabinets that contained important documents, money, spices, and other special items that the family owned.

(11) People began living in castles during medieval times. (12) During that time tradition held that a husband give his new bride *equipage* to show that he trusted her to take good care of the castle. (13) The wife not only wore keys but also added scissors, a small coin purse, a tape measure, and other items that were useful for work in a castle.

(14) In the early 1800s, the word *chatelaine* came into use women replaced keys with personal items. (15) One interesting example is a *vinaigrette*, a small container with holes drilled in it for holding sponges soaked with sweet-smelling oils. (16) Where some *chatelaines* also had miniature pens, notepads, and magnifying glasses, one *chatelaine* from this period had a miniature music box attached to it, and another had a compass. (17) Some *chatelaines* consisted of metal rings with ribbons hanging from them like my great-grandmother's, while others had been made from a variety of materials, including gold, silver, brass, wood, and leather.

(18) I smiled when I examined my great-grandmother's *chatelaine*. (19) In its cylinder were two sewing needles and a rolled up piece of paper with these words written on it: Be ever helpful.

Go On ▶

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Reporting Category: **1 Language**

Performance Indicator: **0801.1.2 Identify the correct use of verbs (i.e., action/linking, regular/irregular, agreement, perfect tenses, verb phrases) within context.**

1 **Read Sentence 17.**

> *Some* chatelaines *consisted of metal rings with ribbons hanging from them like my great-grandmother's, while others had been made from a variety of materials, including gold, silver, brass, wood, and leather.*

Choose the correct revision for the underlined words in the sentence.

A were made

B have been made

C were being made

D made

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Reporting Category: 1 Language

Performance Indicator: 0801.1.4 Identify the correct use of conjunctions (i.e., coordinating, correlative, subordinating) and interjections within context.

2 **Read Sentence 16.**

> *Where some* chatelaines *also had miniature pens, notepads, and magnifying glasses, one* chatelaine *from this period had a miniature music box attached to it, and another had a compass.*

Which word is the best replacement for the underlined word in the sentence?

F Whenever

G Because

H Since

J Although

Reporting Category: 1 Language

Performance Indicator: 0801.1.5 Identify the correct use of prepositional phrases (place correctly according to the words they modify within the sentence) within context.

3 **Read Sentence 7.**

> *"For all of her sewing projects, these are the tools your great-grandmother used."*

What is the best way to revise this sentence?

A "These are the tools for all of her sewing projects your great-grandmother used."

B "These are the tools your great-grandmother for all of her used sewing projects."

C "These are the tools your great-grandmother used for all of her sewing projects."

D "These are for all of her sewing projects the tools your great-grandmother used."

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Reporting Category:	**1 Language**
Performance Indicator:	**0801.1.6 Identify the correct use of commas (i.e., compound sentences, coordinating conjunctions, introductory words, appositives, interrupters) within context.**

4 **Read Sentence 2.**

> *Five faded ribbons dangled from it and each ribbon had a small clip at the end that held a tool: a pair of dainty scissors, a narrow brass cylinder, a small square box, a tiny tape measure, and several threads of all colors looped around the last clip.*

What is the best way to revise the underlined words in the sentence?

F from it, and each ribbon had a small

G from it and each ribbon had a, small

H from it, and, each ribbon had a, small

J from it and each ribbon, had a small

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Reporting Category: 1 Language

Performance Indicator: 0801.1.7 Identify within context a variety of appropriate sentence-combining techniques (i.e., comma + coordinating conjunction, use of semicolon, introductory phrases or clauses).

5 What is the best way to combine Sentences 11 and 12?

A During medieval times, people began living in castles, and tradition held that a husband give his new bride *equipage* to show that he trusted her to take good care of the castle.

B Tradition held that a husband give his new bride *equipage* to show that he trusted her to take good care of the castle when people began living in castles during medieval times.

C People began living in castles during medieval times, and, during that time, tradition held that a husband give his new bride *equipage* to show that he trusted her to take good care of the castle.

D When people began living in castles during medieval times, tradition held that a husband give his new bride *equipage* to show that he trusted her to take good care of the castle.

Go On ▶

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Reporting Category: 1 Language

Performance Indicator: 0801.1.8 Select the most appropriate method to correct a run-on sentence (i.e., conjunctions, semicolons, periods to join or separate elements).

6 **Read Sentence 14.**

In the early 1800s, the word chatelaine *came into use women replaced keys with personal items.*

What is the best way to write this sentence?

F In the early 1800s, the word *chatelaine* came into use, women replaced keys with personal items.

G In the early 1800s, the word *chatelaine* came into use. Women replaced keys with personal items.

H In the early 1800s, the word *chatelaine* came into use; however, women replaced keys with personal items.

J correct as is

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Directions **Darien wrote the following report. It contains mistakes. Read the report and answer Numbers 7 through 11.**

(1) When people in ancient times wanted a safe and reliable way to identify and store food, they invented seals. (2) Smearing wet clay around the lid of a basket or jar worked to keep the lid securely closed. (3) Then the basket or jar could be stored until the item was needed.

(4) This worked until people had difficulty telling which basket or jar held spring planting seeds and which one held the grain for winter meals. (5) There was another complication. (6) Once people began to store items in warehouses, they did not know which jar belonged to them and which belonged to someone else. (7) Since writing had not been invented yet, it was not an option for labeling the containers.

(8) The solution was to carve the image of the contents on a soft stone and then stamp the design in the clay before it dried. (9) An owner's special mark could also be carved on a stone and pressed into the clay next to the symbol for the contents. (10) Clay seals, and the imprints on those, were also fastened to the strings and ropes that closed sacks and bundles of food.

(11) When ancient farmers enjoyed an abundant harvest and needed a large warehouse for storage, they developed a system for keeping track of each person's stored crops. (12) They used a counter, such as a pebble or clay ball, to show how many bushels of grain they were storing. (13) When farmers came to collect the grain, the counters were taken out of a sealed and stamped container and used to determine how many bushels of grain were returned to the farmers.

(14) Seals are still used today. (15) The envelope in the mail, the plastic ring under the cap of many bottles, and the little tab of paper on new salt containers are all seals. (16) Some are labeled, while some are not. (17) They serve the same purpose now as they did in ancient times. (18) Seals mean the contents are kept safe until opened.

Go On ▶

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Reporting Category:	**1 Language**
Performance Indicator:	**0801.1.1 Identify the correct use of nouns (i.e., common/proper, singular/plural, possessives, direct/indirect objects, predicate nouns) and pronouns (i.e., reflexive, interrogative, demonstrative) within context.**

7 **Read Sentence 10.**

Clay seals, and the imprints on <u>those</u>, were also fastened to the strings and ropes that closed sacks and bundles of food.

Which pronoun <u>best</u> replaces the underlined word?

A theirs

B them

C these

D they

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Reporting Category: 1 Language

Performance Indicator: 0801.1.13 Form singular and plural possessive using apostrophes correctly.

8 **Read Sentence 11.**

When ancient farmers enjoyed an abundant harvest and needed a large warehouse for storage, they developed a system for keeping track of each person's stored crops.

What is the correct way to write the underlined words?

F each persons

G each persons'

H each persons's

J correct as is

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.6 Choose the supporting sentence that best fits the context and flow of ideas in a paragraph.

9 **Which sentence best ties together the ideas in Sentences 6 and 7?**

A Farmers with an abundant harvest needed a storage place.

B Containers could easily end up with the wrong person.

C The containers were often made of clay.

D Warehouses could easily become disorganized.

Go On ▶

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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.7 Identify sentences irrelevant to a paragraph's theme or flow.

10 **Which sentence from the last paragraph is unnecessary?**

F Seals are still used today.

G Some are labeled, while some are not.

H They serve the same purpose now as they did in ancient times.

J Seals mean the contents are kept safe until opened.

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.10 Select an appropriate title that reflects the topic of a written selection.

11 **What is the best title for this report?**

A The Growth of Seals

B Identifying Stored Crops

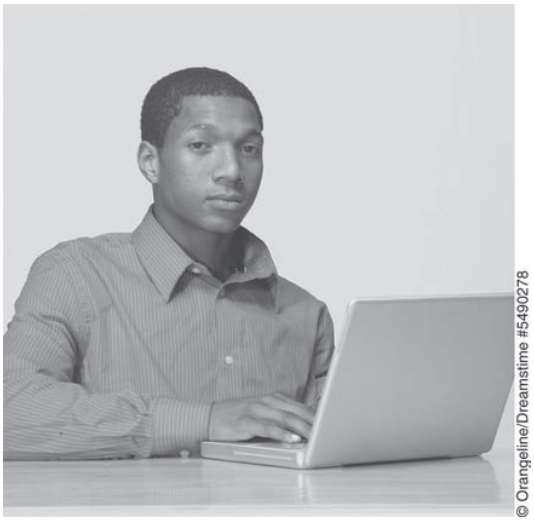
C Ancient Seal, Modern World

D The Complications of Ownership

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Directions **The following passage is a speech. Read it and answer Numbers 12 through 26.**

Is Online School for You?


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1 Have you ever wished you didn't have to wake up early, get dressed, and go all the way to school? For 700,000 American kids, this wish comes true every day. They attend school over the Internet using ordinary home or library computers. This kind of learning has several names: online learning, distance learning, or virtual learning. Regardless of what it is called, this idea may create an impression of a lonely kid reading pages of information on a computer screen rather than from a book. It might also summon an image of another kid spending the day playing video games and typing instant messages to friends instead of learning mathematics or reading a book. Where online education is concerned, both of these scenarios are false! Online learning does not mean learning by oneself. Nor does it mean skipping work altogether. It simply means learning—differently. For some students, online school may be ideal, but for others, traditional school may better meet their needs.

2 Online schools offer many benefits for the learner. Flexibility is the main advantage. Students can attend school wherever and whenever they desire. Homework can be turned in from anywhere the student has Internet access. Additionally, many online schools will allow students to work at their own pace. Math whizzes are typically the best online students because they can work quickly through the subject while extra allowances can be taken for subjects requiring more time.

3 Another advantage of online schooling is with the variety of courses. Most online schools teach the same basic classes like English, math, science, and history. However, some online schools offer specialized courses in subjects such as space science, French, or zoology. Traditional schools are often unable to offer these types of classes if there are not enough students or funds to support them.

Go On ▶

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4 Online schools also have different types of learning tools for kids to use. For example, many online schools have special Web sites where only students registered in online classes can watch videos, see lessons presented, or chat with teachers and other students. Imagine being able to replay the movie seen in your history class again if you needed to review it. Other online schools have live class times where students can call and talk with the teacher directly. Some of these online schools even have virtual clubs where kids can talk with each other about their hobbies.

5 Of course, there are some drawbacks of going to school online. Though there are some free online schools, most charge an admission fee. Also, the learner should be prepared to do much of their class reading and writing homework independently. Because teachers are not present to monitor progress, online students must stay very organized in order to complete the required work for each class by the end of the semester. Even though learners may work at their own pace, timelines are established to ensure students finish their coursework in a reasonable amount of time. Finally, online students may not see or talk to friends as often as they would in a traditional school setting. There are no organized extracurricular activities, and those interactions cannot be replaced by a computer, no matter how fun it is to use computers.

6 Yes, computer technology is amazing, and we use computers for chatting with our friends, listening to music, and playing games. Almost every part of our lives is affected by them, and school is no exception. Since 2006, at least 38 states either have their own online schools or made rules for students attending them. It looks like online schools are here to stay, but only you can decide if this type of learning is right for you.

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Reporting Category: 2 Vocabulary

Performance Indicator: 0801.1.17 Choose the correct meaning/usage of a multi-meaning word by replacing the word in context with an appropriate synonym or antonym.

12 Read this sentence from Paragraph 2.

Additionally, many online schools will allow students to work at their own pace.

Which synonym for pace matches its usage in the sentence above?

F tempo

G speed

H fluency

J step

Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.1 Identify the purpose of a speech (i.e., to inform, to describe, to explain, to persuade, to entertain).

13 What is the purpose of this speech?

A to persuade listeners to register at an online school

B to inform listeners about an alternative to traditional schools

C to entertain listeners with stories from an online student

D to explain why online schools are superior to traditional schools

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.2 Identify the targeted audience of a speech.

14 **Who is most likely the desired audience of this speech?**

F teachers

G administrators

H students

J coaches

Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.3 Identify the thesis and main points of a speech.

15 **Which sentence from the speech is the thesis statement?**

A For some students, online school may be ideal, but for others, traditional school may better meet their needs.

B Online schools offer many benefits for the learner.

C Of course, there are some drawbacks of going to school online.

D Finally, online students may not see or talk to friends as often as they would in a traditional school setting.

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Reporting Category:	4 Communication and Media
Performance Indicator:	0801.2.4 Determine the most effective methods of engaging an audience during an oral presentation (e.g., making eye contact, adjusting speaking rate).

16 **During the presentation of this speech, what should the speaker do to maintain the interest of the listeners?**

F speak very loudly

G look down to read notes

H avoid smiling

J make eye contact with audience

Reporting Category:	4 Communication and Media
Performance Indicator:	0801.2.6 Identify and analyze the organizational structure of a speech (e.g., sequential, chronological, problem-solution, comparison-contrast, cause-effect).

17 **How is the information in this speech mostly organized?**

A compare and contrast

B order of importance

C chronological order

D problem and solution

Go On ▶

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.9 Distinguish between a summary and a critique.

18 **Which statement is a critique of the speech?**

F In most online schools, learners may work at their own pace as long as their work is completed by the deadline.

G According to the speaker, some online schools have live class times and some have Web sites only for registered students.

H The speaker has already decided that the advantages of online schools far outweigh the benefits of traditional schools.

J One advantage of traditional schools is the availability of extracurricular activities to suit a variety of interests.

Reporting Category: 5 Logic

Performance Indicator: 0801.5.1 Recognize a reasonable prediction of future events of a given text.

19 **According to information in the speech, what will most likely happen to online schools in the future?**

A Only students with strong academic skills will be able to utilize online schools.

B The number of online schools and students who use them will increase.

C Online schools will be available only to students with computers in their homes.

D Extracurricular activities and social opportunities will be offered by online schools.

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Reporting Category: 5 Logic

Performance Indicator: 0801.5.5 Choose a logical word to complete an analogy, using synonyms, antonyms, homonyms, categories/subcategories, whole/part, functions, verb forms, rhymes, scrambled words, homophones.

20 **Complete this analogy based on the speech.**

Computers are to online schools as _____ are to traditional schools.

F clubs

G friends

H sports

J books

Reporting Category: 5 Logic

Performance Indicator: 0801.5.6 Identify an example of deductive or inductive reasoning in text.

21 **Which sentence from the speech provides an example of deductive reasoning?**

A Traditional schools are often unable to offer these types of classes if there are not enough students or funds to support them.

B Because teachers are not present to monitor progress, online students must stay very organized in order to complete the required work for each class by the end of the semester.

C Even though learners may work at their own pace, timelines are established to ensure students finish their coursework in a reasonable amount of time.

D Yes, computer technology is amazing, and we use computers for chatting with our friends, listening to music, and playing games.

Go On ▶

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Reporting Category: 5 Logic

Performance Indicator: 0801.5.7 Identify a false premise in text.

22 **Which sentence from the speech is a false premise?**

F This kind of learning has several names: online learning, distance learning, or virtual learning.

G Math whizzes are typically the best online students because they can work quickly through the subject while extra allowances can be taken for subjects requiring more time.

H Most online schools teach the same basic classes like English, math, science, and history.

J Other online schools have live class times where students can call and talk with the teacher directly.

Reporting Category: 5 Logic

Performance Indicator: 0801.5.8 Identify instances of bias and stereotyping in print and non-print texts.

23 **Which sentence from the speech shows a negative bias some people may have about online classes?**

A Regardless of what it is called, this idea may create an impression of a lonely kid reading pages of information on a computer screen rather than from a book.

B Students can attend school wherever and whenever they desire.

C Online schools also have different types of learning tools for kids to use.

D Some of these online schools even have virtual clubs where kids can talk with each other about their hobbies.

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Reporting Category: 5 Logic

Performance Indicator: 0801.5.9 Make inferences and draw conclusions based on evidence in text.

24 **Which of these is <u>not</u> needed to participate in online schooling?**

F membership in a virtual club

G discipline in accomplishing tasks on time

H access to a computer

J basic knowledge of operating a computer

Reporting Category: 6 Informational Text

Performance Indicator: 0801.6.1 Formulate appropriate questions before, during, and after reading.

25 **If an eighth grade student were interested in registering immediately for online school, what is the <u>first</u> question he or she would need to ask?**

A Are online schools available for middle school?

B Does online school require as much time as traditional school?

C Can a person mix online school with traditional school?

D What information is used to assign grades in online school?

Go On ▶

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Reporting Category:	**6 Informational Text**
Performance Indicator:	**0801.6.4 Interpret factual, quantitative, technical, or mathematical information presented in text features (e.g., maps, charts, graphs, time lines, tables, and diagrams).**

26 **After listening to the speech, a student made the following chart.**

• can attend classes whenever there is time • work can be done anywhere • more time devoted to challenging subjects • specialized classes available to suit interests	• can have additional costs • must be able to work independently • limited interaction with teachers and other students • no extracurricular activities

Why did the student most likely create this chart?

F to explain the benefits of attending online schools

G to convince others of the disadvantages of online schools

H to organize the pros and cons of online school

J to list the facts and opinions about online schools

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Directions **Marcus wrote the following report. It contains mistakes. Read the report and answer Numbers 27 through 34.**

The Jazz Sensation

1 The Roaring Twenties also are sometimes referred to as the Jazz Age. Like that decade, jazz is difficult to pin down. This musical style was totally unlike anything before it. It actually grew out of music that had existed for centuries. The real inspiration for jazz came primarily from the music, the feelings, and the history of black people in America.

2 In the early 1900s, the sounds of the blues, ragtime, French dance music, Spanish rhythms from the Caribbean, slave spirituals and work songs, opera, and the singing of street vendors all mingled in New Orleans, Louisiana. This atmosphere created a fertile place for jazz to grow.

3 A highly personal music form, jazz focused on individual interpretation and rhythm rather than traditional musical composition. Jazz musicians varied the beat, the rhythm, and the volume, and reshaped the music according to their feelings. This freedom to alter and experiment with the music while playing is known as improvisation. It is a main ingredient of jazz.

4 When the heyday of the jazz era in New Orleans began to fade in 1917, some out-of-work musicians headed northward to Chicago, Illinois. New York City became the obvious destination for others. The Harlem Renaissance happening there encompassed painting, literature, poetry, and education.

5 Jazz fans have been enthusiastic about their music for years, even if they are sometimes unable to agree on what jazz is or how it should sound. However, all agree that jazz is a truly American art form and that it added to the energy that pulsed through Harlem during the 1920s.

Go On ▶

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Reporting Category: 1 Language

Performance Indicator: 0801.1.7 Identify within context a variety of appropriate sentence-combining techniques (i.e., comma + coordinating conjunction, use of semicolon, introductory phrases or clauses).

27 **Read these sentences from Paragraph 1.**

This musical style was totally unlike anything before it. It actually grew out of music that had existed for centuries.

What is the best way to combine these two sentences?

A Totally unlike anything before it, this musical style actually grew out of music that had existed for centuries.

B This musical style was totally unlike anything before it, so actually it grew out of music that had existed for centuries.

C Although this musical style was totally unlike anything before it; it actually grew out of music that had existed for centuries.

D This musical style was totally unlike anything before it, insofar as it actually grew out of music that had existed for centuries.

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.2 Identify the targeted audience for a selected passage.

28 **People who would enjoy this report most likely have an interest in**

F American art in Chicago.

G New York music traditions.

H American musical influences.

J Spanish musical composition.

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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.3 Select an appropriate thesis statement for a writing sample.

29 **Which sentence from the report is the thesis statement?**

A The Roaring Twenties also are sometimes referred to as the Jazz Age.

B The real inspiration for jazz came primarily from the music, the feelings, and the history of black people in America.

C Jazz musicians varied the beat, the rhythm, and the volume, and reshaped the music according to their feelings.

D Jazz fans have been enthusiastic about their music for years, even if they are sometimes unable to agree on what jazz is or how it should sound.

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.4 Rearrange multi-paragraphed work in a logical and coherent order.

30 **Choose the most logical order for the paragraphs in this report.**

F 2, 1, 3, 4, 5

G 2, 3, 1, 4, 5

H 1, 3, 2, 4, 5

J 1, 3, 4, 5, 2

Go On ▶

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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.5 Select appropriate time-order or transitional words/phrases to enhance the flow of a writing sample.

31 **Read this sentence from Paragraph 4.**

> *The Harlem Renaissance happening there encompassed painting, literature, poetry, and education.*

Which phrase belongs at the end of this sentence to assist the transition to Paragraph 5?

A because without Caribbean inspiration, these arts would be very different

B for the musicians in New Orleans continued experimenting

C and these were also significant aspects of the Harlem Renaissance

D but jazz was clearly the soundtrack to this cultural era

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.4.1 Select the most focused research topic.

32 **Which of these is the <u>most</u> focused research topic?**

F the decline of jazz in New Orleans in 1917

G Chicago's musical history

H the development of jazz music

J Harlem in the 1920s

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Reporting Category:	**3 Writing and Research**
Performance Indicator:	**0801.4.4 Distinguish between primary (i.e., interviews, letters, diaries, newspapers, autobiographies, personal narratives) and secondary (i.e., reference books, periodicals, Internet, biographies, informational texts).**

33 **Which of these is a primary research source?**

A a poem written by an author of the Harlem Renaissance

B a history textbook chapter about New Orleans

C an autobiography of Louis Armstrong, a jazz musician

D an article in a newspaper about a jazz performance in Chicago

Go On ▶

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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.4.5 Discern irrelevant research material from written text.

34 **Marcus wanted to learn more about the development of jazz for his report. After reading some information on a Web site, he wrote the following notes.**

1. *African rhythms were introduced to America by slaves and immigrants.*
2. *Chicago came to prominence in America as a meat-producing giant.*
3. *Jazz performers ranged from street musicians to international superstars.*
4. *Improvisation is defined as creating music with very little preparation.*

Which fact is <u>not</u> relevant to Marcus's report?

F Fact 1

G Fact 2

H Fact 3

J Fact 4

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Directions **The following passage is a rough draft. It contains mistakes. Read the passage and answer Numbers 35 through 40.**

Movie Theater Manners

1 I just returned from spending my Saturday afternoon at the movies with a small group of friends. We all agreed that the movie was excellent, but my purpose here is not to write a film review. I want to remind others that a movie theater is not someone's living room. Rather, it is a place where strangers come together to relax and quietly watch a good film.

2 My experience today, however, tells me that some moviegoers lack good manners. The most annoying problem is people talking right in the middle of the movie, but some people are noisy in other ways too. They scrunch candy wrappers, slurp sodas, and rattle popcorn bags. Even worse, all this commotion seems to happen at the exact moment the main character gives us the most important clue in the movie.

3 Some other nuisanses should also be avoided. A few people show up after the movie has started and disturb everyone else by crawling over them. Then, there are the people who cannot stay seated. They get up for more refreshments, climbing over others once again. Finally, there are the "squirmers" who cannot sit still. They ruin the movie by kicking the back of the seat or constantly fidgeting. When I'm home watching TV, I can tell my little brother to either hush up or leave the room.

4 When I pay my hard-earned baby-sitting money to see a film, I should be able to watch it in peace and quiet. To all movie theater fans, I make the following requests: be on time, be quiet, and stay seated until the movie is over. You are not in your living room watching a free movie.

Go On ▶

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Reporting Category: 1 Language

Performance Indicator: 0801.1.12 Identify correctly or incorrectly spelled words in context.

35 Read this sentence from Paragraph 3.

Some other nuisanses should also be avoided.

What is the correct way to spell the underlined word?

A nusances

B nuisances

C niusances

D nusenses

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.1 Identify the purpose for writing (i.e., to inform, to describe, to explain, to persuade, to entertain).

36 **What is most likely the author's purpose for writing this passage?**

F to describe the way people should behave in a movie theater

G to inform people about what to expect at the movies

H to convince moviegoers to change their behavior while at the movie theater

J to entertain readers with a description of a recent experience at a movie

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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.9 Select illustrations, explanations, anecdotes, descriptions and/or facts to support key ideas.

37 **Which information, if added to the passage, would best support the author's viewpoint?**

A the cost of attending a movie in a local theater

B the average rate of pay for babysitters in the author's town

C the number of movie theaters in the author's town

D the number of people attending movies on a weekly basis

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.11 Identify individual written selections as technical, narrative, persuasive, and/or descriptive in mode.

38 **This passage would best be described as mainly**

F narrative.

G technical.

H descriptive.

J persuasive.

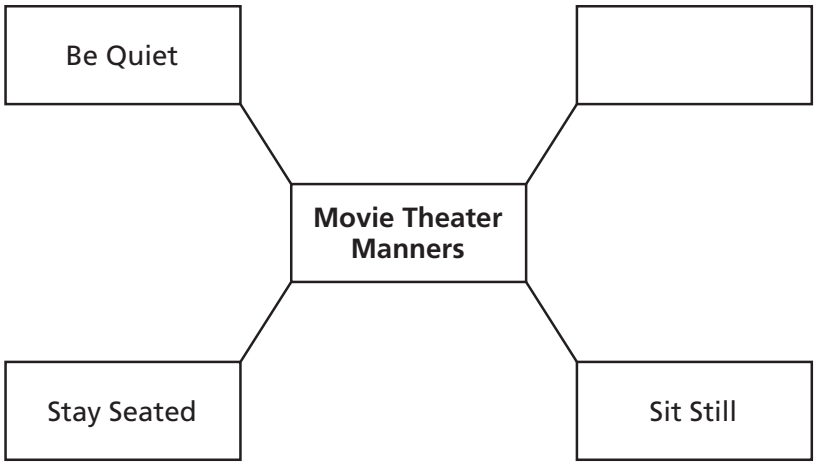
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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.12 Complete a graphic organizer (e.g., clustering, listing, mapping, webbing) with information from notes for a writing selection.

39 **Read the diagram.**



According to the passage, what information belongs in the empty cell?

A Stay at Home

B No Running

C No Popcorn

D Be on Time

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.7.1 Choose the most appropriate medium for a prescribed purpose and audience.

40 **Which medium would be the most effective for the author to use to distribute the information?**

F a letter to the editor of the local newspaper

G an e-mail to personal friends and family

H a letter to the theater owners throughout town

J a handout for moviegoers in the theater parking lot

Go On ▶

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Directions **Read the passage. Then answer Numbers 41 through 52.**

Batty About Bats

by Kathiann Kowalski

1 Don't you hate it when a mosquito buzzes around your head at night when you're trying to sleep? Bzzzzzz . . . Or when the pesky critters join your camp out, leaving your body laced with itchy lumps? Imagine what it would be like if there were millions more mosquitoes!

2 Or, worse yet, what if the insects that devour farmers' crops were multiplied by the millions?

3 Now answer this question: Do you like bats? Well, without them, those two scenarios would become reality. Whether you like them or not, we need bats. So let's discover what really neat creatures they truly are.

Flying and Feeding



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4 Bats are the only true flying mammals. Their scientific name, *chiroptera*, means "hand-winged." Thin membranes sandwich muscles and blood vessels and connect a bat's arm, palm, and finger bones to its ankles—forming wings. Because wings are crucial for flying and feeding, bats spend lots of time grooming them.

5 Flying takes lots of energy, so bats eat about half their weight in food each day. Pregnant or nursing mothers eat more—up to their full weight. What's on the menu? It depends. "Bats fill every conceivable feeding niche," says Ken Paige at the University of Illinois at Urbana. Over 200 of the 925 known species eat fruits or flower nectar. Other bat species eat mosquitoes, flies, moths, beetles, or termites. Still others feed on frogs, fish, lizards, or other animals.

6 When food gets scarce in areas outside the tropics, some bat species migrate. Others hibernate through the cold winter.

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Hanging Out


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7 Bats roost by hanging upside down. Their small size keeps all the blood from rushing to their heads. Where bats roost varies from species to species. Some choose old trees, buildings, or attics. Others build tents from leaves.

8 Other bat species haunt caves in giant colonies. The Mexican free-tailed bat in the southwestern United States forms the largest groups of mammals known anywhere, with millions of bats per cave. One research project headed by Boston University's Thomas Kunz uses advanced infrared thermal imaging and computer technology to count bat colonies. "In order to really assess the impact that bats have on any ecosystem," Kunz explains, "we have to know how many are there."

Super Sonar

9 How do bats get around in the dark? "No bats are blind," says Kunz. "They all can see." Some fruit-eating and nectar-drinking bats actually have excellent vision.

10 About 670 species—mostly those who eat mobile prey—supplement fair or poor vision with *echolocation*. "They create maps of their environment by sound," explains Dean Waters at Great Britain's University of Leeds. The bats emit high-frequency cries above the range of human hearing. Then they interpret the echoes. Echolocation is more than measuring the time for echoes to bounce back. "Bats can not only range targets, but can also classify them depending on how they 'sound,' " says Waters. He calls these variations "echo colors."

11 Bats rely on other environmental clues, too. Insects are more likely to buzz about under certain air pressure conditions. By sensing pressure changes in the middle ear, Paige says, "Bats know when they can find abundant food without expending unnecessary energy flying out to check."

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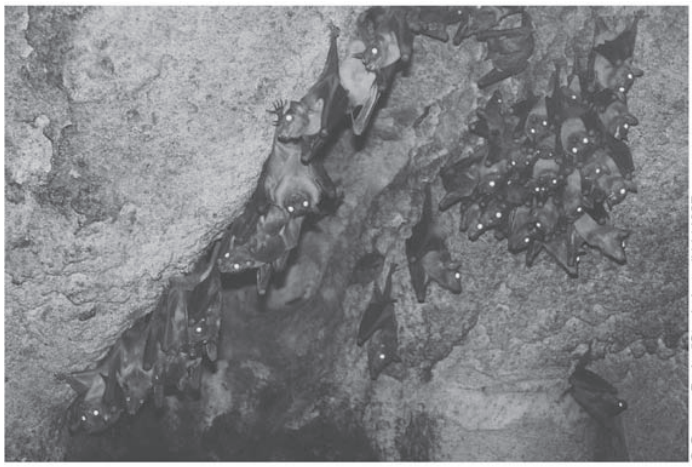
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Helpers in Trouble

12 "It's only myth and folklore that have promoted bad images of bats," notes Kunz. In contrast, Chinese culture prizes bats as symbols of happiness and good fortune. Ancient Egyptians hung bat images over doorways to ward off disease.

13 In truth, these night feeders really "go to bat" for the ecosystem. Uneaten insects would mean many more bug bites. Swarms of pests would destroy farmers' crops. Huge financial losses would follow, not to mention possible starvation for millions of people.

14 But bats are in danger—primarily from people. Destruction of habitat, disruption of hibernating colonies, and pesticides are just a few threats. "But it's not all gloomy," stresses Bob Benson at Bat Conservation International (BCI). One BCI project encourages companies closing mines to use bat-friendly gates. The gates keep people out but let bats in. Another program encourages pest controllers to exclude bats from homes safely, instead of killing them with toxic chemicals. These win-win situations help everyone.



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15 While the BCI and others educate people, scientists study how to help bats survive in their natural habitat. "There is no point in finding out more about these fascinating creatures if we destroy them with ignorance and negligence," says Rob Houston at the University of Bristol in Great Britain. "Bats need friends!"

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Reporting Category: 2 Vocabulary

Performance Indicator: 0801.1.19 Recognize and use grade appropriate and/or content specific vocabulary.

41 **Read this sentence from Paragraph 10.**

> *About 670 species—mostly those who eat mobile prey—supplement fair or poor vision with* echolocation.

What does supplement mean in this sentence?

A ignore

B experiment with

C challenge

D improve upon

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.4.1 Select the most focused research topic.

42 **A student wants to do a report on bats. Which topic is narrow enough for a short report about bats?**

F a comparison of bat species around the world

G the history of bats from ancient times until today

H an analysis of the impact bats have on the ecosystem

J a description of how echolocation helps a bat find prey

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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.4.2 Identify levels of reliability among resources (e.g., eyewitness account, newspaper account, supermarket tabloid account, Internet source).

43 **Which of these is the most reliable resource to find information about the life cycle of the Mexican free-tailed bat?**

A an encyclopedia article about different species of bats

B a local newspaper article about removing bats from an attic

C an eyewitness account of bats swarming out of a cave

D a supermarket tabloid story about bats invading a town

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.4.3 Determine the most appropriate research source for a given research topic.

44 **What would be the most appropriate research source to use to investigate Bat Conservation International?**

F a science textbook

G a newspaper article

H an encyclopedia entry on the Internet

J the Web site for the organization

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Reporting Category: 5 Logic

Performance Indicator: 0801.5.2 Evaluate text for fact or opinion.

45 **Which sentence from the passage is an opinion?**

A So let's discover what really neat creatures they truly are.

B Flying takes lots of energy, so bats eat about half their weight in food each day.

C Their small size keeps all the blood from rushing to their heads.

D Some fruit-eating and nectar-drinking bats actually have excellent vision.

Reporting Category: 5 Logic

Performance Indicator: 0801.5.3 Analyze cause-effect relationships in text.

46 **Special gates used in mines help bats because the gates**

F discourage people from entering the mines while bats are resting.

G allow bats to access their habitat while the mines are closed.

H protect bats from injury while opening and closing.

J provide a safe place for bats to roost.

Go On ▶

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Reporting Category: 5 Logic

Performance Indicator: 0801.5.4 Identify examples of persuasive devices (i.e., bandwagon, loaded words, testimonial, name-calling, plain folks, snob appeal).

47 What persuasive device does the author use in the introduction?

A loaded words

B name-calling

C snob appeal

D testimonial

Reporting Category: 5 Logic

Performance Indicator: 0801.5.8 Identify instances of bias and stereotyping in print and non-print texts.

48 Which stereotype is suggested in the passage?

F Bats are the only mammals that really fly.

G Not enough programs are trying to protect bats.

H Some bat species feed on frogs, fish, and lizards.

J Bats are creatures that are dangerous to humans.

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Reporting Category: 6 Informational Text

Performance Indicator: 0801.6.2 Identify the main idea and supporting details in text.

49 Why does one BCI project encourage companies that close a mine to use bat-friendly gates?

A to give the bats a safe place to live

B to stop bats from attacking people

C to remove the bats from homes safely

D to keep the bats from distracting miners

Reporting Category: 6 Informational Text

Performance Indicator: 0801.6.3 Use text features to locate information and make meaning from text (e.g., headings, key words, captions, footnotes).

50 Which heading from the passage would help a reader find information about how bats use sound to locate their prey?

F Flying and Feeding

G Hanging Out

H Super Sonar

J Helpers in Trouble

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Reporting Category: 6 Informational Text

Performance Indicator: 0801.6.6 Identify the organizational structure of a text (i.e., chronological, cause-effect, comparison-contrast, sequential, problem-solution).

51 **The author organizes the section titled "Helpers in Trouble" by**

A listing the reasons for a reduction in the bat population in chronological order.

B explaining the way specialized organizations intend to educate people about bats.

C identifying current problems bats are experiencing and how they are being addressed.

D stating myths about bats and contrasting them with facts discovered through scientific research studies.

Reporting Category: 7 Literature

Performance Indicator: 0801.8.14 Identify the author's purpose for writing.

52 **What is the purpose of "Batty About Bats"?**

F to provide information about the usefulness of bats

G to persuade readers to find ways to help bats

H to describe why some people are nervous around bats

J to entertain readers with tales about bats

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Directions **Read the passage and the poem. Then answer Numbers 53 through 67.**

Sammy Lee
Five-Foot Giant

by Helen Enright

Sammy Lee scrambled up the ladder and raced along the diving board with his friends in pursuit. He leaped off the board and, to his surprise and delight, turned a complete somersault.

"I could hardly believe it," he said later. "I had to go right back and do it again."

Twelve-year-old Sammy was soon hooked on diving. He began hanging around that pool in Los Angeles, teaching himself to dive. His efforts didn't go unnoticed.

Hart Crum, an outstanding local diver, offered to coach Sammy. Crum was patient and was a good teacher, and by the end of the summer Sammy had learned the basic dives of competition.

It hadn't been easy. In 1933 the public pool was usually open only to white people. Crum, who was black, and Sammy, a Korean-American, were allowed to dive only one day a week.

Crum helped Sammy develop into a standout diver. But he soon admitted that he'd taught Sammy everything he knew. He recommended that Sammy find a more experienced coach.

Sammy began to practice at the Olympic Stadium pool. One day he caught the eye of Jim Ryan, considered to be "the coach of champions." Ryan called him over.

"You interested in diving?" asked Ryan, who was a giant of a man at six feet three and 270 pounds.

"Nuts about it," said Sammy, who was very short.

"Let's see you do a swan dive," Ryan said.

Sammy tried his best and climbed out of the pool with a smile. But Ryan wasn't smiling. "That's the worst dive I ever saw," he growled.

Ryan had a reputation for being a difficult coach. He never eased up, and offered his divers few words of encouragement. But Ryan sensed that Sammy had courage and a keen mind, and he agreed to coach him.

Ryan trained Sammy to take advantage of his short stature (just under five feet two) and to minimize the effect of his broad shoulders hitting the water. Sammy's height permitted him to tuck more tightly and spin more quickly than other divers. But he also learned to slice through the water with the slightest splash.

Go On ▶

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14 Sammy began to have success in diving competitions, but he had many other interests. He played football and ran track for his high school and was voted vice-president of the student body.

15 Sammy's parents—Korean immigrants—put great value on education. They had struggled to make a living in California, and wanted their children to take advantage of the freedoms this country offered. Sammy helped out in the family's restaurant when things got busy, but most nights he sat in the kitchen and studied. He shared valedictorian honors when he graduated from high school, having earned A's in every class. In 1939 he enrolled at Occidental College in Los Angeles.

16 Under Ryan's thorough coaching, Sammy had developed into one of the country's best divers. Sammy wanted more. He wanted to be the best in the world.

17 Sammy won his first national titles in 1942, capturing the 3-meter springboard and 10-meter platform events. But he faced a decision. He wanted to become a doctor, but he knew that the educational demands of medical school would not allow much time for diving.

18 Sammy had joined the army reserves shortly after World War II began. The army offered a special training program for medical students. Sammy became a private first class, and the army paid his tuition to medical school. He quit diving.

19 But the desire to compete never left him. For a break from the demands of his studies, he occasionally found time to dive at a local pool. And after graduating from medical school, Lieutenant Sammy Lee began to work out again. He soon won the national platform-diving title.

20 "When I realized I could still go pretty well," he said, "I started pointing for the Olympics."

21 Sammy made the U.S. team for the 1948 Olympic Games in London, where he won the gold medal in the 10-meter platform event. But his diving soon took a back seat again. Now promoted to major, he was sent to Korea to serve in the U.S. Medical Corps during the Korean War.

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22 But by 1952 he was competing again, earning a spot on the U.S. team that would compete in the Olympics in Helsinki, Finland. If he won, he would become the oldest athlete ever to win an Olympic diving gold medal.

23 It was August 1, 1952—Sammy Lee's thirty-second birthday. He inhaled deeply as he stood high above the water, knowing that no one had ever won the Olympic platform-diving title twice. In the split second between the spring and the takeoff he wondered, "Why am I here? I'm a doctor now, not a diver." But the thought quickly vanished as Lee completed the dive.

24 It was perhaps the best dive he had ever done.

25 Sammy Lee had won his second Olympic championship.



26 Dr. Lee has had a long career as an ear, nose, and throat specialist. He has also remained involved with diving all his life. In addition to diving in exhibitions throughout the world, he has been a judge at the Olympics and has coached many divers, including other Olympic champions.

27 And it all began when he turned an unexpected somersault while playing follow-the-leader with his friends.

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MARY STAHLER
Kansas, 1874

"Free for the taking. At that price, YOU can buy . . . a garden in the West . . . endless land and endless sky!"

We were just newlyweds.
John said, "It seems best
to grow with the country—
raise our family out West,"
We were young. We were strong.
How were we to know
land and sky could be cruel?
We got ready to go.
I smiled through my tears
as our loved ones waved good-bye.
We crossed
the Mississippi
for
endless land . . . endless sky . . .

The trail was rough
and the going was tough.
The prairies of Kansas
were far West enough.
John staked out our claim
one hot day in July,
as I waited and I watched—
endless land . . . endless sky . . .

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Young John was born
early that fall.
next came Mary,
then Elizabeth . . .
nine kids in all.

I schooled the children.
Town was too far away.
There were so many chores
to fit into a day!
Cooking, sewing, laundry—
and much more to do.
Yet somehow I found time
to be lonely, too:
The endless droning of the wind,
a lone coyote's call,
the chatter of the children,
no visitors at all.
I longed to see a woman—
to hear a woman's voice.
Instead, I hear winds whisper:
Free land! You made a choice.
Often I wonder.
and I can't help but sigh—
What price we really paid
for
endless land . . . endless sky . . .

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Reporting Category: 2 Vocabulary

Performance Indicator: 0801.1.16 Use context clues and/or knowledge of roots and affixes to determine the meaning of unfamiliar words.

53 **Read these lines from the poem.**

The endless droning of the wind,
a lone coyote's call,
the chatter of the children,
no visitors at all.

In this excerpt, the word droning refers to a

A sound.

B feeling.

C movement.

D power.

Reporting Category: 5 Logic

Performance Indicator: 0801.5.2 Evaluate text for fact or opinion.

54 **Which sentence from the passage is an opinion?**

F Sammy began to practice at the Olympic Stadium pool.

G In 1939 he enrolled at Occidental College in Los Angeles.

H It was perhaps the best dive he had ever done.

J He has also remained involved with diving all his life.

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Reporting Category: 5 Logic

Performance Indicator: 0801.5.3 Analyze cause-effect relationships in text.

55 **Sammy could spin more quickly than other divers because he**

A had very broad shoulders.

B was coached by a patient teacher.

C played other sports in high school.

D was about five feet two inches tall.

Reporting Category: 7 Literature

Performance Indicator: 0801.8.2 Identify and analyze the author's point of view (i.e., first person, third-person objective, third-person limited, third-person omniscient).

56 **The points of view in the passage and the poem are <u>different</u> because the**

F first-person point of view makes the poem more emotional.

G first-person point of view makes the tone of the passage more exciting.

H third-person omniscient point of view shows more of the poet's attitude.

J third-person limited point of view leaves the passage ending vague.

Go On ▶

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Reporting Category: 7 Literature

Performance Indicator: 0801.8.3 Determine how a story changes if the point of view is changed.

57 How would the passage be <u>different</u> if it were written from a third-person limited point of view?

A Sammy would narrate the events in his life as he experiences them.

B The eventual ending of the passage would be more surprising.

C The author's opinions would be unknown to the reader.

D Only Sammy's thoughts and feelings would be shared with the reader.

Reporting Category: 7 Literature

Performance Indicator: 0801.8.4 Distinguish among different genres (e.g., poetry, drama, biography, novel) using their distinguishing characteristics.

58 How do the passage and poem differ regarding their distinct genres?

F The passage describes factual events and real people, while the poem describes fictional individuals.

G The passage describes events with great detail, while the poem focuses on mood and emotion.

H The passage develops characters through dialogue, while the poem is principally visual in its description.

J The passage is meant to be entertaining, while the poem is meant to explain life in a specific time period.

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Reporting Category: 7 Literature

Performance Indicator: 0801.8.5 Analyze the development of similar themes across two or more literary texts.

59 **Which of these themes is present in both the passage and the poem?**

A Determination and hard work most often result in success.

B Desires and needs are two different things.

C Personal sacrifices are sometimes necessary.

D Moving to a new place can be emotionally challenging.

Reporting Category: 7 Literature

Performance Indicator: 0801.8.6 Identify and analyze how the author reveals character (i.e., what the author tells us, what the other characters say about him or her, what the character does, what the character says, what the character thinks).

60 **The reader is able to understand the speaker in the poem by reading what**

F she does to care for her family.

G her family does every day.

H her family says about her actions.

J she says about her experiences.

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Reporting Category:	7 Literature
Performance Indicator:	0801.8.7 Identify and analyze examples of literary elements that shape meaning within context (i.e., flashback, foreshadowing, irony, mood, symbolism, tone).

61 **Which literary element has the strongest effect on the meaning of the poem?**

A the sad tone as Mary describes her experiences

B foreshadowing the difficulties Mary would face

C the irony of free land causing emotional distress

D flashback to the difficulty of leaving family behind

Reporting Category:	7 Literature
Performance Indicator:	0801.8.8 Analyze figurative language (i.e., idiom, metaphor, simile, personification, hyperbole, pun) within context.

62 **Read these lines from the poem.**

Instead, I hear winds whisper:
Free land! You made a choice.

The author personifies the wind as whispering to the speaker in order to

F exaggerate the noisiness of the prairie.

G portray the setting as an antagonist.

H compare the winds to a member of the family.

J emphasize the reason for moving to the prairie.

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Reporting Category: 7 Literature

Performance Indicator: 0801.8.9 Analyze examples of sound devices within context (i.e., rhyme scheme, alliteration, free verse, repetition, internal rhyme, slant rhyme).

63 **The repetition of "endless land . . . endless sky" throughout the poem serves to**

A create a calm mood for the reader.

B explain how magnificent the setting seems to the narrator.

C remind the reader of the subject of the poem.

D emphasize the inescapable feeling of isolation in the prairie.

Reporting Category: 7 Literature

Performance Indicator: 0801.8.10 Identify the kind(s) of conflict present in a literary plot (i.e., person vs. person, person vs. self, person vs. environment, person vs. technology).

64 **What kind of conflict is the speaker experiencing in the poem?**

F person vs. self

G person vs. person

H person vs. technology

J person vs. environment

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Reporting Category: 7 Literature

Performance Indicator: 0801.8.11 Identify and analyze a literary character's moral dilemma.

65 **What moral conflict is shared by both Sammy and the pioneer woman?**

A Both have personal dreams that may result in hurting the feelings of those they care about.

B Both find themselves isolated from family in order to achieve a goal.

C Both must pursue a specific path in life.

D Both pursue their goals despite the criticism and prejudice of the society to which they belong.

Reporting Category: 7 Literature

Performance Indicator: 0801.8.12 Recognize and identify words within context that reveal particular time periods and cultures.

66 **Which phrase from the poem helps to place its setting before the twentieth century?**

F going was tough

G staked out our claim

H so many chores

J longed to see

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Reporting Category: 7 Literature

Performance Indicator: 0801.8.13 Determine the influence of culture and ethnicity on the themes and issues of literary texts.

67 **How did the idea of westward expansion in a growing country affect the Stahlers?**

A They were enticed to leave family behind to settle new territory.

B Because of the dangers of prairie life, they experienced many hardships.

C They were prepared for the constant adventures they found in Kansas.

D Because many were moving, they were with people who had common goals.

Go On ▶

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Directions Read and answer Numbers 68 through 93.

Reporting Category:	1 Language
Performance Indicator:	0801.1.3 Identify the correct use of adjectives (i.e., common/proper, comparative/superlative, adjective clauses) and adverbs (i.e., comparative/superlative) within context.

68 Read this sentence.

Although the score was not favorable, Shawanda was feeling hopefully that her team would win the game.

Which word should replace the underlined word?

F hopeful

G hopefuller

H more hopeful

J most hopefullest

Reporting Category:	1 Language
Performance Indicator:	0801.1.5 Identify the correct use of prepositional phrases (place correctly according to the words they modify within the sentence) within context.

69 Which sentence uses a prepositional phrase incorrectly?

A Tiffany went with us to visit the local senior citizen center.

B Terry struggled to see the runners as they ran into view.

C To the science museum we wanted to go for our class field trip.

D Two showings of the school play are planned to accommodate all students.

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Reporting Category:	**1 Language**
Performance Indicator:	**0801.1.7 Identify within context a variety of appropriate sentence-combining techniques (i.e., comma + coordinating conjunction, use of semicolon, introductory phrases or clauses).**

70 **Read these sentences.**

Eight-year-old Armando loved reading. He began hanging around the library, sharing books with other kids.

How should the underlined portion of these sentences best be revised to combine the sentences?

F reading, and he began

G reading, yet began

H reading, but he began

J reading so began

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Reporting Category: 1 Language

Performance Indicator: 0801.1.8 Select the most appropriate method to correct a run-on sentence (i.e., conjunctions, semicolons, periods to join or separate elements).

71 **Read the run-on sentence below.**

We usually enjoy the hike to the lake however, today a cloud of mosquitoes plagued us.

What is the correct way to revise the run-on sentence?

A We usually enjoy the hike to the lake, however. Today a cloud of mosquitoes plagued us.

B We usually enjoy the hike to the lake: however, today a cloud of mosquitoes plagued us.

C We usually enjoy the hike to the lake; however, today a cloud of mosquitoes plagued us.

D We usually enjoy the hike to the lake, however, today a cloud of mosquitoes plagued us.

Reporting Category: 1 Language

Performance Indicator: 0801.1.9 Identify the appropriate use of gerund and participial phrases.

72 **Which sentence uses a gerund phrase correctly?**

F Building a tree house in our backyard has a lot of lovely flowers and trees.

G Knowing how to use library resources is a good skill for students to have.

H Stanley, a thoughtful and caring for his friends as best he can.

J Meryl and Marilyn, going to visit their uncle for the summer as usual.

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Reporting Category: 1 Language

Performance Indicator: 0801.1.10 Identify the correct use of appositives/ appositive phrases and infinitive/ infinitive phrases within context.

73 **Which sentence uses an appositive correctly?**

A Blanca, my Labrador retriever, loves to lie in the sun and eat pecans that have fallen right off the tree.

B A person no matter how strong they are must be careful when moving heavy objects from one place to another.

C My older sister, studying chemistry in college will be home for a short break next week.

D While on vacation, my cousin Mark who is the youngest in the family, spent too much time in the sun and got a sunburn.

Reporting Category: 1 Language

Performance Indicator: 0801.1.11 Select the correct pronoun-antecedent agreement for personal pronouns within context.

74 **Which sentence uses correct pronoun-antecedent agreement?**

F Neither of the boys know their scores on the test.

G Most of us want to return in the same bus they came in.

H You and I are wearing the shirts our team leader gave us.

J Everyone should bring in their permission slips by Wednesday.

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Reporting Category:	1 Language
Performance Indicator:	0801.1.14 Recognize usage errors occurring within context (i.e., subject-verb agreement, pronoun case, double negatives, comparative/superlative forms, troublesome word pairs: {to/too/two, their/there/they're, its/it's, sit/set, lie/lay, affect/effect, may/can, leave/let, teach/learn, accept/except, capitol/capital, principle/principal, between/among, rise/raise, stationary/stationery, where/were, which/that/who})within context.

75 **Which sentence does not use the underlined word correctly?**

A "Can you explain the step again?" Sam asked.

B May you help me with my homework?

C Can you go with us next week?

D "May I go to the school fair?" Kai asked her mother.

Reporting Category:	1 Language
Performance Indicator:	0801.1.15 Select the appropriate use of underlining/italicizing with titles, specific words, numbers, letters, and figures.

76 **Which sentence is written incorrectly?**

F He kept guessing *fish* as if the correct answer would change.

G Rudyard Kipling's short story "The Man Who Would Be King" was also made into a movie.

H *To Kill a Mockingbird* is a movie based on a novel by the same name.

J The chapters that provide the best explanations are The Engineers, The River, and The Flood.

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Reporting Category: 2 Vocabulary

Performance Indicator: 0801.1.18 Recognize the effect of stressed or unstressed syllable to aid in identifying the meaning of multiple meaning words.

77 **In which sentence is the second syllable of record accented?**

A Tory ran the race in record time.

B I usually record what the speaker says.

C The doctor's office keeps a record of each patient.

D Henry holds the record for growing the largest pumpkin.

Reporting Category: 2 Vocabulary

Performance Indicator: 0801.1.20 Identify commonly used foreign words and phrases (i.e., RSVP, *déjà vu, faux pas, du jour, bon voyage, alma mater, cum laude, femme fatale, esprit de corps,* verbatim).

78 **Every ten years, members of the graduating class of 1980 gather for a reunion at Central High School because this is their**

F *alma mater.*

G *cum laude.*

H *déjà vu.*

J *esprit de corps.*

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.4 Determine the most effective methods of engaging an audience during an oral presentation (e.g., making eye contact, adjusting speaking rate).

79 **Melissa is giving a speech about her coin collection, but her audience is losing interest. Which of these is most likely the reason?**

A She tells a funny story about how she acquired one of her coins.

B She makes short pauses between the important points in her speech.

C She briefly stops speaking to show the audience some of her favorite coins.

D She keeps her eyes on her notes to make sure her main points are all covered.

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.5 Organize a series of note cards in the most effective order for an oral presentation.

80 Ted is planning a presentation on Beatrix Potter. These are some of his note cards.

1 Although widely respected throughout England for her botany work, she was denied a formal education because of her gender.	**3** Upon her death in 1943, she left 4,000 acres of land to a National Trust, and it later became part of the Lake District National Park.
2 At an early age, she began sketching her many pets: newts, ferrets, two rabbits, and even a bat.	**4** Beatrix Potter was born in South Kensington, London, on July 28, 1866.

In which order should the information on the note cards be presented?

F 2, 4, 3, 1

G 4, 2, 1, 3

H 4, 1, 2, 3

J 1, 3, 4, 2

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.7 Select the most appropriate strategies for participating productively in a team (e.g., gain the floor in orderly ways, meet or set deadlines for completing each task, come to agreement by seeking consensus or following the majority).

81 **Groups of four students are creating multimedia presentations on the American Revolution. Which group is working most efficiently?**

A Three students are surfing the Internet, and one is listing types of media to use to display their information.

B Two students are researching the American Revolution, while two are preparing the template for their presentation.

C All four students are looking at the card catalog on a computer screen to find books about the American Revolution.

D One student is getting books from the library, one is searching the Internet, one is taking notes, and one is finding pictures.

Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.7 Select the most appropriate strategies for participating productively in a team (e.g., gain the floor in orderly ways, meet or set deadlines for completing each task, come to agreement by seeking consensus or following the majority).

82 **For a team to be productive, what is the first step the team needs to take?**

F assign a role to each team member

G set deadlines for the completion of each task

H determine the purpose and goals for the team

J measure the progress of individuals and the group

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Reporting Category:	4 Communication and Media
Performance Indicator:	**0801.2.8 Identify the functions and responsibilities of individuals within an organized group (i.e., reporter, recorder, information gatherer, leader, timekeeper).**

83 **In an organized group, which member maintains the schedule and makes sure all work is completed by the deadline?**

A the information gatherer

B the recorder

C the reporter

D the timekeeper

Reporting Category:	3 Writing and Research
Performance Indicator:	**0801.3.8 Select vivid words to strengthen a description (adjective or adverb) within a writing sample or passage.**

84 **Read the sentence below.**

Tyler went to the front of the room and started to speak.

What is the best way to make the sentence stronger and more vivid?

F Tyler slowly walked from the rear of the room to the front and presented his speech.

G Tyler boldly strode to the front of the crowded room and, in a confident voice, began to speak.

H Before he spoke to the whole class, Tyler had to make his way up the aisle to the front of the room.

J After Tyler went up and stood in the front of the room, he opened his mouth and started giving a long speech.

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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.13 Select the most appropriate format for a work-related text.

85 **Cecilia has several pet-sitting jobs in her neighborhood. She wants to make sure she provides the services her clients need, so she plans to prepare a handout to give to her clients. What type of handout would be most effective?**

A a list of families who highly recommend her services

B a series of questions clients should answer correctly

C a list of services on which clients can check off their preferences

D a page with blank lines so clients can list what services they need

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.4.2 Identify levels of reliability among resources (e.g., eyewitness account, newspaper account, supermarket tabloid account, Internet source).

86 **Erick wants to plant wildflowers in his backyard in Nashville. Which source would provide the most reliable instructions for him?**

F a magazine article on vegetable gardening in Tennessee

G a newspaper article on award-winning landscapes

H a seed description from a national catalog

J a book on growing native Tennessee plants

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Reporting Category: 6 Informational Text

Performance Indicator: 0801.6.5 Choose the correct order of a set of instructions.

87 **Read these steps for making a collage.**

1. *When you are satisfied with your design, glue all the pieces to the poster board.*
2. *Choose a theme.*
3. *Using the materials you have gathered, think about how to create an interesting design and then try different arrangements. Be sure to let the pieces overlap each other.*
4. *Gather materials related to your theme: poster board, glue, torn paper, small objects, photos, magazine clippings, or fabrics with a variety of large and small shapes, light and dark colors, and coarse and fine textures.*

Which is the best way to order the steps?

A 3, 2, 1, 4

B 2, 4, 3, 1

C 2, 3, 1, 4

D 4, 1, 3, 2

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.7.2 Select a visual image that best reinforces a viewpoint or enhances a presentation.

88 **Patti is presenting a report on the works of playwright William Shakespeare for her drama class. Which visual image would be best for her to use during the presentation?**

F a poster board with sketches of William Shakespeare throughout his life

G a timeline of different dramas written by William Shakespeare

H a drawing of a stage where dramas written by William Shakespeare were performed

J a chart of the process William Shakespeare used to write his dramas

Reporting Category: 4 Communication and Media

Performance Indicator: 0801.7.3 Identify the purpose of a medium (i.e., to inform, to persuade, to entertain, to describe).

89 **What is the most likely purpose of a video about pets and their funny behaviors with people?**

A to describe

B to inform

C to entertain

D to persuade

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.7.4 Draw an inference from a non-print medium.

90 **Look at this photo.**



What can the reader conclude about the woman in this photo?

F She is studying for an important test.

G She is interested in reading her book.

H She is spending her lunch time at the park.

J She is reading about the history of the area.

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Reporting Category:	4 Communication and Media
Performance Indicator:	0801.7.5 Choose the statement that best summarizes/communicates the message presented by a medium.

91 **Look at this photo.**



A children's dentist wants to use this photo in a magazine advertisement. What message is the dentist most likely trying to communicate with this photo?

A the best way for people to brush teeth

B the most appropriate toothbrush for people

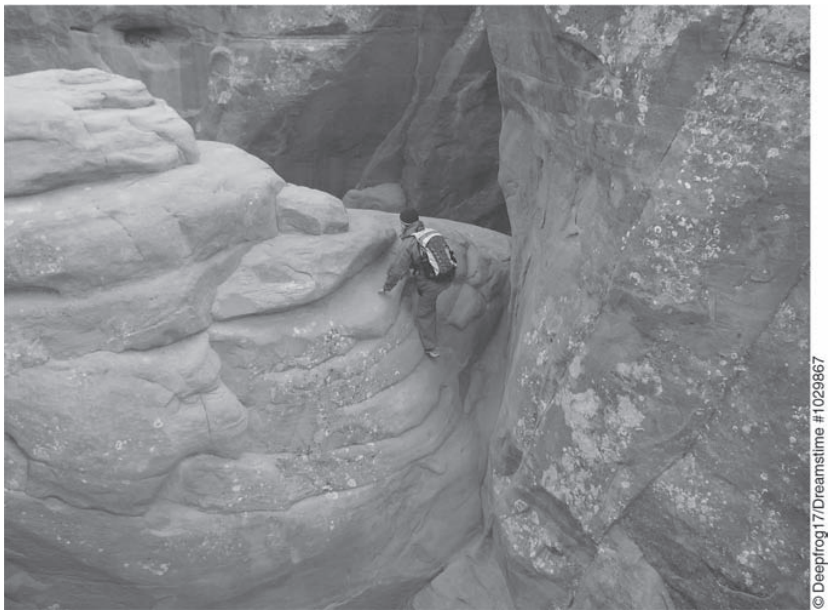
C the importance of healthy dental care at a young age

D the need for parents to encourage their children to brush their teeth

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Reporting Category:	4 Communication and Media
Performance Indicator:	0801.7.6 Select the type of conflict (e.g., person vs. person, person vs. self, person vs. environment, person vs. technology) represented in a non-print medium.

92 Look at the photograph.



What type of conflict is presented in this photograph?

F person vs. environment

G person vs. person

H person vs. technology

J person vs. self

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Reporting Category:	**7 Literature**
Performance Indicator:	**0801.8.1 Demonstrate an understanding of the basic elements of plot: exposition, rising action, climax, falling action, resolution/denouement.**

93 **After reading a short story, Tamika wrote the following in a report.**

> *Eduardo was finally faced with the consequences of his hasty decision. It was a moment of great suspense for the reader.*

Which plot element is Tamika describing?

A the exposition

B the falling action

C the resolution

D the climax

STOP

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Mathematics



Reporting Category: **1 Mathematical Processes**

Performance Indicator: **0806.1.1 Solve problems involving rate/time/distance (i.e., d = rt).**

1 A train traveled for $\frac{3}{4}$ hour at a speed of 80 miles per hour. It then immediately slowed to 60 miles per hour and traveled at that speed for the next $\frac{1}{4}$ hour. What is the total distance the train traveled during this hour?

A 65 miles

B 70 miles

C 75 miles

D 90 miles

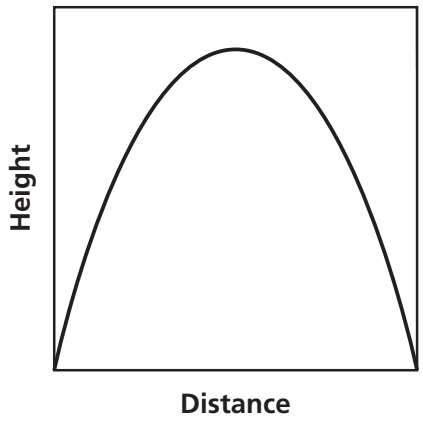
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Reporting Category: 1 Mathematical Processes

Performance Indicator: 0806.1.2 Interpret a qualitative graph representing a contextual situation.

2 William shot an arrow into the air. The graph below shows the height and distance the arrow traveled during flight.



Based on the graph, which statement about the flight of the arrow is true?

F The height of the arrow decreased and then increased.

G The height of the arrow increased and then remained constant.

H The height of the arrow increased and then decreased.

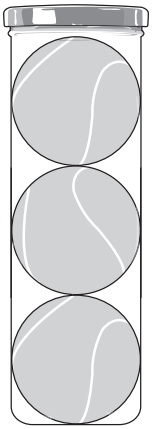
J The height of the arrow decreased and then remained constant.

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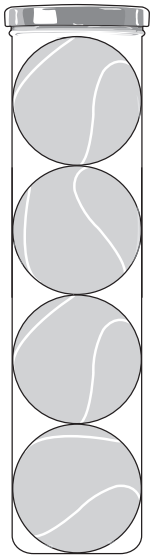
Reporting Category: 1 Mathematical Processes

Performance Indicator: 0806.1.3 Calculates rates involving cost per unit to determine the best buy.

3 Coach Smith went to a store to buy tennis balls. The following packages of tennis balls are available at this store.



3 tennis balls
$4.95



4 tennis balls
$6.00

Coach Smith needs to buy 24 tennis balls. How much money will she save by purchasing 24 tennis balls in packages with the lowest unit price compared to the highest unit price?

A $1.05

B $1.50

C $3.15

D $3.60

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Reporting Category: 2 Number and Operations

Performance Indicator: 0806.2.1 Order and compare rational and irrational numbers and locate on the number line.

4 Which real number is closest in value to the number represented by Point *P* on the number line?



F $\sqrt{18}$

G $\sqrt{24}$

H $\frac{23}{5}$

J 4.5999

Reporting Category: 2 Number and Operations

Performance Indicator: 0806.2.2 Identify numbers and square roots as rational or irrational.

5 Which number is irrational?

A 2.001678

B 1.02002000200002 . . .

C 0.245245245 . . .

D 0.2

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Reporting Category:	**2 Number and Operations**
Performance Indicator:	**0806.2.3 Use scientific notation to compute products and quotients.**

6 **Simplify:**

$$(3 \times 10^6)(2.5 \times 10^7)$$

F 5.5×10^{13}

G 7.5×10^{13}

H 5.5×10^{42}

J 7.5×10^{42}

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Reporting Category: 2 Number and Operations

Performance Indicator: 0806.2.4 Solve real-world problems requiring scientific notation.

7 The table below shows the number of ten-dollar bills produced at the Bureau of Engraving and Printing in 2006 and 2007.

Ten-Dollar Bills Produced

Year	Number
2006	8.512×10^8
2007	8.32×10^7

How many more ten-dollar bills were produced in 2006 than in 2007?

A 1.92×10^6

B 1.92×10^7

C 7.68×10^7

D 7.68×10^8

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Reporting Category: 3 Algebra

Performance Indicator: 0806.3.1 Find solutions to systems of two linear equations in two variables.

8 What is the solution to this system of linear equations?

$$3x + y = 2$$
$$x - 2y = 10$$

F $(2, -4)$

G $(-4, 2)$

H $(3, -7)$

J $(-7, 3)$

Reporting Category: 3 Algebra

Performance Indicator: 0806.3.2 Solve the linear equation $f(x) = g(x)$.

9 **Given:** $\begin{cases} f(x) = \frac{x}{2} \\ g(x) = \frac{4x - 1}{5} \end{cases}$

If $f(x) = g(x)$, what is the value of x?

A $-\frac{2}{3}$

B $-\frac{1}{3}$

C $\frac{1}{3}$

D $\frac{2}{3}$

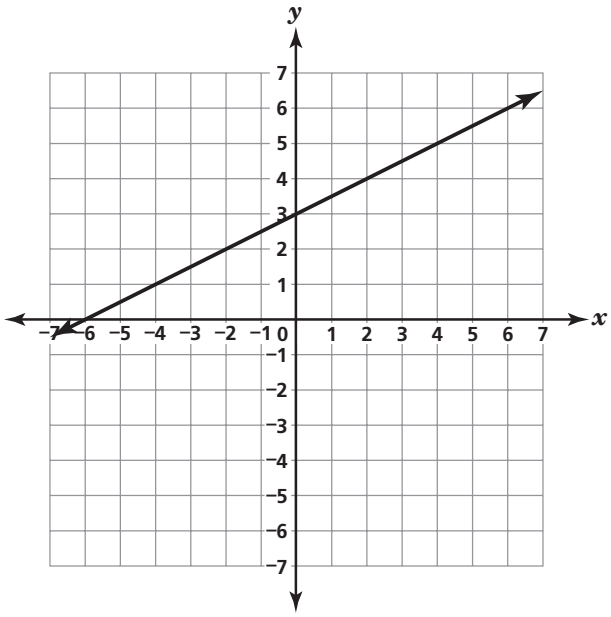
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Reporting Category: 3 Algebra

Performance Indicator: 0806.3.4 Translate between various representations of a linear function.

10 The graph of a linear function is shown below.



Which linear equation is best represented by this graph?

F $y = 3$

G $y = \frac{1}{2}x$

H $y = \frac{1}{2}x + 3$

J $y = 3x + \frac{1}{2}$

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Reporting Category: 3 Algebra

Performance Indicator: 0806.3.5 Determine the slope of a line from an equation, two given points, a table or a graph.

11 Points (15, 31) and (27, 35) are both located on $\overleftrightarrow{RS}$. What is the slope of $\overleftrightarrow{RS}$?

A $\frac{1}{2}$

B $\frac{1}{3}$

C 2

D 3

Reporting Category: 3 Algebra

Performance Indicator: 0806.3.5 Determine the slope of a line from an equation, two given points, a table or a graph.

12 What is the slope of the line represented by the equation $y = 5x + 2$?

F $\frac{1}{5}$

G $\frac{2}{5}$

H 2

J 5

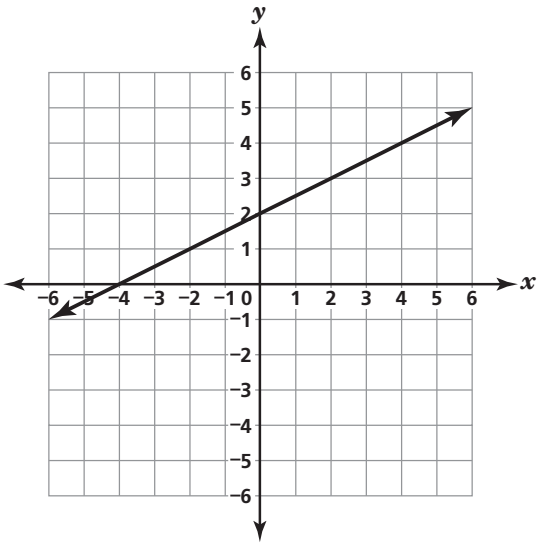
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Reporting Category: 3 Algebra

Performance Indicator: 0806.3.6 Analyze the graph of a linear function to find solutions and intercepts.

13 A line is graphed below.



Which is closest to the *y*-value of the *y*-intercept of this line?

A 2

B $\frac{1}{2}$

C 0

D -4

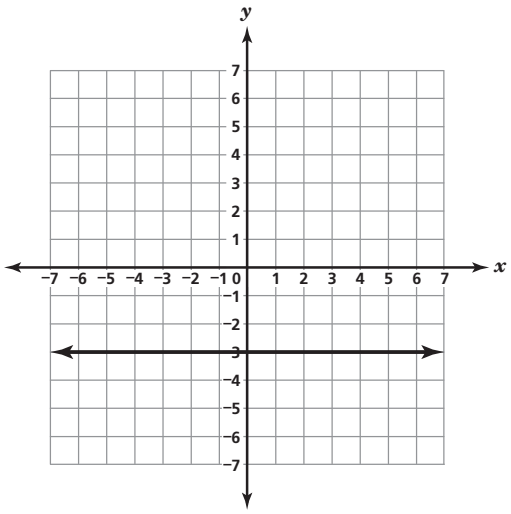
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Reporting Category: 3 Algebra

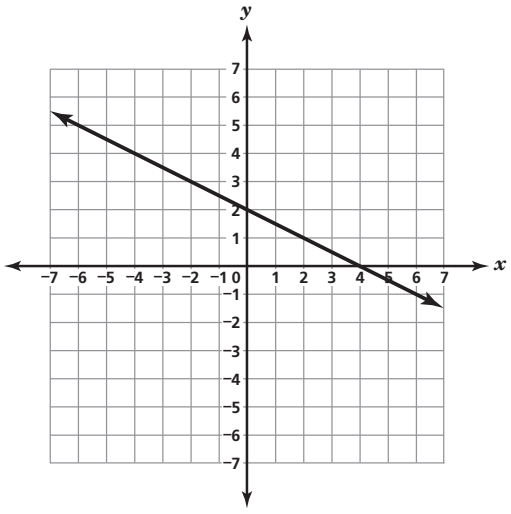
Performance Indicator: 0806.3.6 Analyze the graph of a linear function to find solutions and intercepts.

14 Which graph shows a line that appears to have a *y*-intercept with a *y*-value of 0?

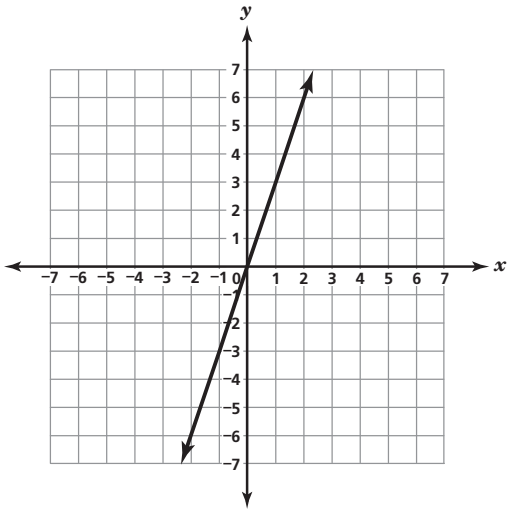
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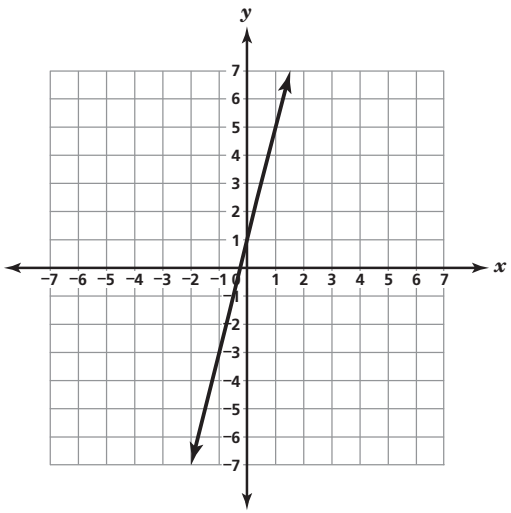
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G



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Reporting Category: 3 Algebra

Performance Indicator: 0806.3.7 Identify, compare and contrast functions as linear or nonlinear.

15 Which equation represents a linear function?

A $y = x^2 - 2$

B $3x + y = 7$

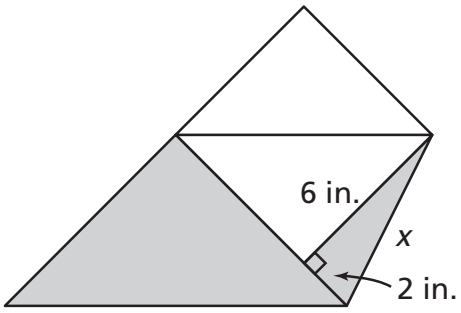
C $5 - x^4 = y + x^5$

D $y = 2x^3 + x^2 - 5x + 1$

Reporting Category: 4 Geometry and Measurement

Performance Indicator: 0806.4.1 Use the Pythagorean Theorem to solve contextual problems.

16 A teacher is showing her class how to fold a square piece of paper to create a paper cup. One of the steps is shown below.



According to the measurements, what is the length of x, in inches?

F 4

G $\sqrt{32}$

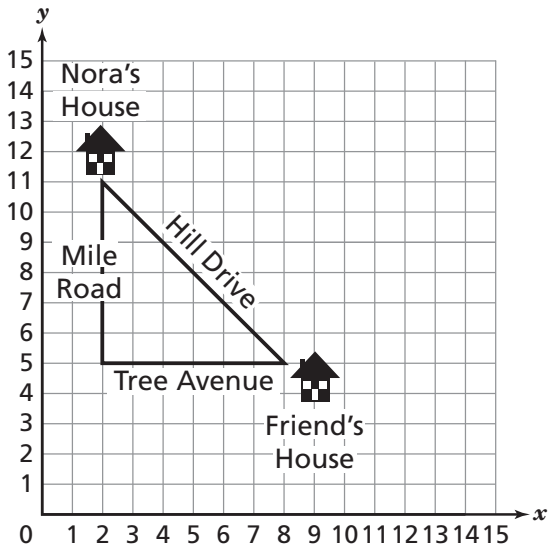
H $\sqrt{40}$

J 8

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Reporting Category:	**4 Geometry and Measurement**
Performance Indicator:	**0806.4.2 Apply the Pythagorean theorem to find distances between points in the coordinate plane to measure lengths and analyze polygons and polyhedra.**

17 The grid below shows a diagram of two paths from Nora's house to her friend's house.



Based on the diagram, which is the closest distance from Nora's house to her friend's house on Hill Drive?

A 8 units

B 12 units

C 18 units

D 36 units

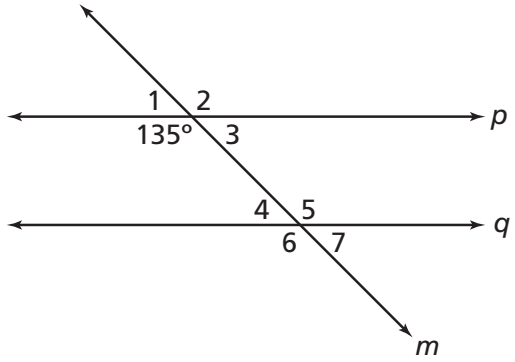
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Reporting Category: **4 Geometry and Measurement**

Performance Indicator: **0806.4.3 Find measures of the angles formed by parallel lines cut by a transversal.**

18 In this figure, Lines *p* and *q* are parallel and Line *m* is a transversal.



What is the measure of ∠7?

F 45°

G 55°

H 135°

J 225°

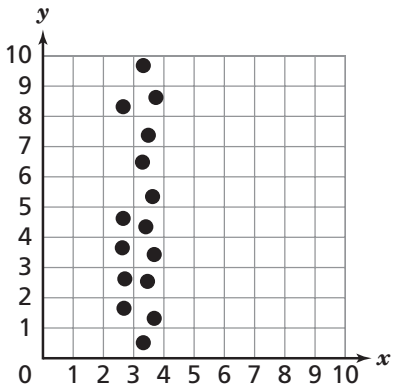
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Reporting Category: 5 Data Analysis, Statistics and Probability

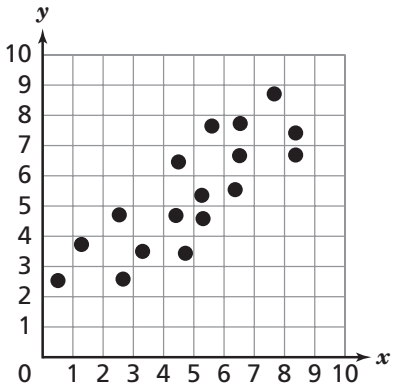
Performance Indicator: 0806.5.3 Generalize the relationship between two sets of data using scatterplots and lines of best fit.

19 Which scatterplot displays a negative relationship between the two variables?

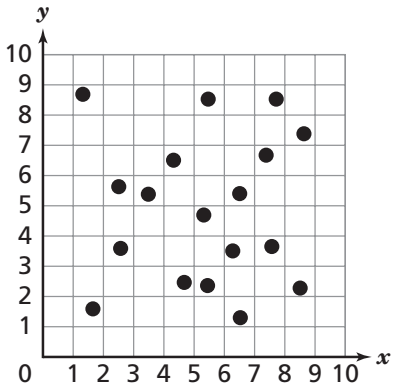
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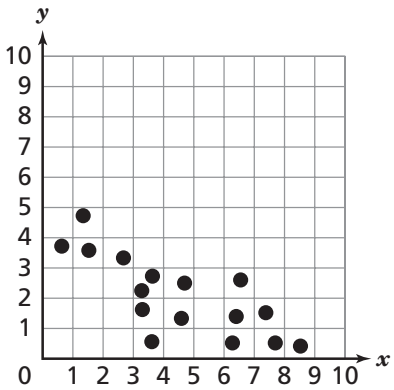
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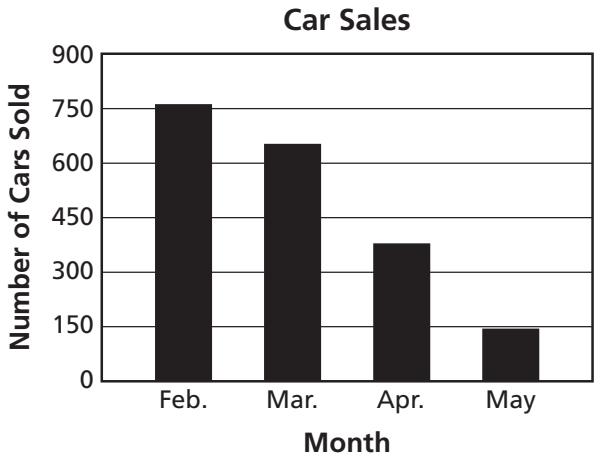
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Reporting Category: 5 Data Analysis, Statistics and Probability

Performance Indicator: 0806.5.4 Recognize misrepresentations of published data in the media.

20 The decrease in sales for a car dealership over four months is shown on the graph.



The dealership manager wants to make the decrease seem less significant. Which change to the graph would be most effective?

F use a greater vertical interval on the vertical axis

G only show the sales from the first and fourth months

H represent the data in a line graph instead of a bar graph

J compare the data to the previous year's sales using a bar graph

STOP

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Science



Reporting Category: **INQUIRY AND TECHNOLOGY & ENGINEERING**

Performance Indicator: **0807.INQ.1 Design a simple experimental procedure with an identified control and appropriate variables.**

1 **A student designs an experiment to determine how surface type affects the amount of force needed to roll a ball 20 meters. What is the independent variable?**

A the lengths of the surfaces

B the force needed to roll the ball

C the type of surfaces used

D the type of ball chosen

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Reporting Category: INQUIRY AND TECHNOLOGY & ENGINEERING

Performance Indicator: 0807.INQ.5 Identify a faulty interpretation of data that is due to bias or experimental error.

2 The table below shows data used to calculate the speed of 4 identical toy cars moving down a ramp.

Table of Toy Car Trials

Car Color	Trial 1 Time (seconds)	Trial 2 Time (seconds)	Distance (centimeters)	Timer
Red	31	39	300	Student 1
Blue	30	33	300	Student 2
Yellow	37	40	300	Student 3
Green	33	28	300	Student 4

Which part of the experiment is most likely the source of error in this investigation?

F Car Color

G Car Type

H Distance

J Timer

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Reporting Category: INQUIRY AND TECHNOLOGY & ENGINEERING

Performance Indicator: 0807.TE.2 Evaluate a protocol to determine if the engineering design process was successfully applied.

3 **A technology company has identified the need for smaller, longer-lasting batteries to use in hybrid vehicles. What would be the first step engineers would take to design and produce an improved battery?**

A test the new battery

B reshape the existing battery

C research current battery technology

D build a prototype battery

Reporting Category: INQUIRY AND TECHNOLOGY & ENGINEERING

Performance Indicator: 0807.TE.4 Differentiate between adaptive and assistive engineered products.

4 **Which of these best describes why an artificial arm is considered an assistive engineered product?**

F It is an adaptation of an earlier technology.

G It helps a person with a disability overcome a handicap.

H It resembles a human body part.

J It causes a permanent change to an organism.

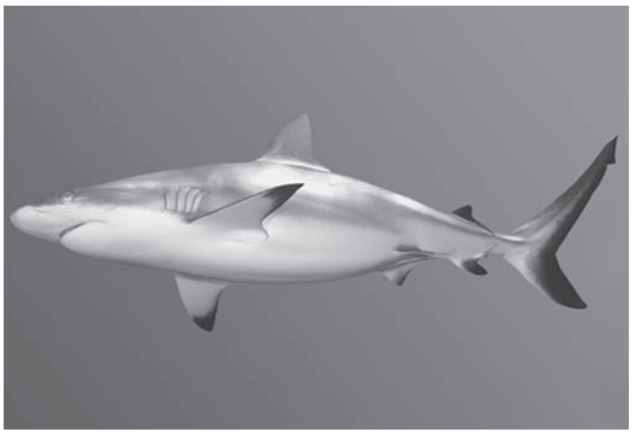
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Reporting Category: LIFE SCIENCE: Biodiversity & Change

Performance Indicator: 0807.5.1 Use a simple classification key to identify an unknown organism.

5 **An organism like the one shown in the picture below is caught in a net.**



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Classification Key

1a. The organism has feathers ..... Class Aves
1b. The organism has no feathers..... Go to 2
2a. The organism has no hair..... Go to 3
2b. The organism has hair or hair-like structures.... Go to 4
3a. The organism has gills.....Class Chondrichthyes
3b. The organism has lungs.....Class Reptilia
4a. The organism has four legs .....Class Mammalia
4b. The organism has six legs ..... Class Insecta

Using the classification key above, identify the organism's class.

A Class Insecta

B Class Reptilia

C Class Mammalia

D Class Chondrichthyes

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Reporting Category:	**LIFE SCIENCE: Biodiversity & Change**
Performance Indicator:	**0807.5.2 Analyze structural, behavioral, and physiological adaptations to predict which populations are likely to survive in a particular environment.**

6 **Which population would best be adapted to maneuver in a rocky, mountainous region?**

F a population of organisms with hooves

G a population of organisms with thick fur

H a population of organisms with gills

J a population of organisms with moist skin

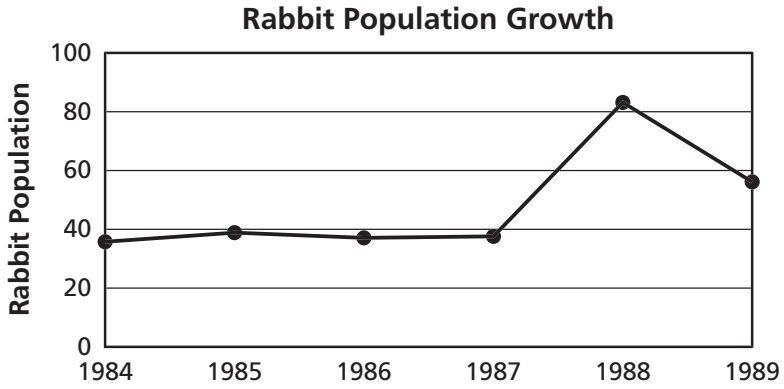
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Reporting Category: LIFE SCIENCE: Biodiversity & Change

Performance Indicator: 0807.5.3 Analyze data on levels of variation within a population to make predictions about survival under particular environmental conditions.

7 The graph below illustrates the growth of a rabbit population.



Which most likely occurred between 1987 and 1988?

A There was a decrease in available amount of food.

B There was an increase in competition.

C There was a decrease in the predator population.

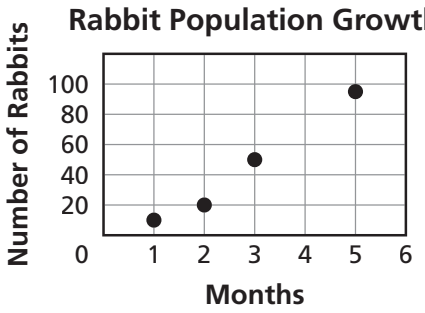
D There was an illness among the population.

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Reporting Category: LIFE SCIENCE: Biodiversity & Change

Performance Indicator: 0807.INQ.3 Interpret and translate data into a table, graph, or diagram.

8 The graph shows a rabbit population that has increased due to the lack of predators.



Which table correctly displays the population data?

F

Rabbit Population

Months	Population
1	5
2	50
3	60
5	85

H

Rabbit Population

Months	Population
1	10
2	15
3	35
5	75

G

Rabbit Population

Months	Population
1	10
2	20
3	50
5	95

J

Rabbit Population

Months	Population
1	20
2	30
3	75
5	120

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Reporting Category: LIFE SCIENCE: Biodiversity & Change

Performance Indicator: 0807.TE.3 Distinguish between the intended benefits and the unintended consequences of a new technology.

9 **Ethanol, often produced from corn, is being added to gasoline in an attempt to reduce the amount of fossil fuel usage. Which is an unintended consequence of ethanol use?**

A cost of corn products increases

B improvement in gas mileage

C conservation of fossil fuels

D improved health of environment

Reporting Category: LIFE SCIENCE: Biodiversity & Change

Performance Indicator: 0807.5.4 Identify several reasons for the importance of maintaining the earth's biodiversity.

10 **The clear-cutting of forests due to urban development will most likely result in**

F decreased forest biodiversity.

G increased oxygen production.

H decreased urban populations.

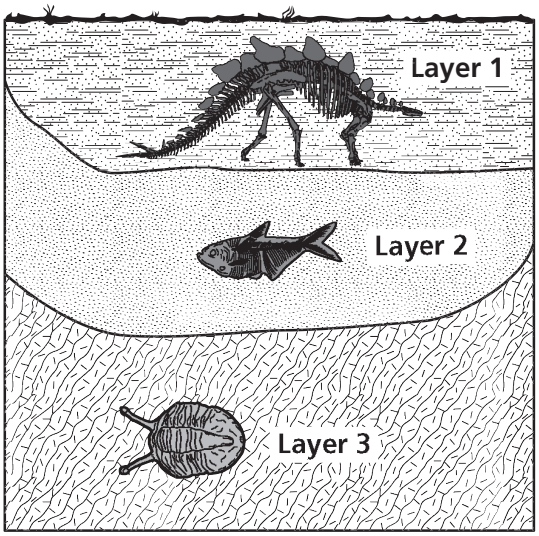
J increased organism diversity.

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Reporting Category: LIFE SCIENCE: Biodiversity & Change

Performance Indicator: 0807.5.5 Compare fossils found in sedimentary rock to determine their relative age.

11 **The diagram below shows three substrate layers with fossils.**



Which statement is <u>best</u> supported by the diagram?

A The fossil in Layer 1 is older than the fossil in Layer 2.

B The fossil in Layer 3 is older than the fossil in Layer 2.

C The fossils in Layers 2 and 3 are from closely related organisms.

D The fossils in Layers 1 and 3 are from closely related organisms.

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Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.9.2 Identify the common outcome of all chemical changes.

12 **A new substance is usually formed when two or more substances combine and form new**

F protons.

G chemical bonds.

H physical shapes.

J electrons.

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Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.9.3 Classify common substances as elements or compounds based on their symbols or formulas.

13 Which is classified as an element?

A NaCl

B CO_2

C Na

D H_2O

Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.9.4 Differentiate between a mixture and a compound.

14 Which combination of substances is a compound?

F salt and water stirred in a glass

G food coloring in frosting

H peanut butter and jelly sandwich

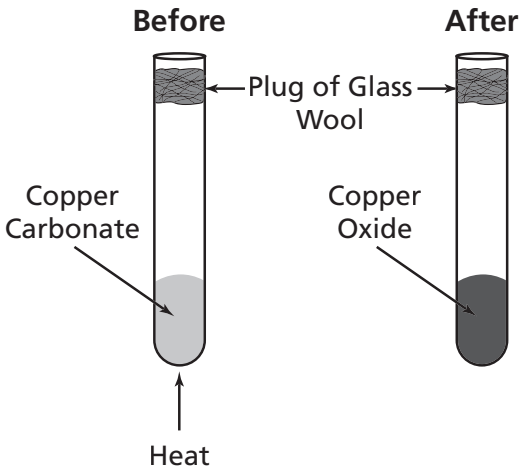
J sulfur dioxide and water forming acid rain

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Reporting Category:	PHYSICAL SCIENCE 1: Chemical Reactions
Performance Indicator:	0807.9.8 Interpret the results of an investigation to determine whether a physical or chemical change has occurred.

15 **Copper carbonate being heated in a test tube is shown in the diagram below.**



Which statement best describes what happened in this experiment?

A Copper carbonate reacted with the glass wool, causing a physical change.

B Copper carbonate decomposed when heated, causing a chemical change.

C Copper oxide reacted with the glass wool, causing a physical change.

D Copper oxide decomposed when heated, causing a chemical change.

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Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.INQ.2 Select tools and procedures needed to conduct a moderately complex experiment.

16 **The steps used to determine the mass of sugar dissolved in a beaker of water are shown in the table below.**

Table of Lab Steps

1. Find the mass of the sugar crystals on the wax paper
2. Boil the sugar water solution in the beaker
3. Scrape the sugar crystals out onto the wax paper
4. Find the mass of a piece of wax paper
5. Subtract the mass of the wax paper from the total mass
6. Wait until all the water has evaporated to collect the sugar crystals

Which correct sequence of steps should a student follow?

F 1, 2, 5, 3, 4, 6

G 1, 4, 6, 5, 3, 2

H 2, 3, 6, 5, 1, 4

J 2, 6, 4, 3, 1, 5

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Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.9.10 Identify the reactants and products of a chemical reaction.

17 **The equation below illustrates the reaction that occurs in chloroplasts during photosynthesis.**

$$\text{carbon dioxide + water} \xrightarrow{\text{sunlight}} \text{glucose + oxygen}$$

Which is a product of photosynthesis?

A carbon dioxide

B water

C sunlight

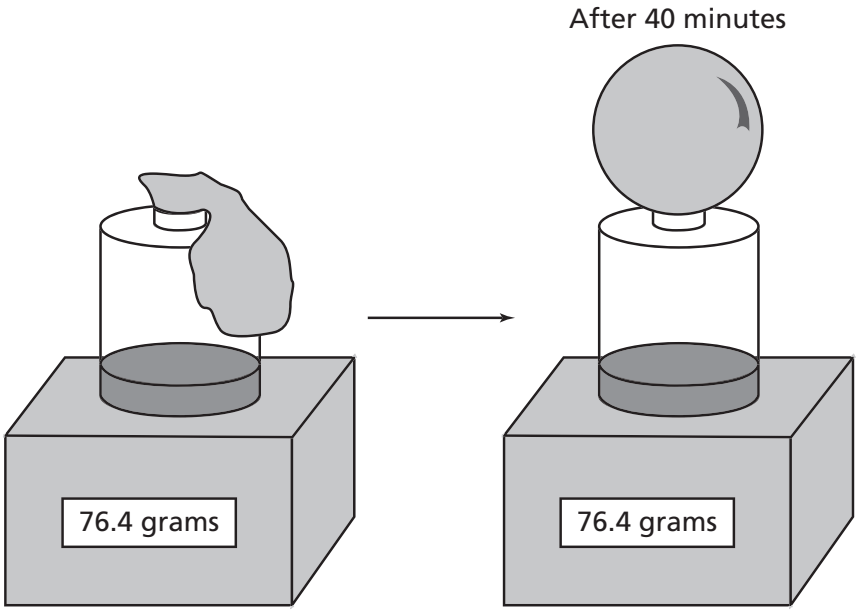
D oxygen

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Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.9.11 Recognize that in a chemical reaction the mass of the reactants is equal to the mass of the products (Law of Conservation of Mass).

18 **A student adds 5 grams of baking soda to 50 grams of vinegar in a container and quickly attaches a balloon to the top of the bottle. The student's investigation is shown below.**



What occurred in this investigation?

F The reaction produces heat, which causes the plastic of the balloon to soften and change shape.

G The reaction in the container produces gas, which causes the balloon to inflate.

H The outside air pressure pushes on the container and forces air inside the balloon.

J The air molecules from the container move into the balloon and form a solid substance.

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Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.9.11 Recognize that in a chemical reaction the mass of the reactants is equal to the mass of the products (Law of Conservation of Mass).

19 **Which sample equation best illustrates the law of conservation of mass?**

A 12 grams reactant X + 10 grams reactant Y ⟶ 2 grams product Z

B 5 grams reactant E + 5 grams reactant F ⟶ 20 grams product G + 5 grams product H

C 4 grams reactant U + 3 grams reactant V ⟶ 7 grams product W

D 10 grams reactant Q + 9 grams reactant R ⟶ 90 grams product S + 90 grams product T

Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.9.12 Identify the basic properties of acids and bases.

20 **Which is the pH of a weak acid?**

F 9.1

G 8.2

H 7.0

J 6.5

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Reporting Category: PHYSICAL SCIENCE 2: Properties of Matter

Performance Indicator: 0807.9.1 Recognize that all matter consists of atoms.

21 **A glass of ice water is on a table in a room where the room's air temperature is 20 degrees Celsius. What do the drinking glass, ice, water, and air all have in common?**

A All four are in a solid state.

B All four are at the same volume.

C All four are at their freezing points.

D All four are made of atoms.

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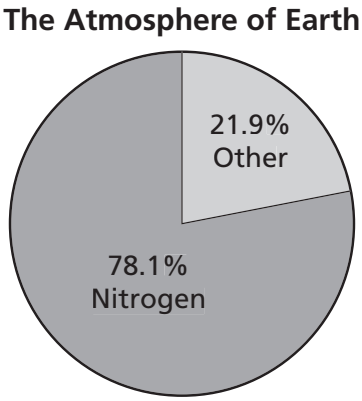
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Reporting Category: PHYSICAL SCIENCE 2: Properties of Matter

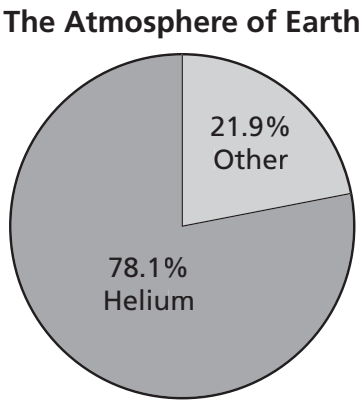
Performance Indicator: 0807.9.5 Describe the chemical makeup of the atmosphere.

22 Which circle graph correctly identifies the percentage makeup of the atmosphere of Earth?

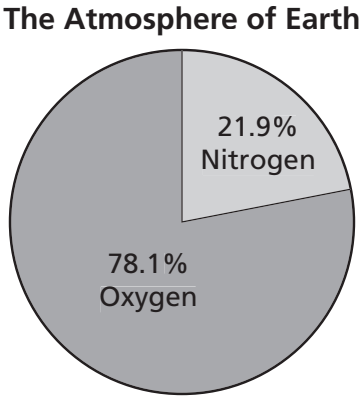
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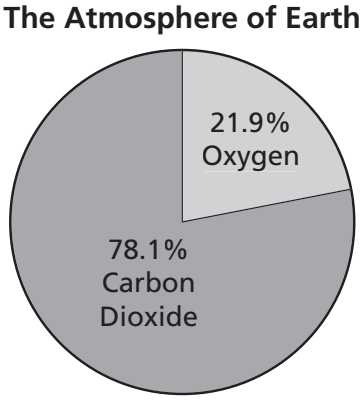
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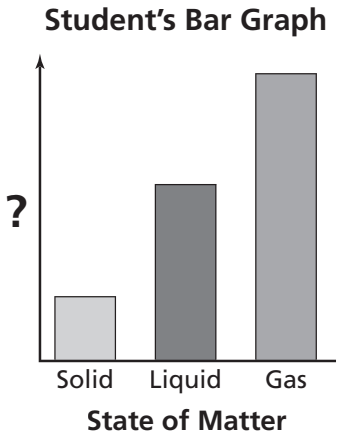
J



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Reporting Category:	**PHYSICAL SCIENCE 2: Properties of Matter**
Performance Indicator:	**0807.9.6 Compare the particle arrangement and type of particle motion associated with different states of matter.**

23 **A student created this bar graph to show how the physical state of matter is related to another factor.**



Which of these is the most appropriate label for the graph's vertical axis?

A weight

B shape

C speed of particle

D electrical charge

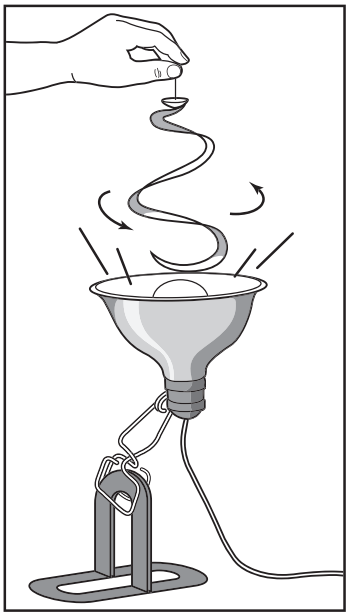
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Reporting Category: PHYSICAL SCIENCE 2: Properties of Matter

Performance Indicator: 0807.INQ.4 Draw a conclusion that establishes a cause and effect relationship supported by evidence.

24 **When the lamp below is switched on, the paper will spin.**



Which most likely causes the paper to spin?

F warm air rising

G warm paper expanding

H cool air sinking

J cool light bulb expanding

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Reporting Category: PHYSICAL SCIENCE 2: Properties of Matter

Performance Indicator: 0807.9.7 Apply an equation to determine the density of an object based on its mass and volume.

25 **A student is given an object and is asked to identify its density. The object has a volume of 3 cubic centimeters and a mass of 6 grams.**

$$\text{Density} = \frac{\text{mass}}{\text{volume}}$$

$$D = \frac{m}{v}$$

Using the formula above, what is the density of the object?

A 2 grams/cubic centimeter

B 3 grams/cubic centimeter

C 6 grams/cubic centimeter

D 9 grams/cubic centimeter

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Reporting Category: PHYSICAL SCIENCE 2: Properties of Matter

Performance Indicator: 0807.9.9 Use the periodic table to determine the properties of an element.

26 In the periodic table shown below, some elements are shaded.

H																	He
Li	Be											B	C	N	O	F	Ne
Na	Mg											Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	Ac	Unq	Unp	Unh	Uns	Uno	Une	Unn								

Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

Based on its position in the periodic table, which element is the heaviest?

F helium (He)

G neon (Ne)

H argon (Ar)

J krypton (Kr)

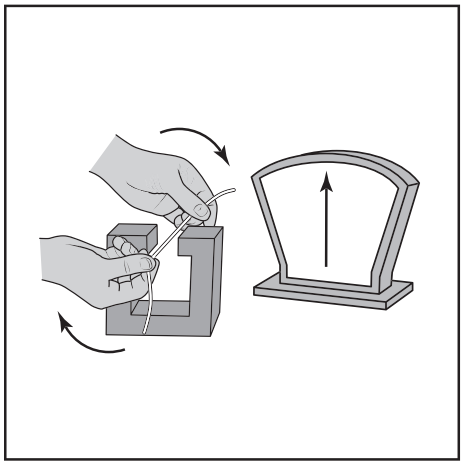
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Reporting Category: PHYSICAL SCIENCE 3: Forces of Nature

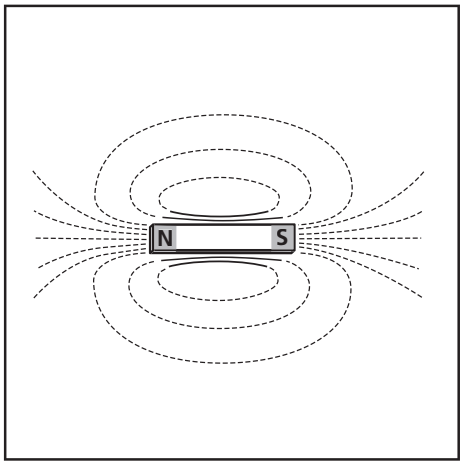
Performance Indicator: 0807.12.1 Recognize that electricity can be produced using a magnet and wire coil.

27 Which diagram best identifies how an electric current is produced?

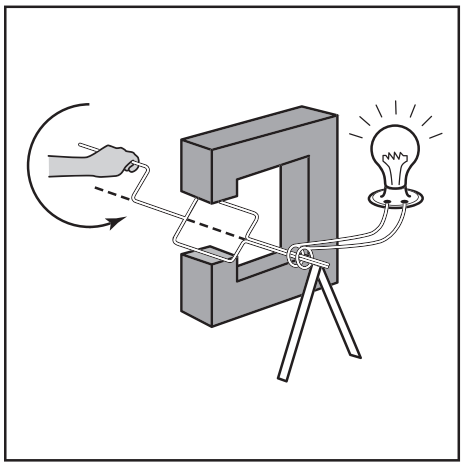
A



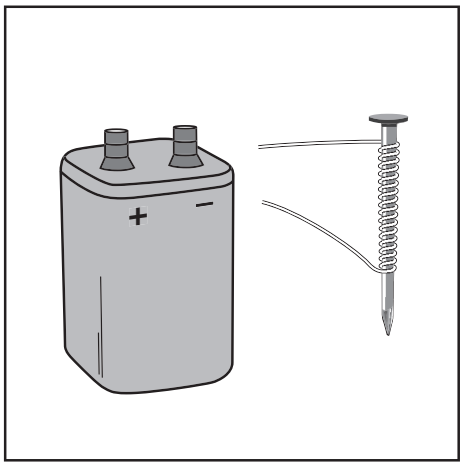
C



B



D



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Reporting Category: PHYSICAL SCIENCE 3: Forces of Nature

Performance Indicator: 0807.12.1 Recognize that electricity can be produced using a magnet and wire coil.

28 **Which is generated when a bar magnet is moved through a wire coil?**

F electric current

G mechanical energy

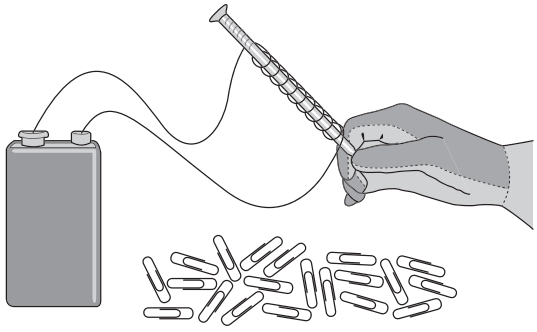
H thermal energy

J gravitational field

Reporting Category: PHYSICAL SCIENCE 3: Forces of Nature

Performance Indicator: 0807.12.2 Describe the basic principles of an electromagnet.

29 **A diagram is shown below.**



What device is the diagram representing?

A a barometer

B a bar magnet

C an electromagnet

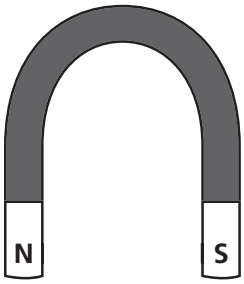
D an electric scale

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Reporting Category:	PHYSICAL SCIENCE 3: Forces of Nature
Performance Indicator:	0807.12.3 Distinguish among the Earth's magnetic field, a magnet, and the fields that surround a magnet and an electromagnet.

30 Which magnet below would provide the best example for the magnetic poles and magnetic fields of Earth?

F



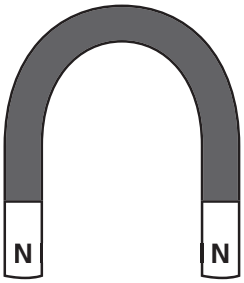
H



G



J



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Reporting Category: PHYSICAL SCIENCE 3: Forces of Nature

Performance Indicator: 0807.12.4 Distinguish between mass and weight using appropriate measuring instruments and units.

31 **Which of these is best used to measure weight in newtons?**

A spring scale

B triple beam balance

C double pan balance

D simple lever

Reporting Category: PHYSICAL SCIENCE 3: Forces of Nature

Performance Indicator: 0807.TE.1 Identify the tools and procedures needed to test the design features of a prototype.

32 **Students are to build a model bridge using toothpicks and wood glue. The design of the bridge must support a specific weight and measure 20 centimeters long. Which tools would best help determine if the model bridge meets the design requirements?**

F ruler, weights, and string

G string, beaker, and water

H hammer, string, and nails

J pliers, saw, and string

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Reporting Category: PHYSICAL SCIENCE 3: Forces of Nature

Performance Indicator: 0807.12.5 Determine the relationship among the mass of objects, the distance between these objects, and the amount of gravitational attraction.

33 When will the gravitational attraction be greatest between two baseballs, each with the same mass?

A when they are 10 meters apart

B when they are 1 meter apart

C when they are 5 meters apart

D when they are 20 meters apart

Reporting Category: PHYSICAL SCIENCE 3: Forces of Nature

Performance Indicator: 0807.12.6 Illustrate how gravity controls the motion of objects in the solar system.

34 Which of these keeps a moon in orbit around a planet?

F shape

G composition

H size

J gravity

STOP

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Social Studies



Reporting Category:	**1 Economics**
Performance Indicator:	**8.2.1 Recognize America's natural resources (i.e., land, timber, fish, animal pelts, peppers, sweet potatoes, squash, pumpkins, turkeys, peanuts, potatoes, tomatoes, tobacco, cacao, beans, and vanilla).**

1 **Which food resource is native to the Americas?**

A eggplant

B peanuts

C rice

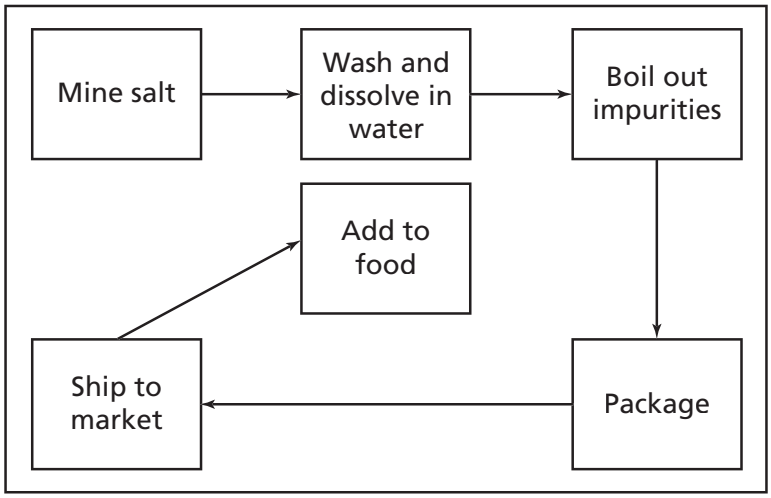
D soybeans

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Reporting Category: 1 Economics

Performance Indicator: 8.2.2 Interpret a diagram showing the steps of changing a resource into a product.

Salt Production



2 **Based on the diagram above, which step occurs immediately before packaging the salt?**

F Wash and dissolve in water

G Boil out impurities

H Ship to market

J Add to food

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Reporting Category: 1 Economics

Performance Indicator: 8.2.3 Differentiate between credit and debt.

3 **Which situation is an example of debt?**

A money borrowed by someone that must be paid back

B money that earns interest while kept in a bank

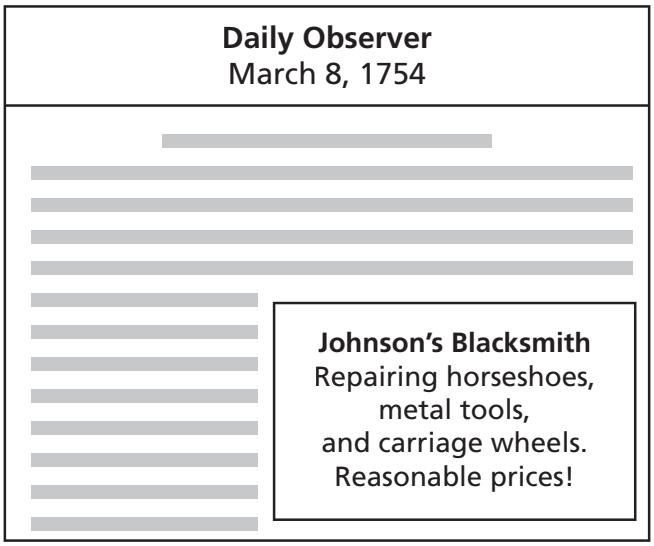
C money that a bank invests in stocks and bonds

D money held in reserve for emergencies

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Reporting Category: 1 Economics

Performance Indicator: 8.2.4 Recognize the economic activities of early America (i.e., agriculture, industry, and service).



4 **Which type of economic activity is illustrated in the advertisement above?**

F herding

G farming

H service

J barter

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Reporting Category: 1 Economics

Performance Indicator: 8.2.5 Identify various forms of taxation (i.e., tariffs, sales tax, excise tax).

5 **Which form of taxation is used by governments to collect revenue from international trade?**

A tariffs

B sales taxes

C income taxes

D user fees

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Reporting Category: 1 Economics

Performance Indicator: 8.2.6 Interpret a variety of economic graphs and charts with topics (e.g., the Columbian exchange, numbers of slaves, population of colonies, population diversity).

Slave Exports from Africa to the Americas

Time Period	Number
1450–1600	367,000
1601–1700	1,868,000
1701–1800	6,133,000
1801–1900	3,330,000
Total	**11,698,000**

Source: *A History of African Societies to 1870*

6 **Which statement is true based on the table above?**

F Slave exports were the highest in the 1800s.

G The 1600s had a lower rate of slave exportation to the Americas than the 1500s.

H The 1700s had the greatest number of slave exports to the Americas.

J Slave exports remained constant for three centuries beginning in 1500.

Go On ▶

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Reporting Category: 1 Economics

Performance Indicator: 8.2.7 Differentiate between a commercial and a subsistence economy.

7 **In which type of economy do families produce all of their own needs?**

A commercial

B manufacturing

C subsistence

D capitalist

Reporting Category: 1 Economics

Performance Indicator: 8.2.8 Recognize the factors that led to urbanization and industrialization in early America (i.e., religious freedom, land ownership, thriving market).

8 **Many New England colonists who lacked good farmland established shops in towns to produce**

F finished goods for new settlers.

G crafts based on Native American designs.

H materials to build better roads.

J luxury items for the London market.

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Reporting Category: 1 Economics

Performance Indicator: 8.2.10 Distinguish among various economic markets found in early America (i.e., traditional, monopoly, oligopoly, free competition).

Colonial Shoemakers in New England

- Independent
- Numerous

9 What economic system is represented above?

A free competition

B monopoly

C traditional

D oligopoly

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Reporting Category: 2 Governance and Civics

Performance Indicator: 8.4.1 Identify the rights, responsibilities, and privileges of a member of the United States of America (i.e., Declaration of Independence, Articles of Confederation, Constitution, Bill of Rights).

> The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated . . .
>
> — 4th Amendment

10 **The amendment excerpted above <u>most</u> directly protects a person's right to**

F assembly.

G privacy.

H speech.

J citizenship.

Reporting Category: 2 Governance and Civics

Performance Indicator: 8.4.2 Identify the purposes and structures of various systems of governance (i.e., Federalism, Confederation, Republic, Democracy, Executive, Legislative, Judicial).

11 **Which type of government shares power between state and national governments?**

A oligarchy

B democracy

C republic

D federal

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Reporting Category: 2 Governance and Civics

Performance Indicator: 8.4.3 Recognize the purpose of government and how its powers are acquired, used, and justified.

Services Provided by Governments

- Schools
- Highways
- Bridges

12 **Which statement best explains why governments are responsible for providing the services on the list above?**

F The services provide for national defense.

G The court system requires the services.

H The services provide a public good.

J The business community demands the services.

Reporting Category: 2 Governance and Civics

Performance Indicator: 8.4.4 Recognize the rights and responsibilities of individuals throughout the development of the United States.

13 **The First Amendment right to a free press assists Americans in which civic responsibility?**

A serving in the military

B serving on juries

C staying informed

D paying taxes

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Reporting Category: 2 Governance and Civics

Performance Indicator: 8.4.5 Identify how conditions, actions, and motivations contributed to conflict and cooperation between states, regions, and nations.

14 **Which political agreement in the Constitutional Convention temporarily reduced conflict between the North and the South?**

F Missouri Compromise

G Kansas-Nebraska Act

H Three-Fifths Compromise

J Fugitive Slave Act

Reporting Category: 2 Governance and Civics

Performance Indicator: 8.4.6 Recognize the rights guaranteed in the Bill of Rights.

- Protection against cruel and unusual punishment
- Guarantee of a speedy trial
- Guarantee of a trial by jury

15 **The guarantees described above are listed in the**

A Bill of Rights.

B Emancipation Proclamation.

C Declaration of Independence.

D Mayflower Compact.

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Reporting Category:	**2 Governance and Civics**
Performance Indicator:	**8.4.7 Recognize the impact that major court decisions have had on American life (i.e., Marbury v. Madison, McCulloch v. Maryland, Dred Scott v. Sanford).**

16 **What is significant about the United States Supreme Court's decision in *Marbury v. Madison*?**

F It eliminated government regulation of commerce.

G It established the principle of judicial review.

H It ended segregation in public schools.

J It reinforced the supremacy of the federal government.

Go On ▶

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Reporting Category:	**2 Governance and Civics**
Performance Indicator:	**8.4.8 Recognize how a right must be interpreted to balance individual rights with the need for order (i.e., freedom of speech, freedom of religion, trial by jury).**



17 **Why would the city council <u>most</u> likely require an organization to get a permit for the parade?**

A to prevent spectators from watching

B to reduce utility rates

C to limit the group's free speech

D to maintain public order

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Reporting Category: 2 Governance and Civics

Performance Indicator: 8.6.4 Identify the role of institutions in furthering both continuity and change (i.e., governments, churches, families, schools, communities).

18 **Which institutions are established by communities to provide an educated work force?**

F governments

G schools

H churches

J families

Reporting Category: 2 Governance and Civics

Performance Indicator: 8.6.5 Recognize how groups and institutions work together to meet common needs.

19 **A group attempting to overturn an unjust law would most likely turn to which government institution?**

A health department

B the courts

C school systems

D the military

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Reporting Category: 3 Geography

Performance Indicator: 8.1.1 Recognize the definition of religion.

20 **Which of these phrases best describes religion?**

F belief in a single government

G written trade agreements

H a set of shared beliefs and practices

J written stories of fiction

Reporting Category: 3 Geography

Performance Indicator: 8.1.7 Recognize how immigration and cultural diffusion have influenced the character of a place (i.e., religion within certain colonies, African songs in the American South, British v. French influences).

21 **Canada's official languages, English and French, indicate the country**

A was colonized by England and France.

B only allows residents from England and France to become citizens.

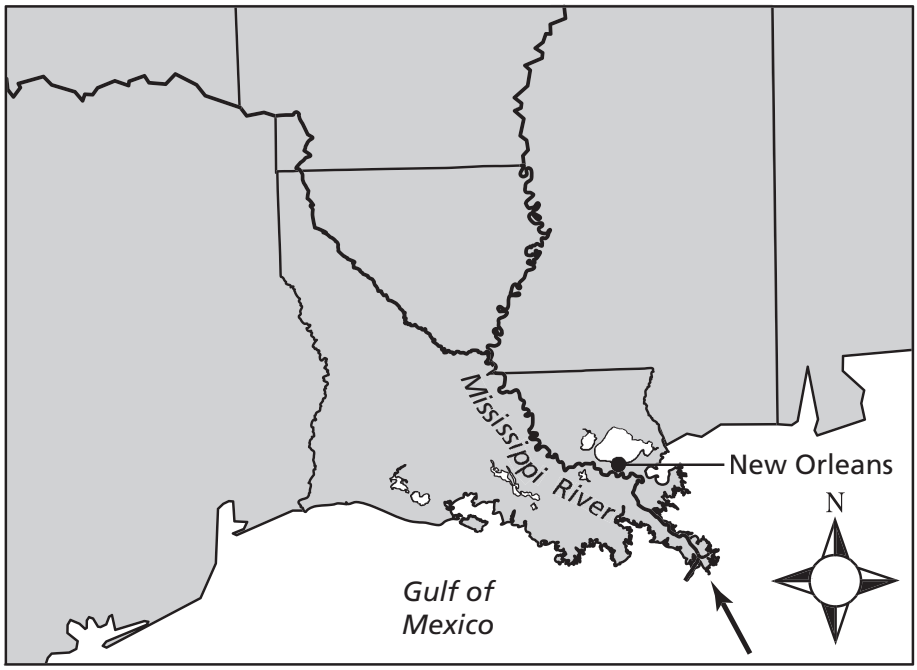
C required its citizens to be knowledgeable of England and France.

D trades equally with England and France.

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Reporting Category:	**3 Geography**
Performance Indicator:	**8.3.2 Identify and use the key geographic elements on a map (i.e., island, flood plain, swamp, delta, marsh, harbor, cape, sea level, bay, prairie, desert, oasis, mesa, mountain, valley, glacier, canyon, cliff, plateau).**

Louisiana Gulf Coast



22 **Which geographic feature is marked by an arrow on the map above?**

F delta

G glacier

H oasis

J plateau

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Reporting Category:	**3 Geography**
Performance Indicator:	**8.3.3 Interpret examples which illustrate how cultures adapt to or change the environment (i.e., deforestation, subsistence farming, cash crop, dam and road building).**

Nation 1: The government encourages and supports efforts to import natural resources.
Nation 2: The government refuses to help its citizens attain health care.
Nation 3: The government supports a large military.
Nation 4: The government constructs dams on major rivers.

23 **Which of the cultures described above is changing its environment?**

A Nation 1

B Nation 2

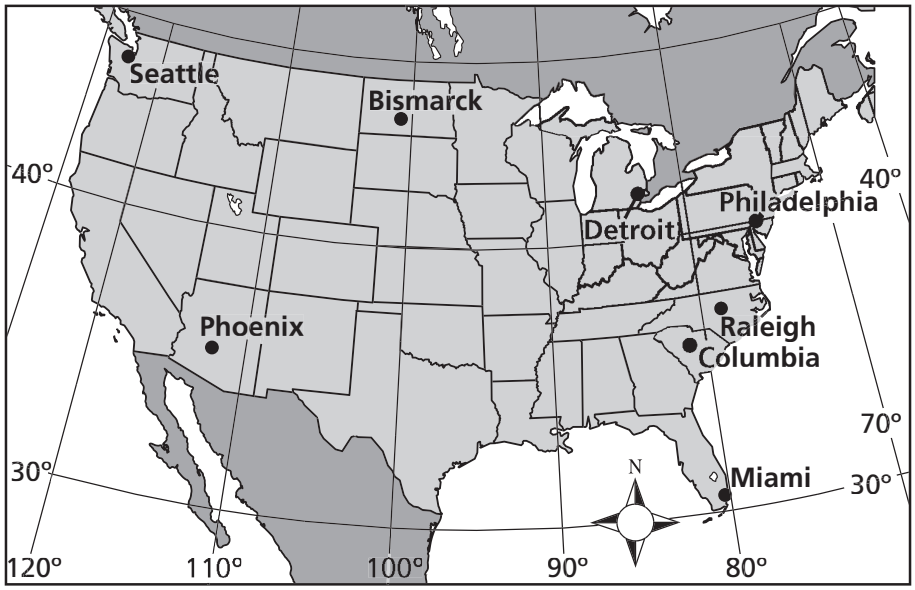
C Nation 3

D Nation 4

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Reporting Category:	**3 Geography**
Performance Indicator:	**8.3.4 Use various geographic data from maps and globes to determine longitude, latitude, distance, direction.**

United States



24 **Which two cities are separated by a measurement of roughly 20° longitude?**

F Bismarck and Columbia

G Detroit and Philadelphia

H Miami and Seattle

J Phoenix and Raleigh

Go On ▶

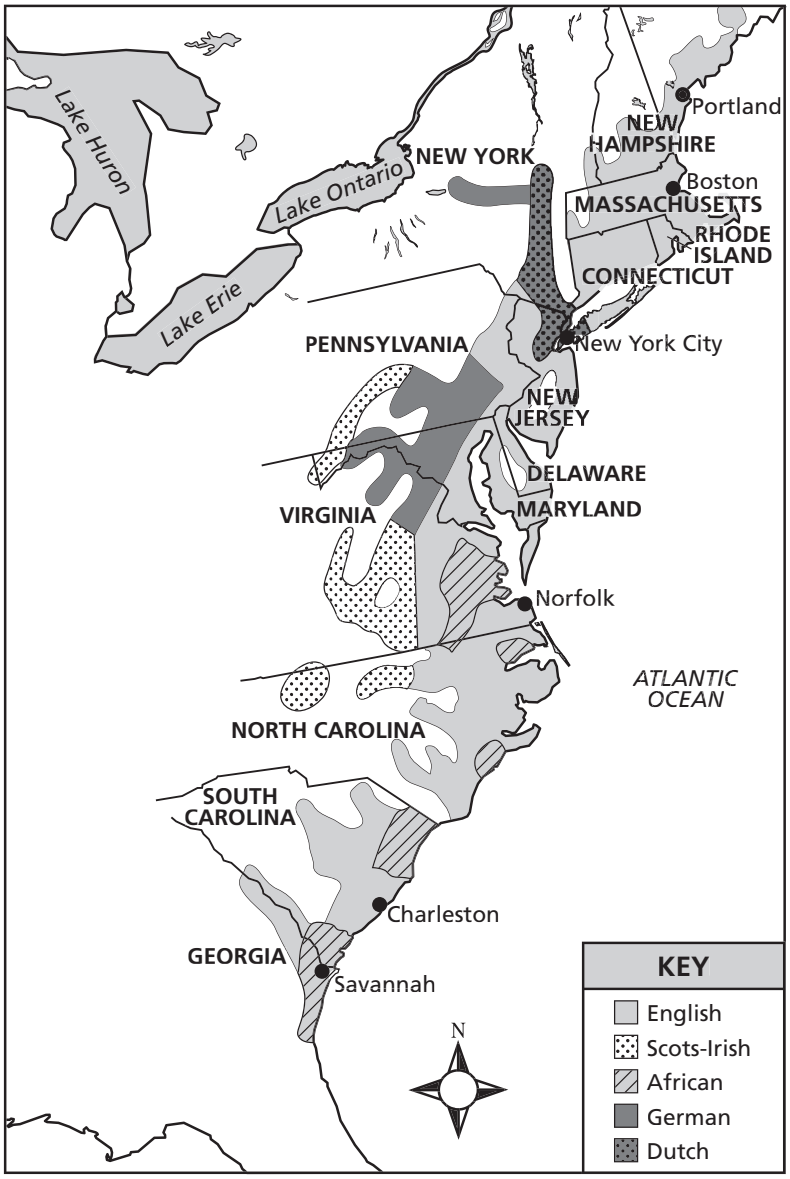
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Reporting Category: 3 Geography

Performance Indicator: 8.3.5 Interpret a geographic map of the early United States.

Directions Use the map below and what you know to do Number 25.

Major Immigrant/Ethnic Groups in Colonial America: 1760



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25 **Based on this map, which immigrant group was most likely the first to move into Tennessee in great numbers?**

A Dutch

B English

C German

D Scots-Irish

Reporting Category:	**3 Geography**
Performance Indicator:	**8.3.6 Recognize how topographical features such as mountain and river systems influenced the settlement and expansion of the United States (i.e., Cumberland Gap, Wilderness Road, Ohio and Tennessee river systems).**

26 **Which geographic feature aided the early exploration of Tennessee?**

F Cumberland Gap

G Ozark Plateau

H Missouri River

J Mississippi Delta

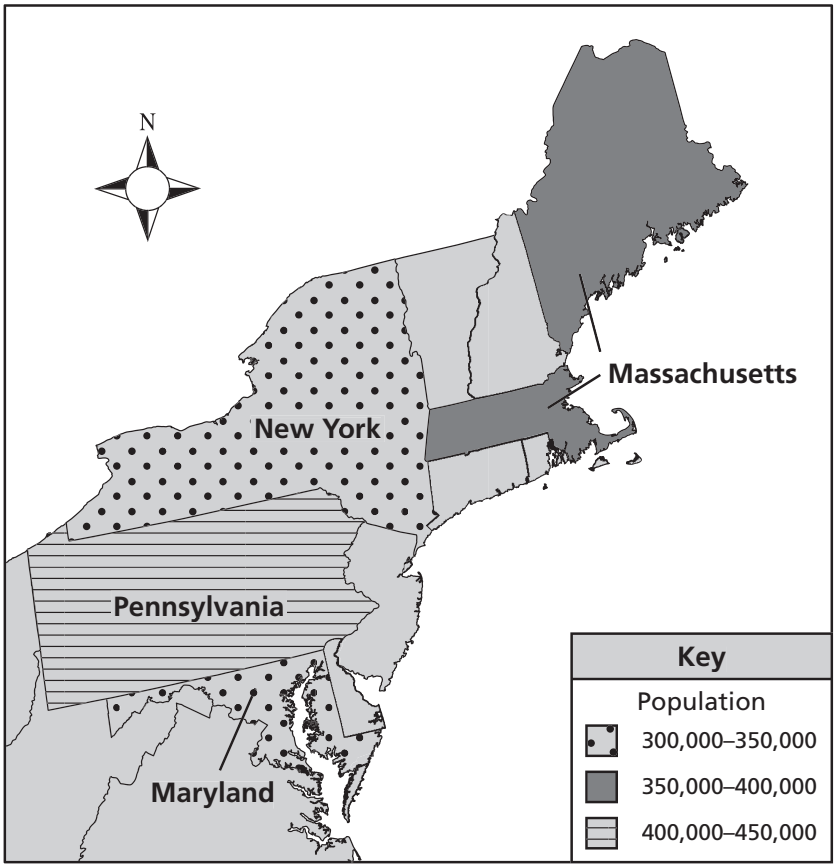
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Reporting Category: 3 Geography

Performance Indicator: 8.3.7 Interpret a chart or map of population characteristics of the early United States (i.e., density, distribution, regional growth).

Population of Selected U.S. States, 1790



Source: U.S. Census

27 According to the map above, which of these states had the greatest population in 1790?

A Maryland

B Massachusetts

C New York

D Pennsylvania

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Reporting Category:	**4 US History Period 1 (Beginnings -1820)**
Performance Indicator:	**UH1.8.1.3 Recognize the influence of science and technology on the development of early American colonial cultures (i.e., compass, shipbuilding, food storage, printing press, financial markets, weaponry, transportation).**

?

- Use of iron tools
- Use of horses
- Use of firearms

28 **What is the best title for the list above?**

F Colonial Advantages Over Native Americans

G Native American Contributions to the Colonies

H Colonial Contributions to the Triangular Trade

J Native American Farming Innovations

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Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.1.4 Compare and contrast the tenets of America's early major religions (i.e., Olmec beliefs, Native American Earth/Mother Spirit, African Traditional Religion, Puritanism, Quakerism).

29 During the Colonial Era, followers of both African and European religious traditions

A believed in spiritual forces.

B worshipped the world around them.

C believed in monotheism.

D worshipped ancestors.

Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.1.5 Identify how religion contributed to early American society (i.e., impact on government, education, social norms, slavery, tolerance).

30 Which institution was <u>most</u> important in establishing social norms and organizing the early Puritan society in New England?

F the local militia

G the colonial government

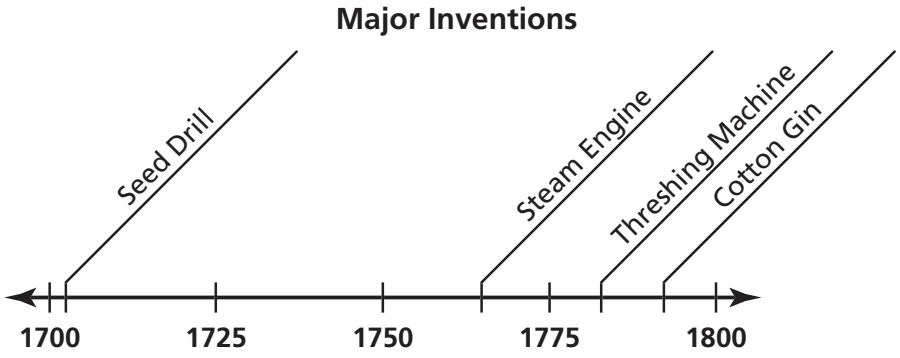
H the royal governor

J the community church

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Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.1.6 Interpret a timeline of technological innovations.



31 **Which area of the economy was <u>most</u> affected by the innovations shown above?**

A banking

B agriculture

C steel

D transportation

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Reporting Category:	**4 US History Period 1 (Beginnings -1820)**
Performance Indicator:	**UH1.8.2.9 Analyze in economic terms (i.e., climate, triangle trade, infrastructure, topography) why slavery flourished in the South as opposed to the North.**

32 **Slavery did not become an important part of the economy in the northern United States because**

F the triangle trade only affected southern colonies.

G strict religious beliefs forbade slavery.

H the cold climate made cash crops unprofitable.

J a lack of industrial development discouraged slavery.

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Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.5.1 Contrast the characteristics of major native civilizations of the Americas.

Culture	Location	Characteristics
Pueblo	Southwest	• Used stone, straw, and earth to build their homes • Made pots and other objects out of clay • Grew crops such as corn and cotton
Mohawk	Northeast	• Built homes and other buildings out of bark and twigs • Used fish and deer as important food sources • Built canoes from trees • Wove baskets

33 **The main differences between the groups described above were a result of the**

A size of their populations.

B amount of wealth they collected.

C types of basic needs they needed to meet.

D types of natural resources available in their regions.

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Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.5.3 Differentiate between a primary and a secondary source.

34 **Which document is a secondary source?**

F a journal kept by a soldier

G a history book written by a professor

H a letter written by a military officer to his wife

J a map drawn for use in battle planning

Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.5.4 Recognize causes and consequences of conflict (i.e., French and Indian War, Revolutionary War, War of 1812).

35 **Which conflict resulted from competition between two European nations for control of North America?**

A the French and Indian War

B the American Revolution

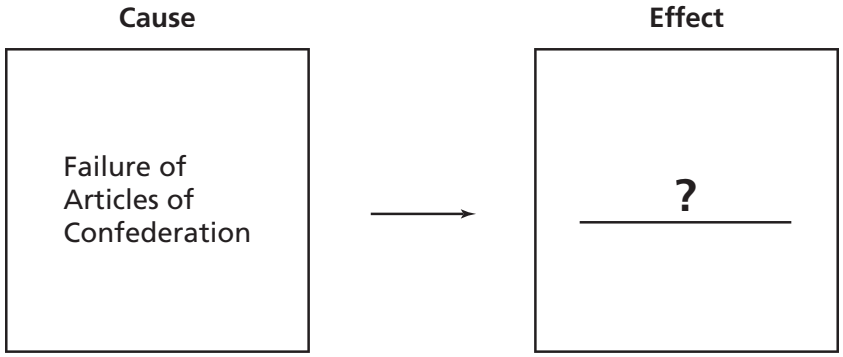
C the War of 1812

D the Civil War

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Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.5.6 Classify the characteristics of major historic events into causes and effects (i.e., exploration, colonization, revolution, expansion, and Civil War).



36 **Which event <u>best</u> completes the diagram above?**

F Pilgrims Sign the Mayflower Compact

G Thomas Paine Writes *Common Sense*

H Declaration of Independence Is Signed

J U.S. Constitution Is Written

Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.5.7 Recognize the historical impacts of European settlement in North America.

37 **European settlement in North America resulted in the**

A introduction of new diseases.

B beginning of the Protestant Reformation.

C increased power of the Aztec civilization.

D decline of international trade.

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Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.5.12 Differentiate between primary and secondary source documents.

38 **Recording daily events in a journal is one way to create a**

F secondary source.

G brochure.

H primary source.

J biography.

Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.1.2 Identify cultures that contributed to the development of the United States (i.e., Native American, African, British, Scottish, Irish, German).

39 **By 1820, Tennessee's inhabitants included Native Americans, African Americans, and**

A immigrants from Europe.

B workers from Asia.

C farmers from Mexico.

D soldiers from Canada.

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Reporting Category:	**5 US History Period 2 (1801-1900)**
Performance Indicator:	**UH2.8.3.1 Recognize the causes and examples of migration and immigration in Early American (i.e. land, religion, money, pioneer spirit, indentured servitude, displacement, and slavery).**

40 **At the end of the 19th century, most immigrants from Eastern Europe came to America in response to**

F poor economic conditions in their homelands.

G U.S. government programs offering free land.

H generous terms of indentured servitude.

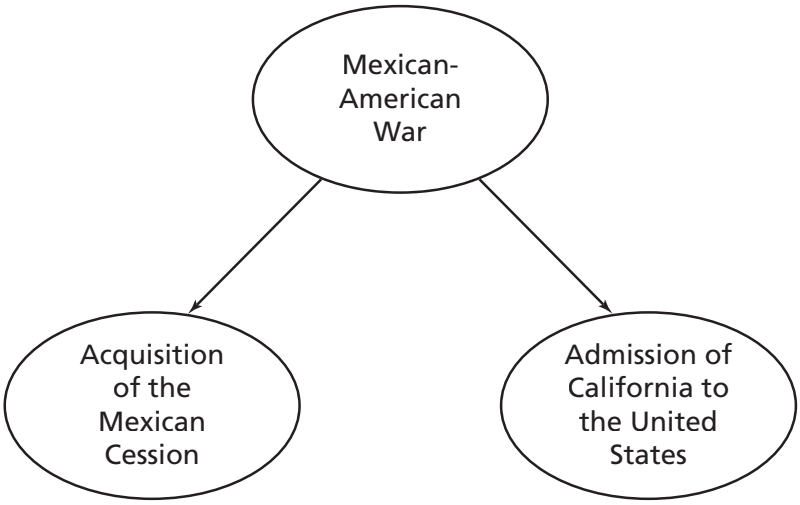
J career opportunities in the U.S. military.

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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.4.9 Analyze the contributions of Tennessee political leaders on the national scene (i.e., Andrew Jackson, Andrew Johnson, James K. Polk, Sequoyah, Sam Houston).



41 **Which president made the decisions that began the sequence of events above?**

A William Henry Harrison

B Andrew Jackson

C James K. Polk

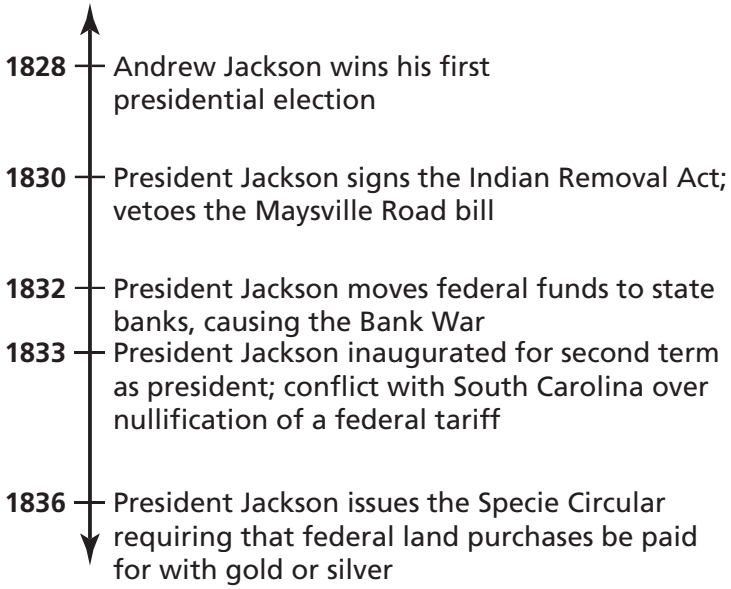
D Millard Fillmore

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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.2 Read a timeline and order events of the past.

Andrew Jackson's Presidency



42 **Based on the timeline above, which action did President Andrew Jackson take during his second term in office?**

F vetoed a road bill

G issued the Specie Circular

H signed the Indian Removal Act

J moved federal funds to state banks

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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.3 Differentiate between a primary and secondary source.

> Late in the fall of 1838 we emigrated from Ohio to Missouri. Our first halting place was on Green River, but the next year we took a farm in Platte County. . . . [I]n April, 1844, we started across the plains.
>
> — *Across the Plains in 1844* by Catherine Pringle, 1860

43 **Why is the excerpt above a primary source?**

A It is a textbook chapter.

B It is an autobiographical account.

C It is a summary of a historical event.

D It is an official government document.

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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.4 Recognize causes and consequences of conflict, (i.e., French and Indian War, Revolutionary War, War of 1812).

- British forces encourage Native Americans to attack settlers
- British navy impresses American sailors
- British navy attacks U.S. ships

44 **War Hawks in Congress reacted to the issues listed above by calling for which conflict?**

F French and Indian War

G the War of 1812

H Pontiac's Rebellion

J the First Seminole War

Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.5 Recognize consequences of the westward expansion of the United States.

45 **The rapid settlement of the western territories during the first half of the 19th century led to**

A economic depression.

B laws restricting immigration.

C sectional differences.

D laws restricting reform movements.

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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.6 Classify the characteristics of major historical events into causes and effects (i.e., exploration, colonization, revolution, expansion, and Civil War).

46 **Which event led most directly to the Civil War?**

F completion of the Transcontinental Railroad

G passing the Homestead Act

H secession of South Carolina

J fighting the Battle of Gettysburg

Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.8 Determine the social, political, and economic factors that contributed to the institution of slavery in America.

47 **Which economic factor contributed most to the increase in slavery after 1800?**

A creation of monopolies

B growth of factory towns

C discovery of mineral deposits

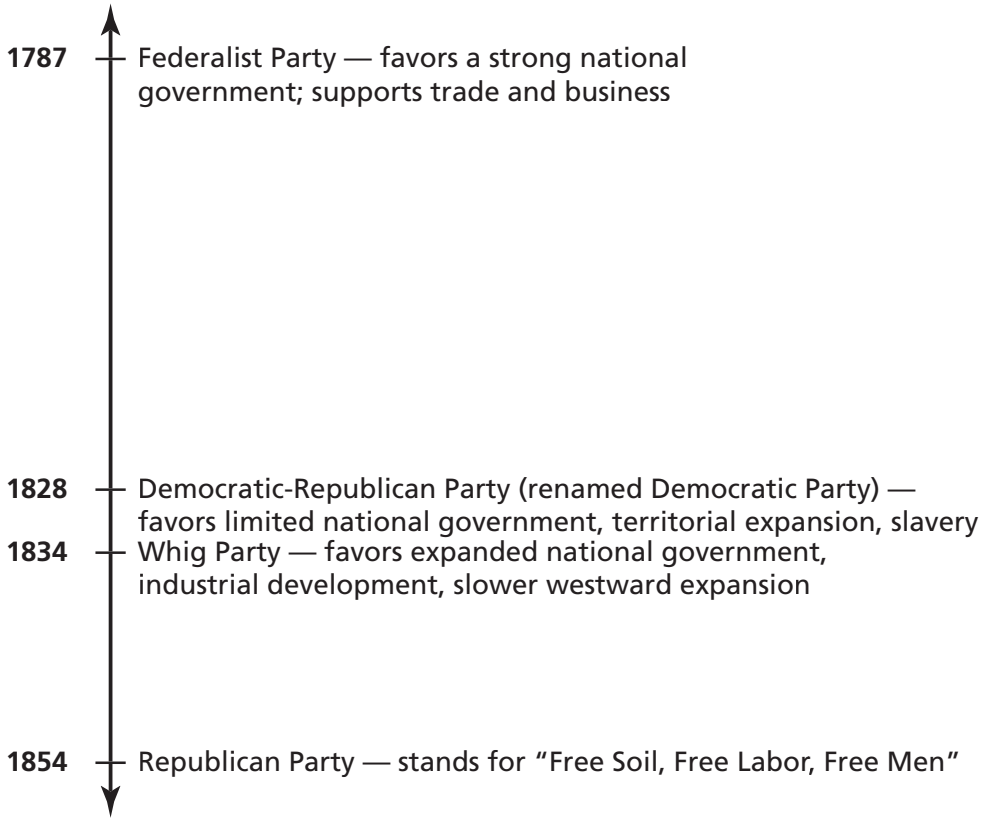
D expansion of cotton plantations

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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.9 Interpret a timeline, detailing the development of political parties in the United States to the Civil War.

Development of Some Political Parties From 1787 to 1854



Note: Some dates are approximate

48 **According to the timeline above, abolitionists would most likely have been attracted to the**

F Federalist Party.

G Democratic Party.

H Republican Party.

J Whig Party.

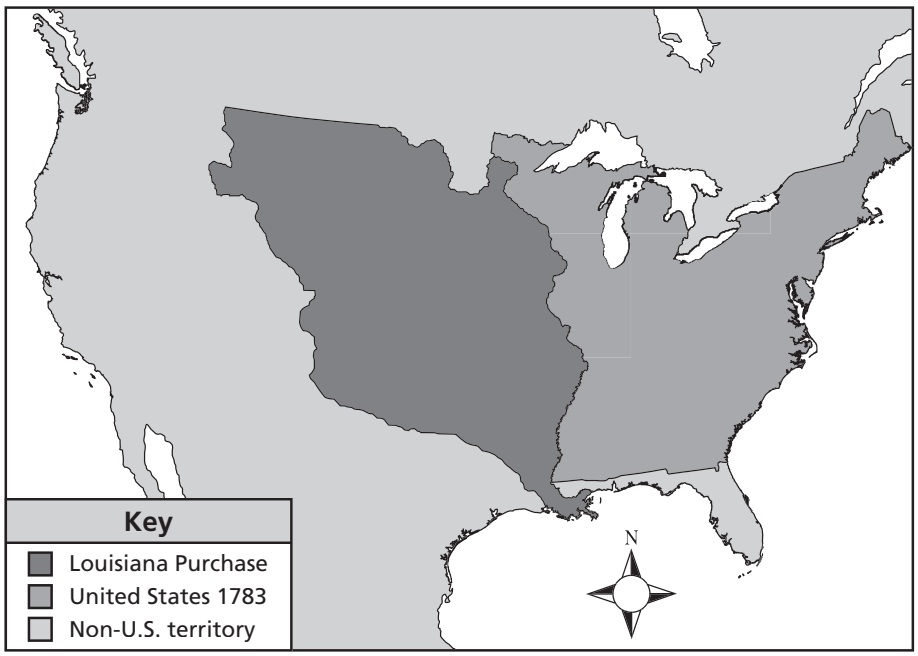
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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.10 Interpret maps, timelines, and charts that illustrate key elements of history (i.e., expansion, economics, politics, society).

Louisiana Purchase



49 **The map above shows that the Louisiana Purchase**

A doubled the land area of the United States.

B expanded the United States to its present-day boundaries.

C added most of the Southwest to the United States.

D gave the United States control of the Ohio River valley.

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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.11 Identify conclusions about historical events using primary and secondary sources.

> Until lately, there were no Europeans on this continent; that it then all belonged to [Native Americans] . . . to keep it, to traverse it, to enjoy its productions. . . . The way, and the only way, is for all the [Native Americans] to unite in claiming a common and equal right in the land . . .
>
> — Tecumseh, Speech at Vincennes, 1810

50 **In the excerpt above, Tecumseh states that to stop settlers from taking their land, Native Americans needed to**

F work together as a group.

G move farther west.

H sell at a fair price.

J move onto reservations.

Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.13 Examine the demographic changes brought about by westward movement (i.e., slavery, industrialization, and Native American relocation).

51 **Which of these demographic changes was created by United States westward expansion?**

A Native Americans were forced to relocate to new lands.

B Africans were forced to be slaves on Caribbean plantations.

C Children worked long hours in American factories.

D Irish immigrants relocated to growing urban centers.

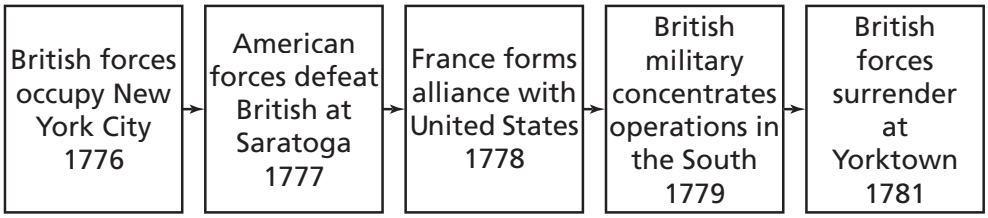
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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.14 Recognize the course of conflicts including major battles, alliances, strategy, leadership, resources, or technology using a diagram for the Revolutionary War.

Events of the Revolutionary War



52 **Based on the diagram above, why is the Battle of Saratoga considered the turning point of the Revolutionary War?**

F It occurred about halfway through the war.

G It moved the center of fighting south.

H It took place between major British victories.

J It persuaded France to join the American cause.

Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.6.1 Identify the impact of individual and group decisions on historical events.

53 **Which president was responsible for increasing the size of the United States by purchasing land from France?**

A John Adams

B Thomas Jefferson

C James Madison

D James Monroe

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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.6.2 Recognize the impact groups have on change at the local, state, national, and world levels.

54 **Which social injustice did abolitionists bring to the attention of the American public?**

F discrimination against women

G slavery of African Americans

H theft of Native American land

J child labor in factories

Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.6.3 Recognize examples of stereotyping, prejudice, conformity, and altruism in early American history.

55 **During the 1800s, women were forbidden by law to**

A attend public schools.

B vote in elections.

C work in textile factories.

D write newspaper editorials.

STOP

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Reading/Language Arts
Answer Key

1	A
2	J
3	C
4	F
5	D
6	G
7	B
8	J
9	B
10	G
11	C
12	G
13	B
14	H
15	A
16	J
17	A
18	H
19	B
20	J
21	B
22	G
23	A
24	F

25	A
26	H
27	A
28	H
29	B
30	H
31	D
32	F
33	C
34	G
35	B
36	H
37	A
38	J
39	D
40	F
41	D
42	J
43	A
44	J
45	A
46	G
47	A
48	J

49	A
50	H
51	C
52	F
53	A
54	H
55	D
56	F
57	D
58	G
59	C
60	J
61	C
62	G
63	D
64	J
65	C
66	G
67	A
68	F
69	C
70	F
71	C
72	G

73	A
74	H
75	B
76	J
77	B
78	F
79	D
80	G
81	D
82	H
83	D
84	G
85	C
86	J
87	B
88	G
89	C
90	G
91	C
92	F
93	D

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Math
Answer Key

1	C
2	H
3	D
4	G
5	B

6	G
7	D
8	F
9	D
10	H

11	B
12	J
13	A
14	G
15	B

16	H
17	A
18	F
19	D
20	F

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Science
Answer Key

1	C
2	J
3	C
4	G
5	D
6	F
7	C
8	G
9	A

10	F
11	B
12	G
13	C
14	J
15	B
16	J
17	D
18	G

19	C
20	J
21	D
22	F
23	C
24	F
25	A
26	J
27	B

28	F
29	C
30	H
31	A
32	F
33	B
34	J

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Social Studies
Answer Key

1	B
2	G
3	A
4	H
5	A
6	H
7	C
8	F
9	A
10	G
11	D
12	H
13	C
14	H

15	A
16	G
17	D
18	G
19	B
20	H
21	A
22	F
23	D
24	F
25	D
26	F
27	D
28	F

29	A
30	J
31	B
32	H
33	D
34	G
35	A
36	J
37	A
38	H
39	A
40	F
41	C
42	G

43	B
44	G
45	C
46	H
47	D
48	H
49	A
50	F
51	A
52	J
53	B
54	G
55	B

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Tennessee Comprehensive Assessment Program

Achievement Test ~ Grade 8

Item Sampler

542241 1 2 3 4 5 A B C D E Printed in the USA ISD4530

Mathematics



Reporting Category: **1 Mathematical Processes**

Performance Indicator: **0806.1.1 Solve problems involving rate/time/distance (i.e., d = rt).**

1 During a 4-hour drive, a truck driver traveled at a rate of 40 miles per hour for the first hour and 70 miles per hour for the following 3 hours. Which is closest to the average rate the truck driver traveled during these 4 hours?

$$\text{distance} = \text{rate} \times \text{time}$$

A 63.3 miles per hour

B 62.5 miles per hour

C 55.0 miles per hour

D 47.5 miles per hour

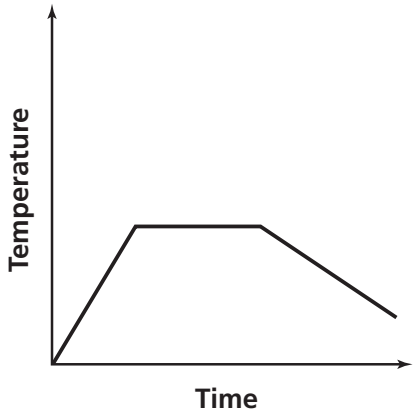
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Reporting Category: 1 Mathematical Processes

Performance Indicator: 0806.1.2 Interpret a qualitative graph representing a contextual situation.

2 The graph below represents the temperature inside an oven over a period of time.



Which statement best describes the change in temperature?

F The temperature increased and then decreased.

G The temperature was constant and then decreased.

H The temperature increased, remained constant, and then decreased.

J The temperature increased, decreased for a while, and then remained constant.

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Reporting Category: 1 Mathematical Processes

Performance Indicator: 0806.1.3 Calculate rates involving cost per unit to determine the best buy.

3 Sasha is trying to find the best price for blank CDs. The table below shows the packages of CDs available to purchase.

CD Packages

Package	Number of CDs	Price
Q	20	$4.10
R	35	$6.50
S	60	$12.50
T	80	$15.99

Which package offers the lowest price per CD?

A Package Q

B Package R

C Package S

D Package T

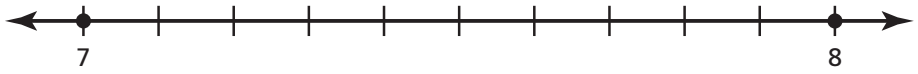
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Reporting Category: 2 Number and Operations

Performance Indicator: 0806.2.1 Order and compare rational and irrational numbers and locate on the number line.

4 Which value could be represented by a point between the labeled numbers on the number line below?



F $\sqrt{48}$

G $\frac{39}{6}$

H $\sqrt{56}$

J $\frac{74}{9}$

Reporting Category: 2 Number and Operations

Performance Indicator: 0806.2.2 Identify numbers and square roots as rational or irrational.

5 Which statement is true?

A The number $\frac{5}{8}$ is rational.

B The number $\sqrt{\pi}$ is rational.

C The number $\frac{\sqrt{5}}{\sqrt{20}}$ is irrational.

D The number 0.625 is irrational.

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Reporting Category: 2 Number and Operations

Performance Indicator: 0806.2.3 Use scientific notation to compute products and quotients.

6 Simplify:

$$(1.7 \times 10^2)(2 \times 10^6)$$

F 3.7×10^{12}

G 3.4×10^{12}

H 3.7×10^{8}

J 3.4×10^{8}

Reporting Category: 2 Number and Operations

Performance Indicator: 0806.2.4 Solve real-world problems requiring scientific notation.

7 One proton has a charge of approximately 1.6×10^{-19} coulomb. Based on this information, how many protons are required to have a total charge of 4×10^{-2} coulomb?

A 6.4×10^{17}

B 2.5×10^{17}

C 2.5×10^{-21}

D 6.4×10^{-21}

Go On ▶

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Reporting Category: 3 Algebra

Performance Indicator: 0806.3.1 Find solutions to systems of two linear equations in two variables.

8 What is the value of x in the solution to this system of linear equations?

$$4x - 3y = 3$$
$$x - y = 2$$

F -5

G -3

H 3

J 5

Reporting Category: 3 Algebra

Performance Indicator: 0806.3.2 Solve the linear equation f(x) = g(x).

9 Given the equations below, what is the value of x when $f(x) = g(x)$?

$$f(x) = 3(x - 2)$$
$$g(x) = 0.5(4x - 8)$$

A -10

B -6

C -2

D 2

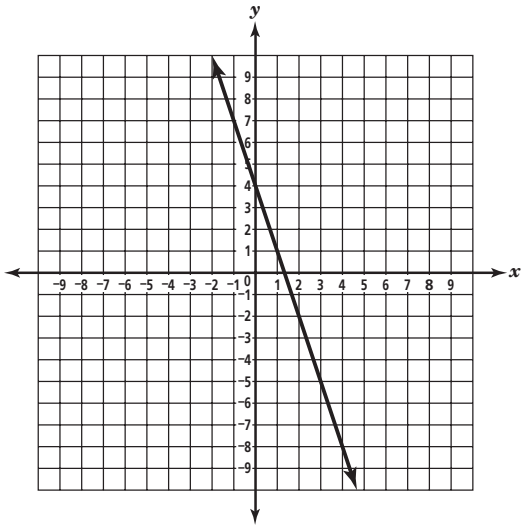
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Reporting Category: 3 Algebra

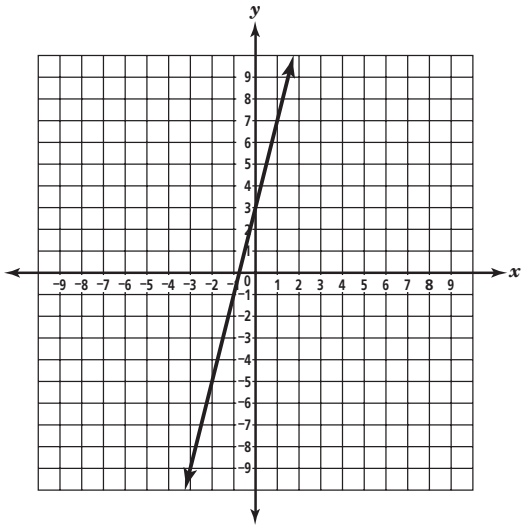
Performance Indicator: 0806.3.4 Translate between various representations of a linear function.

10 Which graph best represents the equation $y = 3x + 4$?

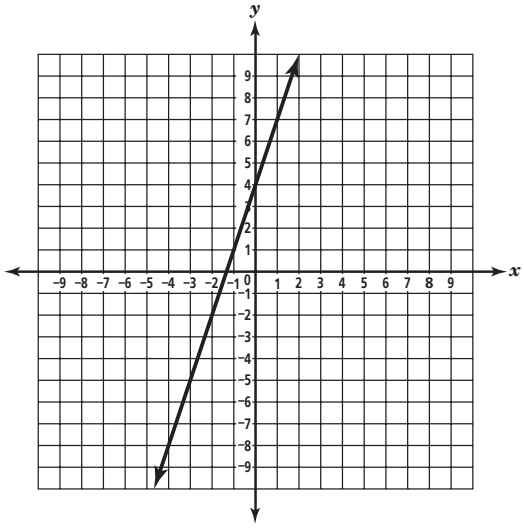
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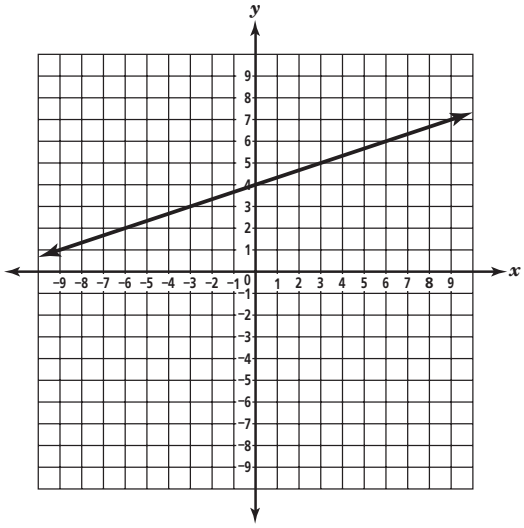
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G



J



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Reporting Category: 3 Algebra

Performance Indicator: 0806.3.5 Determine the slope of a line from an equation, two given points, a table or a graph.

11 What is the slope, m, of the line represented by the table below?

x	y
–12	–4
–9	–3
–6	–2
0	0
3	1
6	2

$$m = \frac{(y_2 - y_1)}{(x_2 - x_1)}$$

A -3

B $-\frac{1}{3}$

C $\frac{1}{3}$

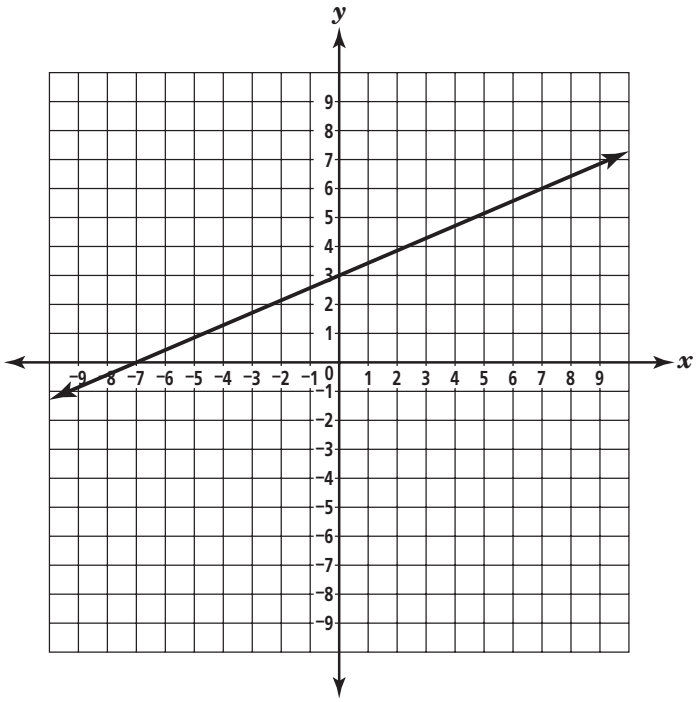
D 3

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Reporting Category: 3 Algebra

Performance Indicator: 0806.3.6 Analyze the graph of a linear function to find solutions and intercepts.

12 A function is graphed below.



What appears to be the *x*-intercept of this function?

F $(-7, 0)$

G $(0, -7)$

H $(0, 3)$

J $(3, 0)$

Go On ▶

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Reporting Category: 3 Algebra

Performance Indicator: 0806.3.7 Identify, compare and contrast functions as linear or nonlinear.

13 Which term in this function identifies it as nonlinear?

$$f(x) = x^3 + \frac{1}{4}x - \sqrt{5}$$

A $-\sqrt{5}$

B $\frac{1}{4}x$

C $f(x)$

D x^3

Reporting Category: 4 Geometry and Measurement

Performance Indicator: 0806.4.1 Use the Pythagorean Theorem to solve contextual problems.

14 The rectangular bottom of a box has an interior length of 19 inches and an interior width of 14 inches. A stick is placed in the box along the diagonal of the bottom of the box. Which measurement is closest to the longest possible length for the stick?

$$a^2 + b^2 = c^2$$

F 12.8 in.

G 16.3 in.

H 23.6 in.

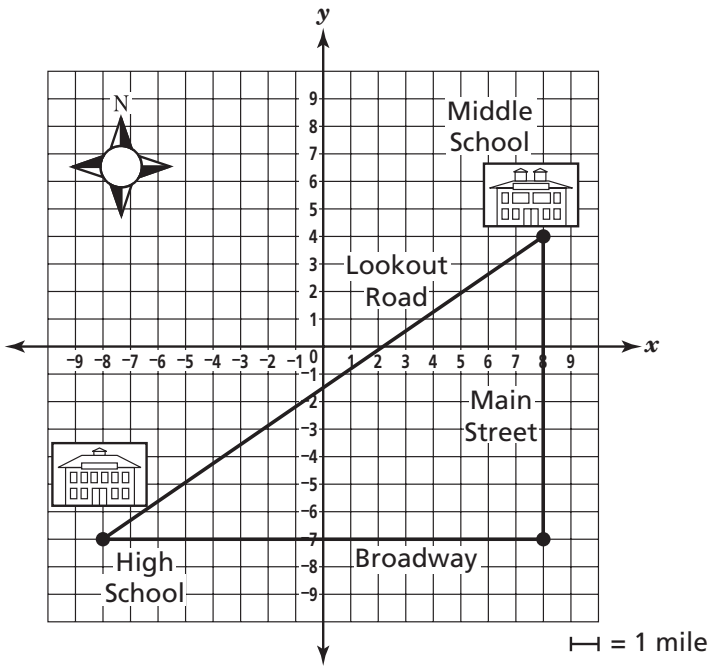
J 33.0 in.

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Reporting Category: 4 Geometry and Measurement

Performance Indicator: 0806.4.2 Apply the Pythagorean theorem to find distances between points in the coordinate plane to measure lengths and analyze polygons and polyhedra.

15 The diagram below shows the locations of two schools on a map. The length of each grid square represents one mile.



$$a^2 + b^2 = c^2$$

- One route from the high school to the middle school requires traveling northeast on Lookout Road.
- A different route from the high school to the middle school requires traveling east on Broadway and then north on Main Street.

What is the approximate difference between these routes?

A 7.6 miles

B 11.0 miles

C 19.4 miles

D 27.0 miles

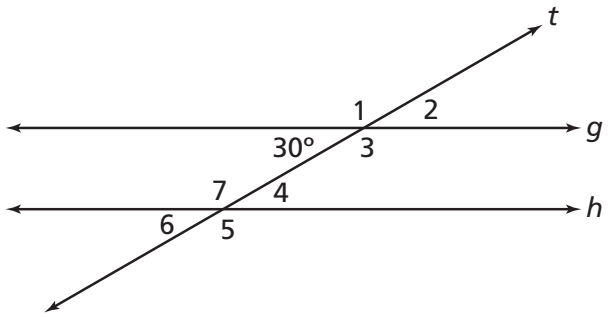
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Reporting Category: 4 Geometry and Measurement

Performance Indicator: 0806.4.3 Find measures of the angles formed by parallel lines cut by a transversal.

16 Lines *g* and *h* are parallel lines cut by Transversal *t*, as shown in the figure below.



What is the measure of Angle 5?

F 30°

G 60°

H 150°

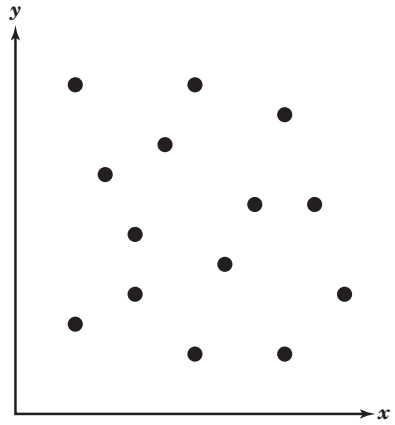
J 210°

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Reporting Category: 5 Data Analysis, Statistics, and Probability

Performance Indicator: 0806.5.3 Generalize the relationship between two sets of data using scatterplots and lines of best fit.

17 Which type of relationship is best represented in the scatterplot below?



A constant correlation

B negative correlation

C positive correlation

D no correlation

Go On ▶

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Reporting Category: 5 Data Analysis, Statistics, and Probability

Performance Indicator: 0806.5.4 Recognize misrepresentations of published data in the media.

18 The owner of a dance studio claims that her studio offers more individual attention to students than other studios because the ratio of students to teachers is 8 to 1. The table below shows the daily class sizes at this studio.

Daily Class Sizes

Class	Number of Students	Number of Teachers
Monday	10	1
Tuesday	15	1
Wednesday	18	2
Thursday	2	1
Friday	3	1

Which statement best explains why the student-to-teacher ratio used by the owner of the dance studio is misleading?

F The age of each student attending is not given.

G The experience of each teacher is not included in the table.

H Almost half of the classes at the studio have fewer than 8 students per teacher.

J More than half of the classes at the studio have more than 8 students per teacher.

STOP

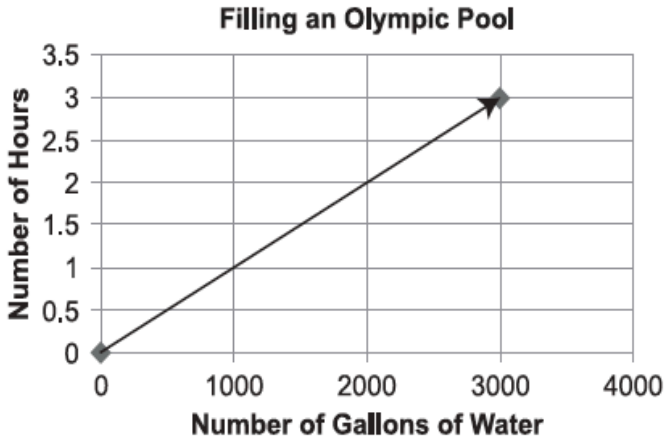
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8th Grade Math Constructed Response 2

Name _____ Date _____ Class _____

1. Olympic Pool Task

As shown in the graph below, an Olympic-sized swimming pool is being filled with water from a fire hose.



a. After studying the graph, Nick claims the hourly rate shown in the graph is 1000 gallons per hour. Explain why Nick is correct, using equations, tables, drawings, and/or words.

GO ON TO THE NEXT PAGE.

b. Brian says, "Since the rate is 1000, that tells me the slope is 1000 so I can write an equation for the line. It would be $y = 1000x$." Do you agree or disagree with Brian? Use equations, tables, drawings, and/or words to justify your answer.



Tennessee Comprehensive Assessment Program / Mathematics

TCAP/CRA PILOT 2012



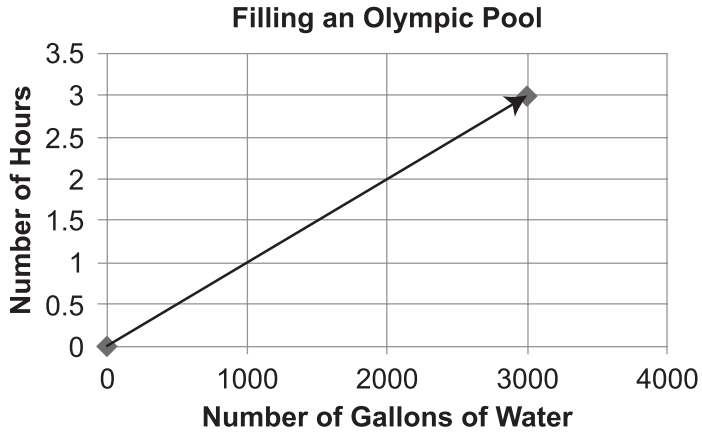
Task 2 : Olympic Pool

Scoring Guide

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Task 2. Olympic Pool Task

As shown in the graph below, an Olympic-sized swimming pool is being filled with water from a fire hose.



a. After studying the graph, Nick claims the hourly rate shown in the graph is 1000 gallons per hour. Explain why Nick is correct, using equations, tables, drawings, and/or words.

b. Brian says, “Since the rate is 1000, that tells me the slope is 1000 so I can write an equation for the line. It would be $y = 1000x$.” Do you agree or disagree with Brian? Use equations, tables, drawings, and/or words to justify your answer.



2. Olympic Pool Task Scoring Guide

The CCSS for Mathematical Content (1 point)

8.EE.5 Student correctly verifies the hourly rate at which the pool is being filled in one of the following ways: _____

- Reads points from the graph and makes a table
- Reads points from the graph and makes two or more ratios

Student's reasons for disagreeing with Brian will include one of the following:

- Observing, appropriately testing and stating that the graph represents a proportional relationship; choosing a readable point on the line and dividing, e.g., $y = \frac{1}{1000}x$, to determine the slope.
- Building a table from the readable points on the graph, forming the ratio of $\frac{\text{change in hours}}{\text{change in number of gallons}}$ between the data in the table and noting that each is equivalent to $\frac{1}{1000}$.
- Forming the ratio of $\frac{\text{change in hours}}{\text{change in number of gallons}}$ between two data points on the graph and noting that, since the graph is a straight line, the slope is constant between all other data points, $\frac{1}{1000}$.
- Read a data point from the graph and show the data point does not work as input, output values for the equation $y = 1000x$.
- Showing a $\frac{\text{rise}}{\text{run}}$ "step" on the graph of the line; simplifying the resulting ratio to $\frac{1}{1000}$.
- Stating that there are 2 unit rates in a proportional situation and 1000 gallons per hour is not the unit rate that corresponds to the slope in this representation.

Total Content Points _____

The CCSS for Mathematical Practices (5 points)

MP1 Student makes an association between the unit rate in gallons per hour and the fact that this does not correspond to the slope of the line in this situation. _____

(MP1: Make sense of problems and persevere in solving them.)

MP2 Student abstracts numbers from the graph to verify the hourly rate and contextualizes the rate to notice that this does not correspond to the slope of the line. _____

(MP2: Reason abstractly and quantitatively.)

MP3 In part b, the student indicates that s/he disagrees with Brian. Student notes and uses the proportional relationship and/or linearity to justify the hourly rate and refute Brian's claim. _____

(MP3: Construct viable arguments and critique the reasoning of others.)

MP6 Student correctly multiplies, scales up, creates equivalent fractions, labels quantities. Student gives an accurate description of the relationship between rate and slope. _____

(MP6: Attend to precision.)

MP7 Response indicates attention to the fact that the hourly rate does not correspond to the slope of the line in this situation. _____

(MP7: Look for and make use of structure.)

Total Practice Points _____

Total Awarded Points _____

The CCSS for Mathematical Content Addressed in This Task

Understand the connections between proportional relationships, lines, and linear equations.

8.EE.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has a greater speed.*

The CCSS for Mathematical Practices*

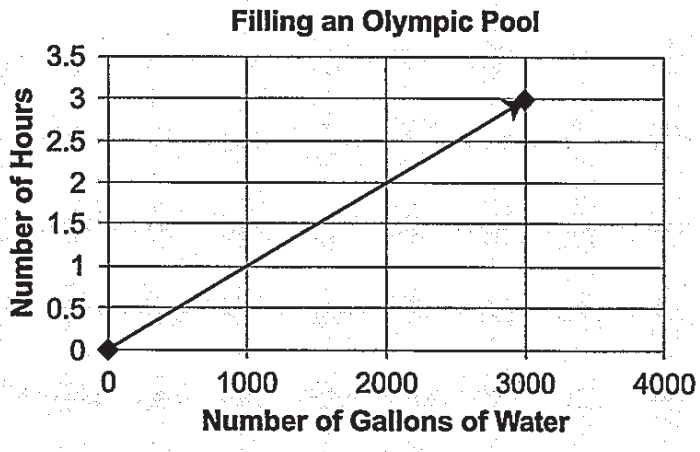
1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

*Gray text indicates Mathematical Practices not addressed in this task.

Students' responses to a mathematical task provide evidence of what they understand and are able to do in relation to the standards and practices. Across tasks, this cumulative evidence shows students' understanding and abilities within a domain. When students do not respond completely to all parts of a task, they provide insufficient evidence of their mathematical understanding and abilities and therefore do not fully demonstrate the expectations of the standards and practices aligned with that task.

Task 2. Olympic Pool Task

As shown in the graph below, an Olympic-sized swimming pool is being filled with water from a fire hose.



a. After studying the graph, Nick claims the hourly rate shown in the graph is 1000 gallons per hour. Explain why Nick is correct, using equations, tables, drawings, and/or words.

The graph shows that the line passes through points (1000,1), (2000,2), and (3000,3). This means that after one hour, the pool was filled with 1000 gallons of water. After 2 hours, 2000 gallons; after 3 hours, 3000 gallons.

$y = (1/1000)x$

b. Brian says, "Since the rate is 1000, that tells me the slope is 1000 so I can write an equation for the line. It would be $y = 1000x$." Do you agree or disagree with Brian? Use equations, tables, drawings, and/or words to justify your answer.

I disagree with Brian. The equation for the line is $y = (1/1000)x$. If you plug the coordinates in to Brian's formula, they don't work. $1 \neq 1000(1000)$

$1 = (1/1000)(1000)$

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Total Content Points: 1 (8.EE.5)

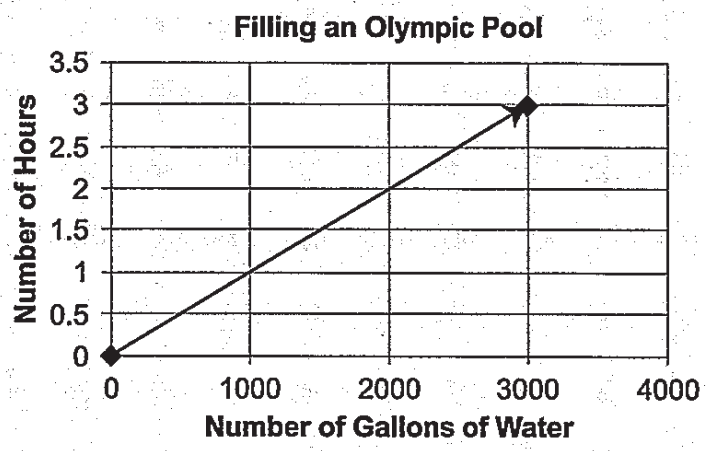
Total Practice Points: 5 (MP1, MP2, MP3, MP6, MP7)

The student uses three points from the graph to verify the hourly rate. In part b, the student disagrees with Brian and shows that a data point from the graph does not work as an input, output value for the equation $y = 1000x$ (8.EE.5). The explanations show that the student has made an association between the unit rate and the slope, and that she recognizes they are not equal (MP1, MP7). In addition, the student abstracts numbers from the graph to verify the rate and demonstrate that it does not correspond to the slope (MP2). The student justifies the hourly rate and refutes Brian's claim by substituting a point from the graph into Brian's equation to show that it does not work. Then the student substitutes a point into the correct equation to show that it does work (MP3). The student attends to precision by labeling the rates and showing the relationship between the slope and rate in part b (MP6).

Total Awarded Points: 6 out of 6

Task 2. Olympic Pool Task

As shown in the graph below, an Olympic-sized swimming pool is being filled with water from a fire hose.



a. After studying the graph, Nick claims the hourly rate shown in the graph is 1000 gallons per hour. Explain why Nick is correct, using equations, tables, drawings, and/or words.

# of Gallons	# of Hours
1000	1
2000	2
3000	3

1000 ÷ 1 = 1000
2000 ÷ 2 = 1000
3000 ÷ 3 = 1000
→ 1000 is the rate.

Litho#: 80120

b. Brian says, "Since the rate is 1000, that tells me the slope is 1000 so I can write an equation for the line. It would be $y = 1000x$." Do you agree or disagree with Brian? Use equations, tables, drawings, and/or words to justify your answer.

I disagree. If the equation $y=1000x$ had numbers instead of variables, it would certainly not correspond what the graph shows.

$1 \neq 1000 \cdot 1000$ $\quad 3 \neq 7000 - 3000$

$2 \neq 2000 - 2000$

Guide 2 Litho 80120

Total Content Points: 1 (8.EE.5)

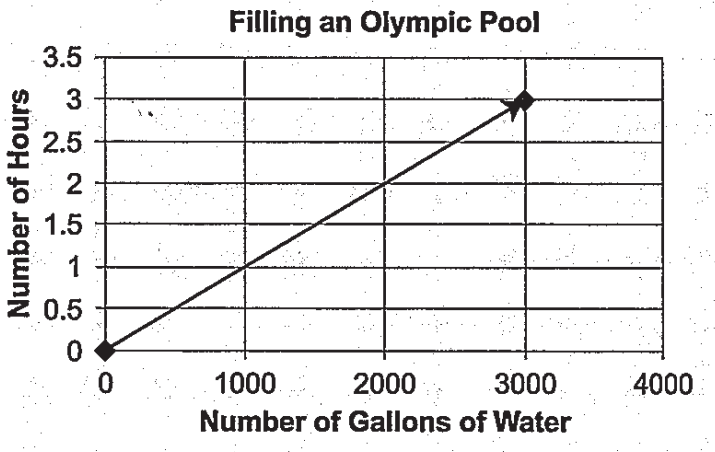
Total Practice Points: 4 (MP1, MP2, MP3, MP7)

The student verifies the hourly rate in part a by making a table with points from the graph and making ratios. In part b, the student disagrees with Brian and shows that data points from the table do not work as input, output values for the equation $y = 1000x$ (8.EE.5). The explanations indicate that the student has made an association between the unit rate and the slope (MP1). In addition, the student abstracts numbers from the graph and contextualizes the rate to show that it does not correspond to the slope (MP2). The student justifies the hourly rate and refutes Brian's claim by substituting points from the graph into Brian's equation and stating that they do not correspond to "what the graph shows" (MP3). Although the student calculates the correct hourly rate, the rate is not labeled, which demonstrates a weakness in the precision of the response (no credit for MP6). All of the calculations given are correct (MP7).

Total Awarded Points: 5 out of 6

Task 2. Olympic Pool Task

As shown in the graph below, an Olympic-sized swimming pool is being filled with water from a fire hose.



a. After studying the graph, Nick claims the hourly rate shown in the graph is 1000 gallons per hour. Explain why Nick is correct, using equations, tables, drawings, and/or words.

G.	Hr.
1000	1
2000	2
3000	3

2000/2 = 1000 gal./hr
1000/1 = 1000 gal./hr
3000/3 = 1000 gal./hr

if you can't tell why he is right it is pretty obvious

b. Brian says, "Since the rate is 1000, that tells me the slope is 1000 so I can write an equation for the line. It would be $y = 1000x$." Do you agree or disagree with Brian? Use equations, tables, drawings, and/or words to justify your answer.

No, slope is rise over run, therefore the slope must be 1/1000. The equation would then be $y = \frac{1}{1000}x$.

Guide 3 Litho 80028

Total Content Points: 1 (8.EE.5)

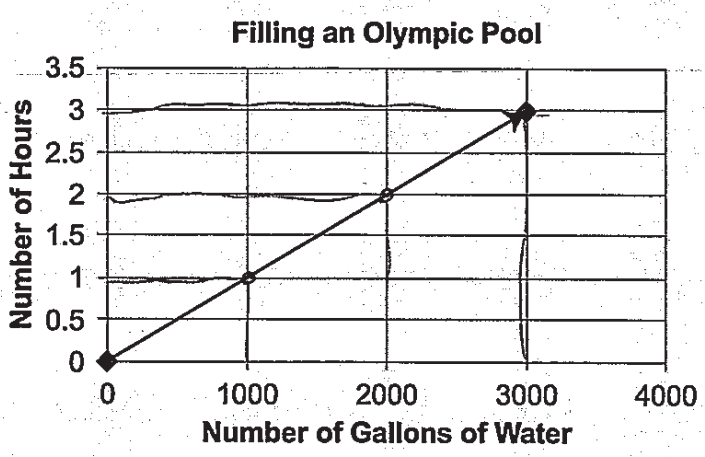
Total Practice Points: 4 (MP1, MP2, MP3, MP7)

The student verifies the hourly rate in part a by making a table with points from the graph and by making ratios. In part b, the student disagrees with Brian and states that slope is rise over run and that the correct slope is $\frac{1}{1000}$ (8.EE.5). The explanations indicate that the student recognizes that the unit rate does not correspond to the slope (MP1, MP7). In addition, the student abstracts numbers from the graph and contextualizes the rate to demonstrate that it does not correspond to the slope (MP2). The student justifies the hourly rate and then distinguishes between it and the actual slope of the line (MP3). The student does not relate the hourly rate directly to the slope of the line in the graph (no credit for MP6).

Total Awarded Points: 5 out of 6

Task 2. Olympic Pool Task

As shown in the graph below, an Olympic-sized swimming pool is being filled with water from a fire hose.



a. After studying the graph, Nick claims the hourly rate shown in the graph is 1000 gallons per hour. Explain why Nick is correct, using equations, tables, drawings, and/or words.

The first clear point is on the number 1000 on the x axis & 1 on the y axis. The graph can prove that 1000 gallons are filled into the pool every hour.

Litho#: 80229

b. Brian says, "Since the rate is 1000, that tells me the slope is 1000 so I can write an equation for the line. It would be $y = 1000x$." Do you agree or disagree with Brian? Use equations, tables, drawings, and/or words to justify your answer.

i disagree. if you took actual numbers from the graph & plugged them into the equation, you'd get $2 = 1000(2000)$, which doesn't equal 2 at all. the equation should read $x = 1000y$.

ck: $2000 = 1000(2)$
$2000 = 2000$ ✓

Guide 4 Litho 80229

Total Content Points: 0

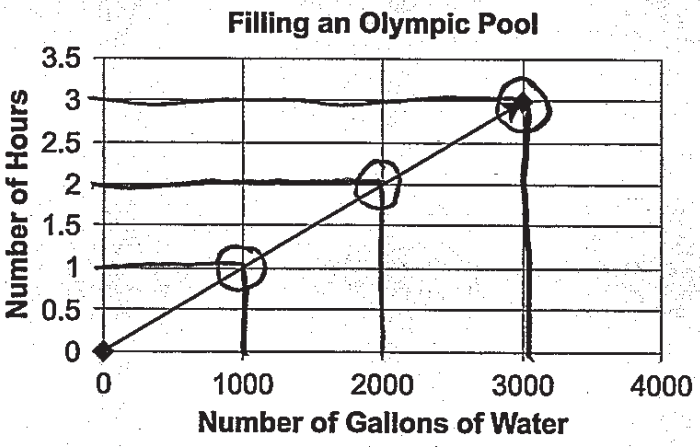
Total Practice Points: 4 (MP1, MP2, MP3, MP7)

In part b, the student disagrees with Brian and shows that a data point from the graph does not work as an input, output value for the equation $y = 1000x$. However, the student does not clearly verify the hourly rate in part a (no credit for 8.EE.5). The student explains that the unit rate does not correspond to the slope (MP1, MP7). In addition, the student abstracts numbers from the graph and contextualizes the rate to demonstrate that it does not correspond to the slope (MP2). The student justifies the hourly rate and refutes Brian's claim by substituting a point from the graph into Brian's equation to show that it does not work, and by substituting a point into the correct equation to show that it does work (MP3). The student does not clearly label the hourly rate, and the explanation in part a lacks precision (no credit for MP6).

Total Awarded Points: 4 out of 6

Task 2. Olympic Pool Task

As shown in the graph below, an Olympic-sized swimming pool is being filled with water from a fire hose.



a. After studying the graph, Nick claims the hourly rate shown in the graph is 1000 gallons per hour. Explain why Nick is correct, using equations, tables, drawings, and/or words.

Because when the line crosses 1 hour the line was at 1,000 gallons

Litho#: 80276

b. Brian says, "Since the rate is 1000, that tells me the slope is 1000 so I can write an equation for the line. It would be $y = 1000x$." Do you agree or disagree with Brian? Use equations, tables, drawings, and/or words to justify your answer.

Disagree it should Be $y = \frac{1}{1,000}x$ Because you go up one over 1,000.

Guide 5 Litho 80276

Total Content Points: 0

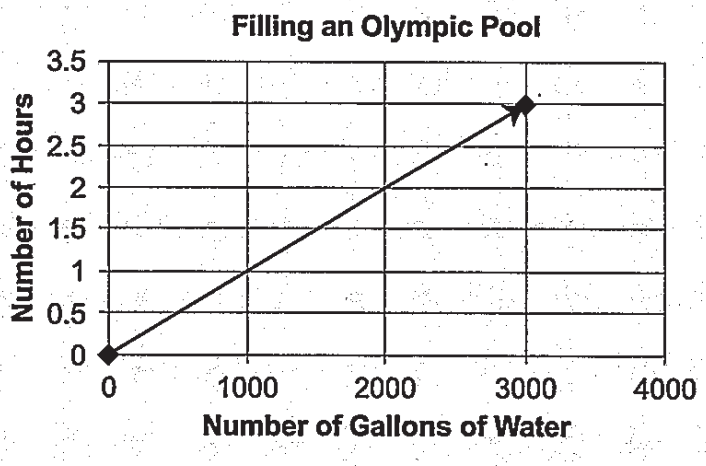
Total Practice Points: 2 (MP1, MP7)

In part b, the student disagrees with Brian by referencing one of the "steps" on the graph ("you go up one over 1000") and gives the correct equation with the slope $\frac{1}{1000}$. The student verifies the hourly rate in part a by circling the points (1000, 1), (2000, 2), and (3000, 3) on the graph and describing what point (1000, 1) indicates. However, the student does not clearly explain how the points circled confirm the hourly rate, and does not create a table or ratios for more than one data point (no credit for 8.EE.5) The response indicates attention to the fact that the hourly rate does not correspond to the slope (MP1, MP7). The student only abstracts one data point from the graph, and although she circles two other points on the graph, she does not explain her reasoning clearly (no credit for MP2). The student does not use a proportional relationship or linearity to justify the hourly rate and show how it is different from the slope of the line (no credit for MP3). The explanation in part a remains vague (no credit for MP6).

Total Awarded Points: 2 out of 6

Task 2. Olympic Pool Task

As shown in the graph below, an Olympic-sized swimming pool is being filled with water from a fire hose.



a. After studying the graph, Nick claims the hourly rate shown in the graph is 1000 gallons per hour. Explain why Nick is correct, using equations, tables, drawings, and/or words.

For every hour, the number of gallons increases by 1000. Therefore, the rate is 1000 gallons per hour.

Litho#: 80151

b. Brian says, "Since the rate is 1000, that tells me the slope is 1000 so I can write an equation for the line. It would be $y = 1000x$." Do you agree or disagree with Brian? Use equations, tables, drawings, and/or words to justify your answer.

I disagree. The slope for the line is $\frac{1}{1000}$, so the equation should be $y = \frac{1}{1000}x$.

Guide 6 Litho 80151

Total Content Points: 0

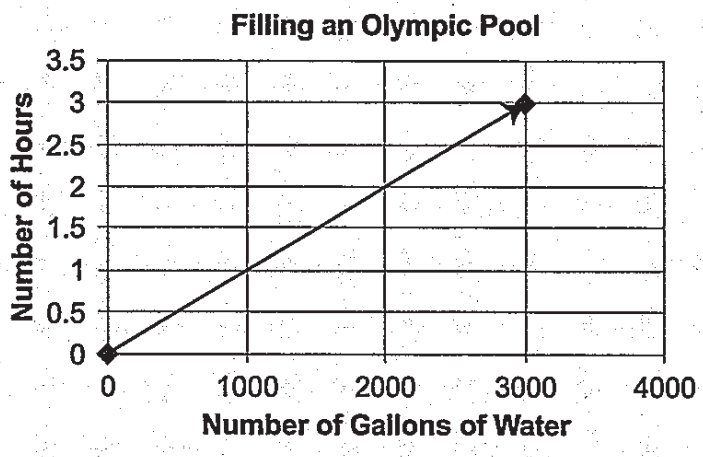
Total Practice Points: 2 (MP1, MP7)

The student verifies the hourly rate in part a by stating “for every hour, the number of gallons increases by 1000.” In part b, the student disagrees with Brian and states the correct slope and equation, but does not give any additional explanation or justification (no credit for 8.EE.5). The student does indicate that the unit rate does not correspond to the slope of the line (MP1, MP7). However, the student does not abstract numbers from the graph to verify the hourly rate (no credit for MP2) and does not use the proportional relationship or linearity to justify the hourly rate (no credit for MP3). The explanation in part a is too general to demonstrate attention to precision (no credit for MP6).

Total Awarded Points: 2 out of 6

Task 2. Olympic Pool Task

As shown in the graph below, an Olympic-sized swimming pool is being filled with water from a fire hose.



a. After studying the graph, Nick claims the hourly rate shown in the graph is 1000 gallons per hour. Explain why Nick is correct, using equations, tables, drawings, and/or words.

Each hour, the pool is filled another 1000 gallons.

X	Y
0.5	500 gal
1	1000
1.5	1500
2	2000

b. Brian says, "Since the rate is 1000, that tells me the slope is 1000 so I can write an equation for the line. It would be $y = 1000x$." Do you agree or disagree with Brian? Use equations, tables, drawings, and/or words to justify your answer.

no, the equation is $y = \frac{1}{1000}x$

Guide 7 Litho 80017

Total Content Points: 0

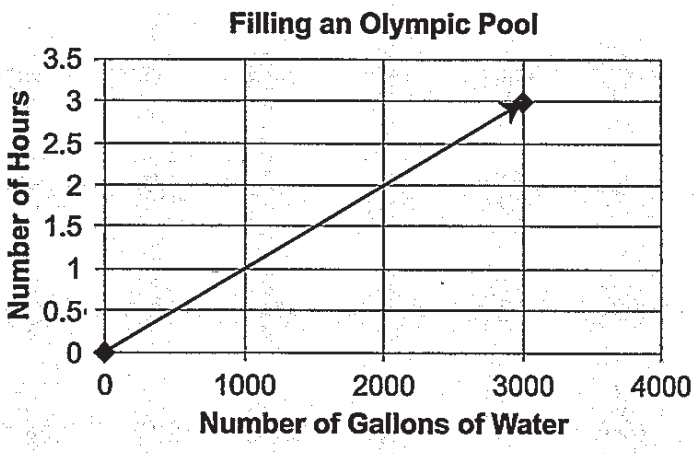
Total Practice Points: 2 (MP1, MP7)

The student explains the hourly rate in part a by stating that for each hour another 1000 gallons are added to the pool. However, the table the student makes shows x and y reversed. In part b, the student disagrees with Brian and states the correct equation with a slope of $\frac{1}{1000}$, but does not give any additional explanation or justification (no credit for 8.EE.5). The student indicates that the hourly rate does not correspond to the slope of the line (MP1, MP7). The student does not abstract numbers from the graph (no credit for MP2) or use the proportional relationship or linearity to justify the hourly rate (no credit for MP3). The incorrect table the student produces in part a indicates a lack of precision (no credit for MP6).

Total Awarded Points: 2 out of 6

Task 2. Olympic Pool Task

As shown in the graph below, an Olympic-sized swimming pool is being filled with water from a fire hose.



a. After studying the graph, Nick claims the hourly rate shown in the graph is 1000 gallons per hour. Explain why Nick is correct, using equations, tables, drawings, and/or words.

The graph says so.

Litho#: 80086

b. Brian says, "Since the rate is 1000, that tells me the slope is 1000 so I can write an equation for the line. It would be $y = 1000x$." Do you agree or disagree with Brian? Use equations, tables, drawings, and/or words to justify your answer.

No since it's one hour equals to 1000 gallons of water then the slope would be 1/1000 so the equation is $y = 1/1000x$

Guide 8 Litho 80086

Total content Points: 0

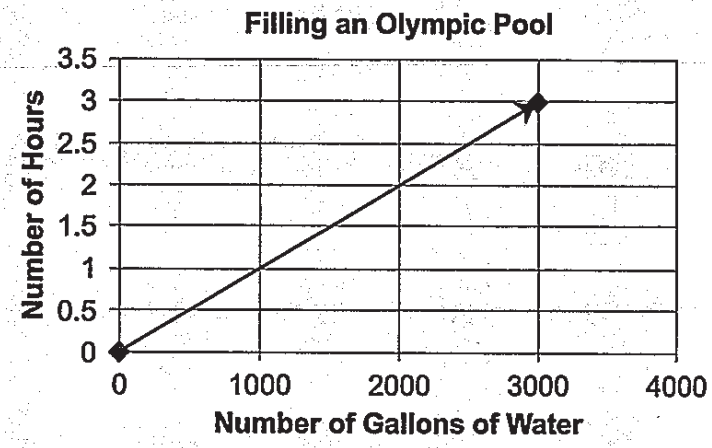
Total Practice Points: 2 (MP1, MP7)

The student does not verify the hourly rate in part a. In part b, the student disagrees with Brian and states the correct rate and the correct slope of $\frac{1}{1000}$, but does not give any additional explanation or justification (no credit for 8.EE.5, no credit for MP6). The student has not abstracted numbers from the graph (no credit for MP2) or used the proportional relationship or linearity to justify the hourly rate (no credit for MP3). The response indicates attention to the fact that the hourly rate does not correspond to the slope of the line (MP1, MP7).

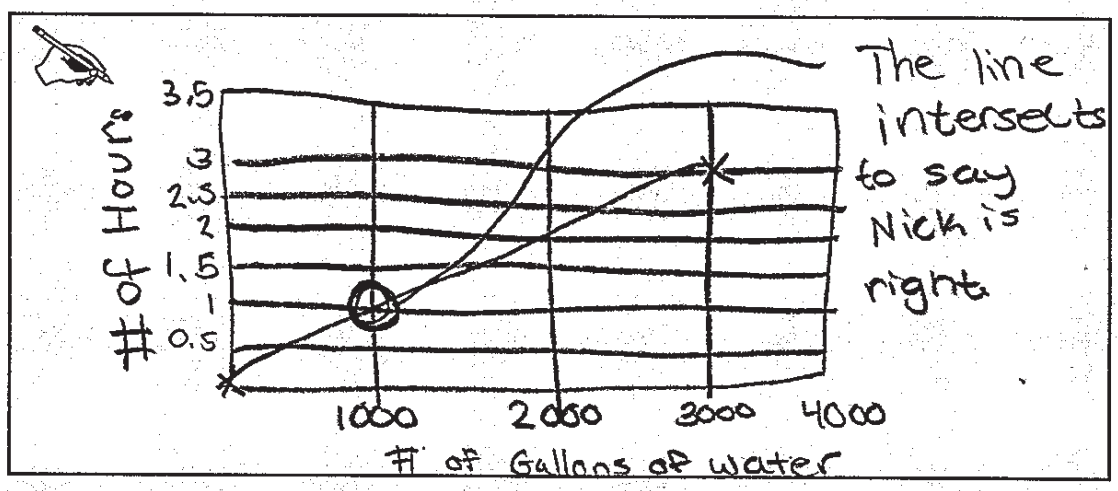
Total Awarded Points: 2 out of 6

Task 2. Olympic Pool Task

As shown in the graph below, an Olympic-sized swimming pool is being filled with water from a fire hose.



a. After studying the graph, Nick claims the hourly rate shown in the graph is 1000 gallons per hour. Explain why Nick is correct, using equations, tables, drawings, and/or words.



b. Brian says, "Since the rate is 1000, that tells me the slope is 1000 so I can write an equation for the line. It would be $y = 1000x$." Do you agree or disagree with Brian? Use equations, tables, drawings, and/or words to justify your answer.



Disagree

The graph goes up by halfs not thousands.

Guide 9 Litho 80222

Total Content Points: 0

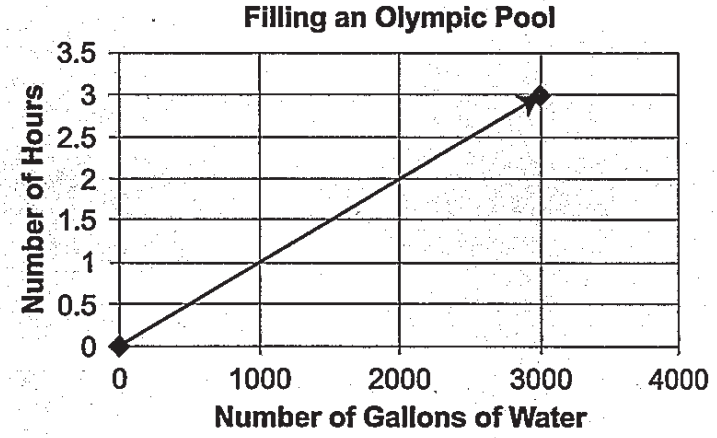
Total Practice Points: 0

The student draws a version of the graph, and references the point (1000, 1). Referencing a single point from the graph is not sufficient to verify the hourly rate in part a (no credit for MP2). Although the student disagrees with Brian in part b, the explanation is incorrect (no credit for 8.EE.5). The student does not clearly demonstrate understanding of the relationship between the rate and the slope in this situation (no credit for MP1, no credit for MP7). The student does not use the proportional relationship or linearity to justify the hourly rate (no credit for MP3). The student is not precise in his explanations (no credit for MP6).

Total Awarded Points: 0 out of 6

Task 2. Olympic Pool Task

As shown in the graph below, an Olympic-sized swimming pool is being filled with water from a fire hose.



a. After studying the graph, Nick claims the hourly rate shown in the graph is 1000 gallons per hour. Explain why Nick is correct, using equations, tables, drawings, and/or words.

The line is at 1000 gallons of water, at 1 hour. when it gets to 2000 gallons of water, it is at 2 hours. every hour, there is another 1000 gallons of water added.

Litho#: 80098

b. Brian says, "Since the rate is 1000, that tells me the slope is 1000 so I can write an equation for the line. It would be $y = 1000x$." Do you agree or disagree with Brian? Use equations, tables, drawings, and/or words to justify your answer.

I agree. The line's constant rate of change is 1000. So $y=1000x$ is correct.

Guide 10 Litho 80098

Total Content Points: 0

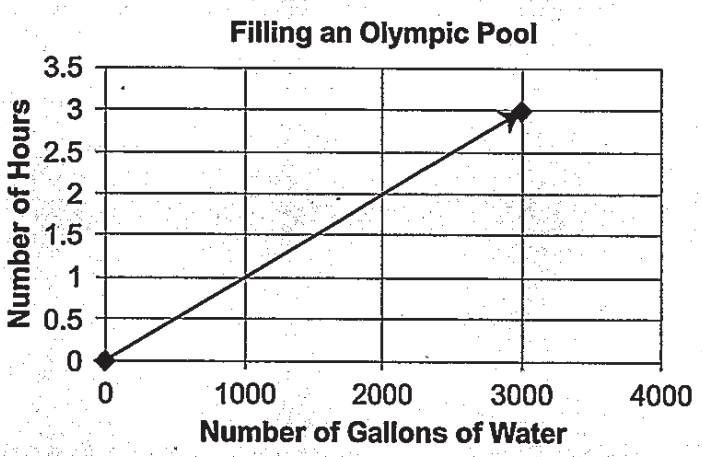
Total Practice Points: 0

The student verifies the hourly rate in part a by describing two of the points from the graph. However, in part b the student incorrectly agrees with Brian that the slope is 1000 (no credit for 8.EE.5, no credit for MP3). The student does not recognize that the hourly rate does not correspond to the slope of the line (no credit for MP2). The response does not demonstrate any understanding of the relationship between the rate and the slope in this situation (no credit for MP1, no credit for MP7). The explanation in part b indicates a lack of precision and accuracy (no credit for MP6).

Total Awarded Points: 0 out of 6

Task 2. Olympic Pool Task

As shown in the graph below, an Olympic-sized swimming pool is being filled with water from a fire hose.



a. After studying the graph, Nick claims the hourly rate shown in the graph is 1000 gallons per hour. Explain why Nick is correct, using equations, tables, drawings, and/or words.

He is correct because the graph shows an increase on the number of Gallons of water every hour.

Litho#: 80283

b. Brian says, "Since the rate is 1000, that tells me the slope is 1000 so I can write an equation for the line. It would be $y = 1000x$." Do you agree or disagree with Brian? Use equations, tables, drawings, and/or words to justify your answer.

I don't agree because by the graph you can see it goes right 1,000 and up 2 so you have to say it's $\frac{1000}{2}$

Guide 11 Litho 80283

Total Content Points: 0

Total Practice Points: 0

The student does not verify the hourly rate part a. Although thestudent disagrees with Brian in part b, the explanation is incorrect (no credit for 8.EE.5). The response fails to show any understanding of the relationship between the rate and the slope in this situation (no credit for MP1, no credit for MP3, no credit for MP7). The student does not abstract values from the graph (no credit for MP2). The explanation given in part a is vague, and the explanation in part b is incorrect (no credit for MP 6).

Total Awarded Points: 0 out of 6

Name Answer Key

Summer Review - Week # 1

1) Solve for x if y = -10:

a) $y = x + 12$

$-10 = x + 12$

$-12 \quad -12$

$-22 = x$

b) $y = 7x - 42$

$-10 = 7x - 42$

$+42 = +42$

$\frac{32}{7} = \frac{7x}{7}$ or $\frac{32}{7}$

$x = 4.5$

c) $y = 4x - 16$

$-10 = 4x - 16$

$+16 \quad +16$

$\frac{6}{4} = \frac{4x}{4}$

$\frac{6}{4} = x$

d) $y = -2x - 45$

$-10 = -2x - 45$

$+45 = +45$

$\frac{35}{-2} = \frac{-2x}{-2}$ $x = -17.5$

2) Solve for y if x = 5:

a) $y = x + 13$

$y = 5 + 13$

$18 = 5 + 13$

$y = 18$

b) $y = 6x - 32$

$y = 6(5) - 32$

$y = 30 - 32$

$-2 = y$

c) $y = 2x - 15$

$y = 2(5) - 15$

$y = 10 - 15$

$y = -5$

d) $y = 8x - 5$

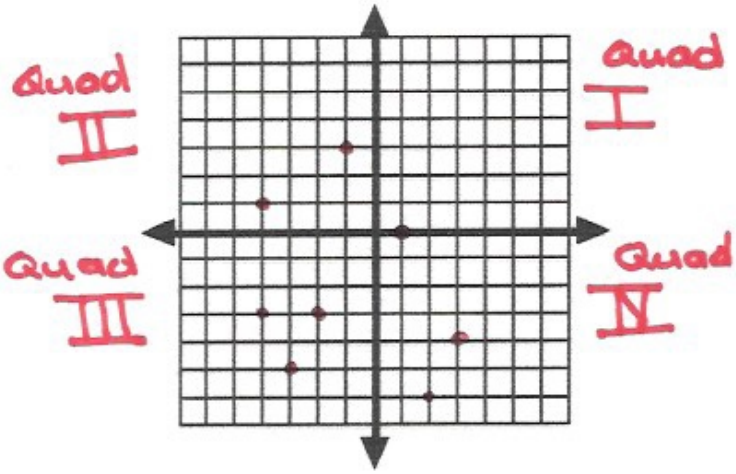
$y = 8(5) - 5$

$y = 40 - 5$

$y = 35$

3) Graph each coordinate pair on the graph and then indicate which quadrant or axis the point lies on.

Coordinate pair	Quadrant or Axis
(-2, -3)	III
(-3, -5)	III
(-4, 1)	II
(-1, 3)	II
(3, -4)	IV
(1, 0)	O
(2, -6)	IV
(-4, -3)	III



4) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-24 - 11|$

-35 or 35

b) $|31 - 60|$

-29 or 29

c) $|-37 - 49|$

-86 or 86

d) $|-96 + 75|$

-21 or 21

5) Solve for x:

a) $\frac{7}{6} = \frac{x}{36}$ cross multiply

$252 = 6x$

$\frac{252}{6} = \frac{6x}{6}$

$42 = x$

b) $\frac{10}{8} = \frac{4}{x}$

$32 = 10x$

$\frac{32}{10} = \frac{10x}{10}$

$3.2 = x$

c) $\frac{x}{60} = \frac{9}{10}$

$540 = 10x$

$\frac{540}{10} = \frac{10x}{10}$

$54 = x$

Show your work! Show your work! Show your work!

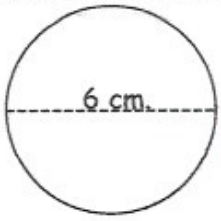
Show your work! Show your work! Show your work!

Name _____

Summer Review - Week #2

1) Find the circumference and area of each circle:

a)



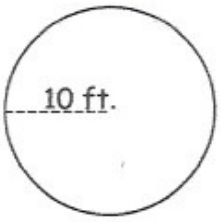
$A=\pi \cdot 3^2$

$C=\pi \cdot 6$

C = 18.8 or _____

A = 28.3 or _____

b)



$r=10$

$d=20$

C = 31.4 or _____

A = 62.8 or _____

2) Solve for x if y = 7:

a) $y = x + 24$

$7 = x + 24$

$-24 = -24$

$-17 = x$

b) $y = -2x - 26$

$7 = -2x - 26$

$+26 \quad +26$

$\frac{33}{-2} = \frac{-2x}{-2}$ $\quad -\frac{33}{2} = x$

c) $y = -3x - 11$

$7 = -3x - 11$

$+11 \quad +11$

$\frac{18}{-3} = \frac{-3x}{-3}$

$-6 = x$

d) $y = 6x - 1$

$7 = 6x - 1$

$+1 \quad +1$

$\frac{8}{6} = \frac{6x}{6}$ $\quad x = \frac{8}{6}$

3) Solve for y if x = -1:

a) $y = x + 12$

$y = -1 + 12$

$11 = y$

b) $y = 6x - 31$

$y = 6(-1) - 31$

$y = -6 - 31$

$y = -37$

c) $y = 2x - 14$

$y = 2(-1) - 14$

$y = -2 - 14$

$y = -16$

d) $y = 4x - 15$

$y = 4(-1) - 15$

$y = -4 - 15$

$y = -19$

4) Try to reduce before you compute the answers! (This will help when you are trying to reduce.)

a) $\frac{12}{30} \cdot \frac{9}{12} =$

$\frac{2}{5} \cdot \frac{3}{4} = \frac{6}{20}$ or $\frac{3}{10}$

b) $\frac{25}{24} \cdot \frac{8}{10} =$

c) $\frac{72}{72} \cdot \frac{72}{72} =$

$\frac{6}{6} \cdot \frac{6}{6} = 1$

d) $\frac{20}{12} \cdot \frac{16}{30} =$

Show your work! Show your work! Show your work!

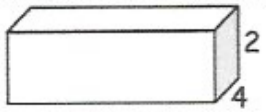
Show your work! Show your work! Show your work!

Name _____

Summer Review – Week #3

1) Find the surface area and volume of each of the figures.

a)



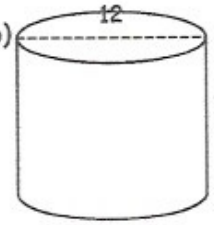
Surface Area = 196

$2(2 \cdot 15) + 2 \cdot 4 \cdot 15 \cdot 2$

Volume =

$15 \cdot 4 \cdot 2 = 120$

b)



Surface Area =

$(2)(\pi)(r)(h) + (2)(\pi)(r^2)$

$602.9 + 226.08$

$= 828.16$

Volume = $(\pi)(6^2)(16)$

~~$2 \cdot 6 (6 + 16$~~

~~226.22~~ $= 1808.6$

2) Solve for x if y = -3:

a) $y = x + 17$

$-3 = x + 17$

$-17 \quad -17$

$-20 = x$

b) $y = 4x - 43$

$-3 = 4x - 43$

$+43 \quad +43$

$\frac{40}{4} = \frac{4x}{4}$

$10 = x$

c) $y = -3x - 19$

$-3 = -3x - 19$

$+19 \quad +19$

$\frac{16}{-3} = \frac{-3x}{-3}$

$\frac{-16}{3} = x$

d) $y = -2x - 46$

$-3 = -2x - 46$

$+46 \quad +46$

$\frac{43}{-2} = \frac{-2x}{-2}$

$-\frac{43}{2} = x$

3) Solve for y if x = 12:

a) $y = 3x + 14$

$y = 3(12) + 14$

$y = 36 + 14$

$y = 50$

b) $y = 2x - 12$

$y = 2(12) - 12$

$y = 24 - 12$

$y = 12$

c) ~~$y = -2x$~~ $- 91$

$y = -2(12) - 91$

$y = -24 - 91$

$y = -115$

d) $y = -7x - 24$

$y = -7(12) - 24$

$y = -84 - 24$

$y = -108$

4) Find the area and perimeter of the following figures.

a) A = 40

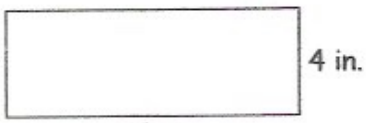
$(4 \cdot 10)$

P = 28

$(10 \cdot 2) + (4 \cdot 2)$

$20 + 8$

$= 28$



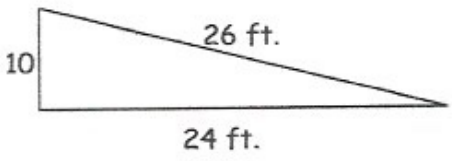
b) A = 120

~~30~~ $(\frac{1}{2} \cdot 10) \cdot 24$

$5 \cdot 24$

P = 60

$10 + 26 + 24$



Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

5) Simplify:

a) $-\frac{4}{15}-\frac{3}{5}=$

$\left(\frac{-4}{-15}\cdot\frac{1}{1}\right)-\left(\frac{3}{5}\cdot\frac{3}{3}\right)$

$-\frac{4}{15}-\frac{9}{15}=\frac{-5}{15}$

b) $\frac{3}{16}-\frac{7}{32}=\frac{-1}{32}$

$\left(\frac{3}{16}\cdot\frac{2}{2}\right)-\left(\frac{7}{32}\cdot\frac{1}{1}\right)$

$\frac{6}{32}-\frac{7}{32}$

c) $\frac{9}{7}-\frac{11}{6}=\frac{-23}{42}$

$\left(\frac{9}{7}\cdot\frac{6}{6}\right)-\left(\frac{11}{6}\cdot\frac{7}{7}\right)$

$54/42-77/42$

d) $\frac{7}{9}-\frac{4}{4}=\frac{-8}{36}$

$\left(\frac{7}{9}\cdot\frac{4}{4}\right)-\left(\frac{4}{4}\cdot\frac{9}{9}\right)$

$\frac{28}{36}-\frac{36}{36}$

6) Solve for x if y = 0:

a) y = x + 24

$0=x+24$

$-24\quad -24$

$-24=x$

b) y = 6x − 90

$0=6x-90$

$+90\quad +90$

$+90=6x$

$\frac{+90}{6}=\frac{6x}{6}$

c) y = 2x − 22

$0=2x-22$

$+22\quad +22$

$\frac{22}{2}=\frac{2x}{2}$

$11=x$

$x=15$

d) y = 4x − 36

$0=4x-36$

$+36\quad +36$

$\frac{36}{4}=\frac{4x}{4}$

$x=9$

7) Solve for y if x = −8:

a) y = −2x + 3

$y=-2(-8)+3$

$y=16+3$

$y=19$

b) y = 3x − 39

$y=3(-8)-39$

$y=-24-39$

$y=-63$

c) y = −4x − 35

$y=-4(-8)-35$

$y=32-35$

$y=-3$

d) y = 5x − 12

$y=5(-8)-12$

$y=-40-12$

$y=-52$

8) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-26-12|$

-38 or 38

b) $|81-67|$

14 or -14

c) $|-39-41|$

-80 or 80

d) $|-95+92|$

3 or -3

9) Solve for x:

a) $\frac{9}{12}=\frac{x}{36}$

$\frac{324}{12}=\frac{12x}{12}$

$27=x$

b) $\frac{7}{8}=\frac{4}{x}$

$7x=32$

$\frac{7x}{7}=\frac{32}{7}$

$x=4.57$

c) $\frac{x}{30}=\frac{4}{5}$

$5x=120$

$\frac{5x}{5}=\frac{120}{5}$

$x=24$

10) Write an equation that represents the points in the table.

x	y
3	4
5	6
7	8

$y=3+1$

$y=5+1$

$y=7+8$

y = x+1

Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

Summer Review - Week # IV

Name _____

1) Solve for x if y = -3:

a) $y = 4x + 42$

$-3 = 4x + 42$

$-42 \quad -42$

$\frac{-45}{4} = x$

b) $y = -2x - 4$

$-3 = -2x - 4$

$+4 \quad +4$

$1 = -2x$

$\frac{-1}{2} = x$

c) $y = 7x - 1$

$-3 = 7x - 1$

$+1 \quad +1$

$\frac{-2}{2} = \frac{7x}{2}$

$\frac{-2}{7} = x$

d) $y = 40x - 8$

$-3 = 40x - 8$

$+8 \quad +8$

$-5 = 40x$

$x = \frac{-5}{40}$

2) Solve for y if x = 1:

a) $y = -x + 3$

$y = -1 + 3$

$y = 2$

b) $y = -6x - 2$

$y = -6(1) - 2$

$y = -6 - 2$

$y = -8$

c) $y = -2x - 5$

$y = -2(1) - 5$

$y = -2 - 5$

$y = -7$

d) $y = -4x - 26$

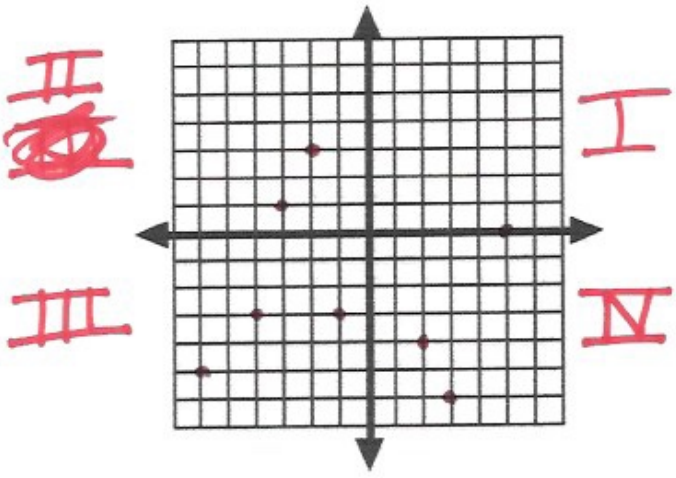
$y = -4(1) - 26$

$y = -4 - 26$

$y = -30$

3) Graph each coordinate pair on the graph and then indicate which quadrant or axis the point lies on.

Coordinate pair	Quadrant or Axis
(-4, -3)	III
(-6, -5)	III
(-3, 1)	II
(-2, 3)	II
(2, -4)	IV
(5, 0)	
(3, -6)	IV
(-1, -3)	III



4) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-21 - 17|$

-38 or 38

b) $|39 - 26|$

13 or -13

c) $|-17 - 79|$

-96 or 96

d) $|-9 + 25|$

16 or -16

e) $|-21 - 61|$

-82 or 82

f) $|61 - 74|$

-13 or 13

g) $|-31 - 79|$

-110 or 110

h) $|-12 + 55|$

43 or -43

Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

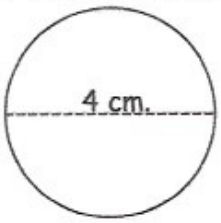
Name _____

_____

Summer Review – Week #5

1) Find the circumference and area of each circle:

a)



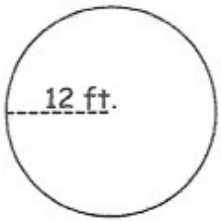
$C = \pi \cdot 4$

$A = \pi \cdot 2^2$

C = 12.56 or _____

A = 12.56 or _____

b)



$C = \pi \cdot 24$

$A = \pi \cdot 12^2$

C = 75.4 or _____

A = 452.2 or _____

2) Solve for x if y = 7:

a) $y = x + 91$

$7 = x + 91$

$-91 \quad -91$

$-84 = x$

b) $y = 4x - 2$

$7 = 4x - 2$

$+2 \quad +2$

$\frac{9}{4} = \frac{4x}{4}$

$\frac{9}{4} = x$

c) $y = 5x - 46$

$7 = 5x - 46$

$+46 \quad +46$

$\frac{53}{5} = \frac{5x}{5}$

$\frac{53}{5} = x$

d) $y = 6x - 86$

$7 = 6x - 86$

$+86 \quad +86$

$\frac{93}{6} = \frac{6x}{6}$

$\frac{93}{6} = x$

3) Solve for y if x = 13:

a) $y = -x + 3$

$y = -13 + 3$

$y = -10$

b) $y = -2x - 2$

$y = -2(13) - 2$

$y = -26 - 2$

$y = -28$

c) $y = -3x - 75$

$y = -3(13) - 75$

$y = -39 - 75$

$y = -114$

d) $y = 8x - 36$

$y = 8(13) - 36$

$y = 104 - 36$

$y = 68$

4) Try to reduce before you compute the answers! (This will help when you are trying to reduce.)

a) $\frac{18}{27} \cdot \frac{30}{40} =$

$\frac{540}{1080} = \frac{1}{2}$

b) $\frac{10}{15} \cdot \frac{24}{32} =$

$\frac{240}{480} = \frac{1}{2}$

c) $\frac{36}{72} \cdot \frac{9}{12} =$

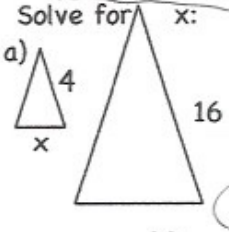
$\frac{324}{864} = \frac{3}{8}$

d) $\frac{24}{18} \cdot \frac{18}{24} =$

$\frac{432}{432} = 1$

5) Solve for x:

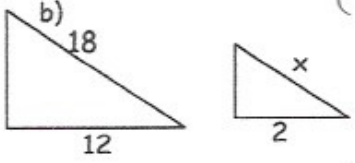
a)



$\frac{4}{16} = \frac{x}{20}$

$5 = x$

b)



$\frac{18}{12} = \frac{x}{2}$

$3 = x$

Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

Name _____

Summer Review - Week # 6

1) Solve for x if y = -30:

a) $y = x + 11$

$-30 = x + 11$

$-11 \quad -11$

$-41 = x$

b) $y = -2x - 32$

$-30 = -2x - 32$

$+32 \quad +32$

$\frac{2}{-2} = \frac{-2x}{-2x}$ $x = -1$

c) $y = -3x - 1$

$-30 = -3x - 1$

$+1 \quad +1$

$\frac{-29}{-3} = \frac{-3x}{-3}$ $x = \frac{-29}{3}$

d) $y = 5x - 10$

$-30 = 5x - 20$

$+20 \quad +20$

$\frac{-10}{5} = \frac{5x}{5}$

$-2 = x$

2) Solve for y if x = -6:

a) $y = x + 3$

$y = -6 + 3$

$y = -3$

b) $y = -2x - 72$

$y = -2(-6) - 72$

$y = 12 - 72$

$y = -60$

c) $y = 3x - 65$

$y = 3(-6) - 65$

$y = -18 - 65$

$y = -83$

d) $y = 4x - 26$

$y = 4(-6) - 26$

$y = -24 - 26$

$y = -50$

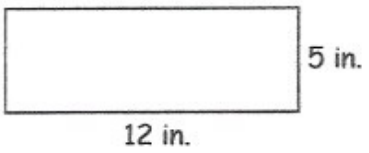
3) Find the area and perimeter of the following figures.

a) A = 60

$5 \cdot 12$

P = 34

$(2 \cdot 5) + (2 \cdot 12)$



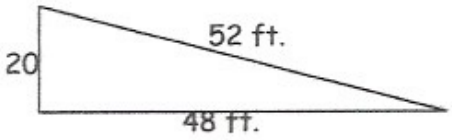
b) A = 480

$(\frac{1}{2} \cdot 20) \cdot 48$

$10 \cdot 48$

P = 120

$20 + 52 + 48$

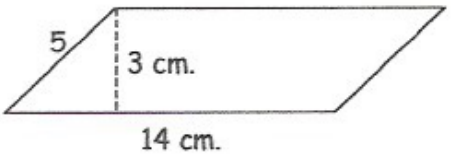


c) A = 42

$3 \cdot 14$

P = 38

$2(5 + 14)$



4) Simplify:

a) $-\frac{8}{9} - \frac{4}{6} =$

b) $\frac{4}{5} - \frac{7}{25} = \frac{13}{25}$

c) $\frac{1}{6} - \frac{2}{10} = -\frac{1}{30}$

d) $\frac{9}{10} - \frac{1}{2} = \frac{4}{10}$

Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

5) Solve for y if x = 3:

a) $y = -5x + 17$

$y = -5(3) + 17$

$y = -15 + 17$

$y = 2$

b) $y = 3x - 22$

$y = 3(3) - 22$

$y = 9 - 22$

$y = -13$

c) $y = 2x - 25$

$y = 2(3) - 25$

$y = 6 - 25$

$y = -19$

d) $y = 6x - 39$

$y = 6(3) - 39$

$y = 18 - 39$

$y = -21$

6) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-81 - 17|$

-98 or 98

b) $|8 - 20|$

-12 or 12

c) $|-76 - 29|$

-105 or 105

d) $|-91 + 45|$

-46 or 46

7) Solve for x:

a) $\frac{1}{8} = \frac{x}{32}$

$\frac{32}{8} = \frac{8x}{8}$

$4 = x$

b) $\frac{9}{5} = \frac{3}{x}$

$9x = 15$

$x = \frac{15}{9} = \frac{5}{3}$

c) $\frac{x}{40} = \frac{3}{20}$

$\frac{20x}{20} = \frac{120}{20}$

$x = 6$

8) Write an equation that represents the points in the table.

x	y
-2	4
0	2
5	-3

$y = x$

9) Solve for x if y = -5:

a) $y = -x + 13$

$-5 = -x + 13$

$-13 \quad -13$

$-18 = x$

b) $y = 2x - 23$

$-5 = 2x - 23$

$+28 \quad +28$

$x = \frac{23}{2}$

c) $y = -3x - 17$

$-5 = -3x - 17$

$+12 \quad +12$

$\frac{7}{-3} = \frac{-3x}{-3}$

$x = -\frac{7}{3}$

d) $y = 8x - 29$

$-5 = 8x - 29$

$+29 = \quad +29$

$\frac{24}{8} = \frac{8x}{8}$

$3 = x$

10) Solve for y if x = -8:

a) $y = x + 92$

$y = -8 + 92$

$y = 84$

b) $y = 3x - 72$

$y = 3(-8) - 72$

$y = -24 - 72$

$y = -96$

c) $y = -5x - 35$

$y = -5(-8) - 35$

$y = 40 - 35$

$y = 5$

d) $y = 7x - 26$

$y = 7(-8) - 26$

$y = -56 - 26$

$y = -82$

Show your work! Show your work! Show your work!

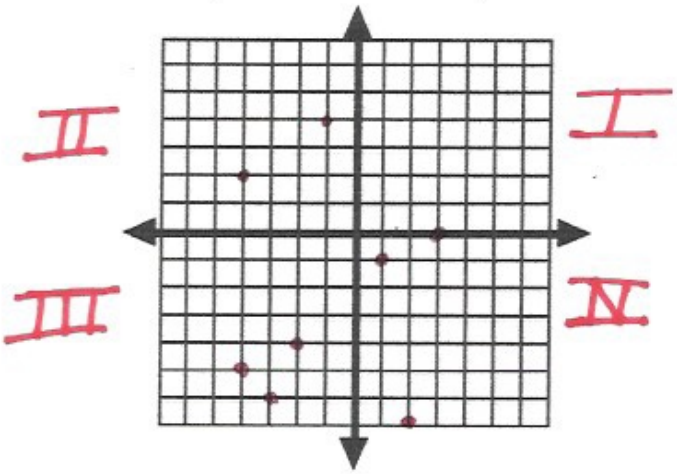
Show your work! Show your work! Show your work!

Name _____

Summer Review - Week #7

1) Graph each coordinate pair on the graph and then indicate which quadrant or axis the point lies on.

Coordinate pair	Quadrant or Axis
(-2, -4)	III
(-3, -6)	III
(-4, 2)	II
(-1, 4)	II
(3, 0)	~~QN~~
(1, -1)	IV
(2, -7)	IV
(-4, -5)	III



2) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-29-13|$ -42 or 42

b) $|39-62|$ -23 or 23

c) $|-59-41|$ -100 or 100

d) $|-26+71|$ 45 or -45

3) Solve for x:

a) $\frac{7}{8}=\frac{x}{48}$ $\frac{8x}{8}=\frac{336}{8}$ $x=42$

b) $\frac{9}{2}=\frac{8}{x}$ $\frac{9x}{9}=\frac{16}{9}$ $x=\frac{16}{9}$

c) $\frac{x}{80}=\frac{3}{4}$ $\frac{4x}{4}=\frac{240}{4}$ $x=60$

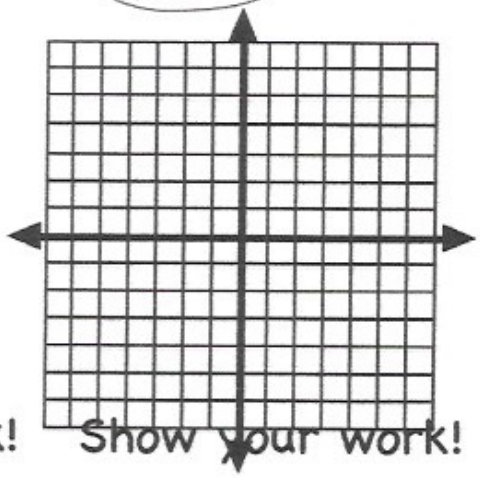
4) Graph the following lines on the coordinate plane:

a) $y = x + 5$

b) $y = -2x + 6$

c) $y=\frac{1}{4}x - 2$

d) $y=-\frac{2}{3}x + 3$



Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

Name _____

Summer Review – Week # 8

1) Solve for x if y = -3:

a) $y = x + 17$

$-3 = x + 17$

$-17 \quad -17$

$-20 = x$

b) $y = 2x - 4$

$-3 = 2x - 4$

$+4 \quad +4$

$1 = 2x$

$\frac{1}{2} = x$

c) $y = 9x + 24$

$-3 = 9x + 24$

$-24 \quad -24$

$\frac{-27}{9} = \frac{9x}{9}$

$-3 = x$

d) y =

2) Solve for y if x = 7:

a) $y = -3x + 63$

b) $y = 2x - 38$

c) $y = 4x - 25$

d) y =

3) Try to reduce before you compute the answers! (This will help when you are trying to reduce.)

a) $\frac{12}{24} \cdot \frac{10}{5} = \frac{120}{120} = 1$

b) $\frac{23}{24} \cdot \frac{14}{46} = \frac{322}{1104} = \frac{7}{24}$

c) $\frac{3}{4} \cdot \frac{36}{18} = \frac{108}{72} = \frac{3}{2}$

d) $\frac{15}{18} \cdot \frac{21}{3} = \frac{315}{54} = \frac{35}{6}$

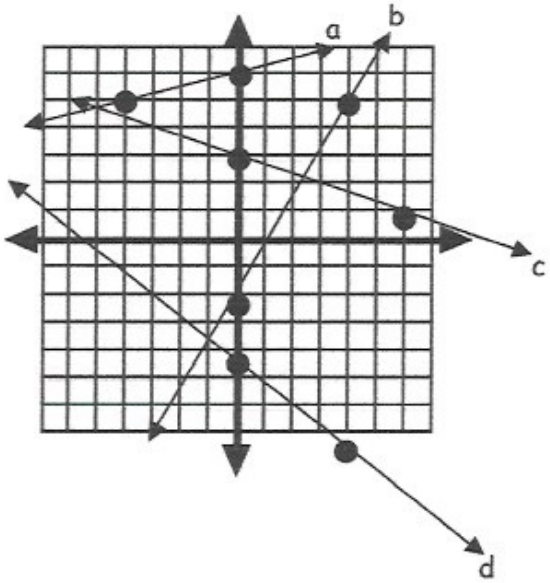
4) Write an equation that represents each of the lines.

a) y =

b) y =

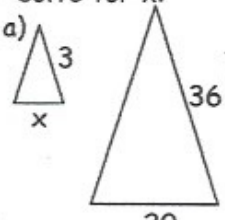
c) y =

d) y =



5) Solve for x:

a)

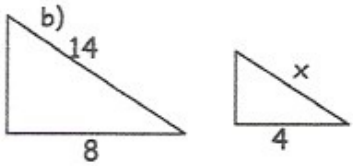


$x = \frac{60}{36}$

$\frac{x}{3} = \frac{20}{36}$

$60 = 36x$

b)



$\frac{x}{4} = \frac{14}{8}$

$8x = 56$

$x = 7$

Show your work! Show your work! Show your work!

Louisiana Believes

Grade 8 Mathematics
Practice Test
2013-2014

DEPARTMENT of EDUCATION
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1-877-453-2721
Ask LDOE?
http://www.louisianabelieves.com/resources/contact-us

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LEAP Practice Test—Grade 8 Mathematics

Test Administrator Instructions

★ This document contains a Practice Test that shows what each part, or session, of an actual grade 8 math assessment is like.

The Practice Test may be used at home or at school for students to become familiar with the LEAP test they will take in spring 2014. It may help students feel more relaxed when they take the actual test.

★ The Assessment Structure provides information on the overall design of the actual test. The Assessment Structure and example items can be found on the Louisiana Department of Education's website.

http://www.louisianabelieves.com/resources/library/assessment-guidance-2013-2014

The mathematics test has three sessions to be taken separately:

- Session 1 (pages 3 to 19) includes 30 multiple-choice questions—a calculator may not be used.
- Session 2 (pages 21 to 38) includes 30 multiple-choice questions—a calculator may be used.
- Session 3 (pages 40 to 43) includes 4 constructed-response questions—a calculator may be used.

★ A Mathematics Reference Sheet, which students may use for all sessions, is located on page 46.

★ Students respond to multiple-choice items using the Answer Sheets on pages 44 and 45 and constructed-response items using pages 40 to 43 of Session 3.

★ The Answer Keys and Scoring Rubrics, used to score student responses, are located on pages 47 to 52.

When printing the PDF files for the three Math Sessions, be sure to set the *Page Scaling* drop-down menu on the Print screen to None, No Scaling, or Actual Size depending on the printer you are using. Otherwise, measurement items may not be the correct size, which may impact student responses.

DEPARTMENT of EDUCATION
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Mathematics—Sessions 1, 2, and 3
GENERAL INSTRUCTIONS

The Mathematics test has three sessions, two with multiple-choice questions and one with constructed-response questions. You may **not** use a calculator for session 1, but you may use a calculator for sessions 2 and 3.

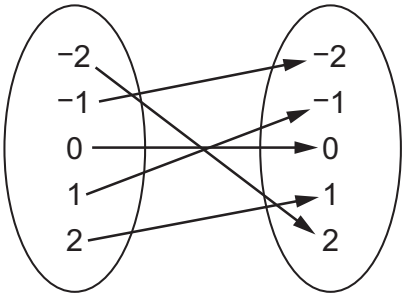
Session 1—Mathematics (No Calculator)

Write your answers for questions 1 through 30 in the spaces provided on page 44, session 1 answer sheet. Write only one answer for each question. You may work problems in your test booklet or on scratch paper, but you must mark your answer on your answer sheet. You may review your work in this session, but do not work on any other session.

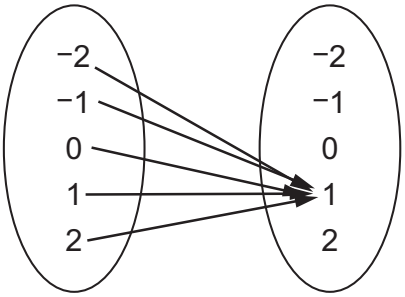
You may NOT use a calculator for this session.

1. Which model is **not** a function?

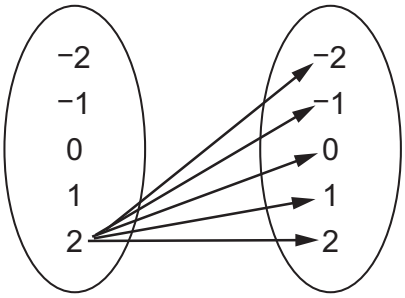
A.



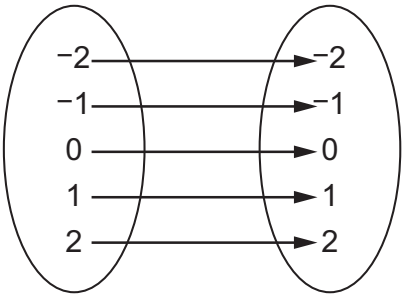
B.



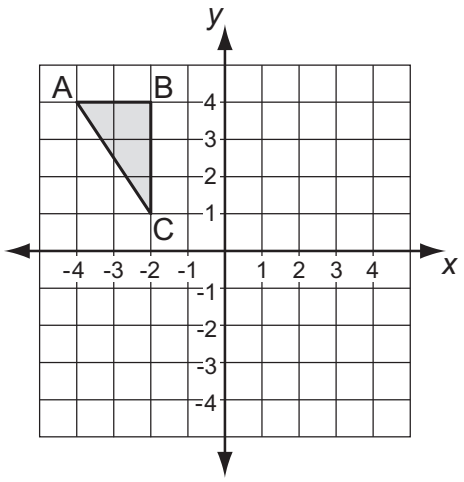
C.



D.



2. Janet graphed a triangle on the coordinate grid shown.



Janet rotated the triangle 90° clockwise about the origin to create figure A'B'C'. What are the coordinates of the vertices of the figure A'B'C' after the rotation?

A. A' (–4, –4)
B' (–4, –2)
C' (–1, –2)

B. A' (4, 4)
B' (2, 4)
C' (2, 1)

C. A' (–4, –4)
B' (–2, –4)
C' (–2, –1)

D. A' (4, 4)
B' (4, 2)
C' (1, 2)

3. The choir director set up chairs for the concert with an equal number of rows and columns. The number of chairs in each row and column is represented by the algebraic expression $\sqrt{y}$, where y is the total number of chairs. What is the number of chairs in each row and column if $y = 81$ chairs?

A. 3 chairs

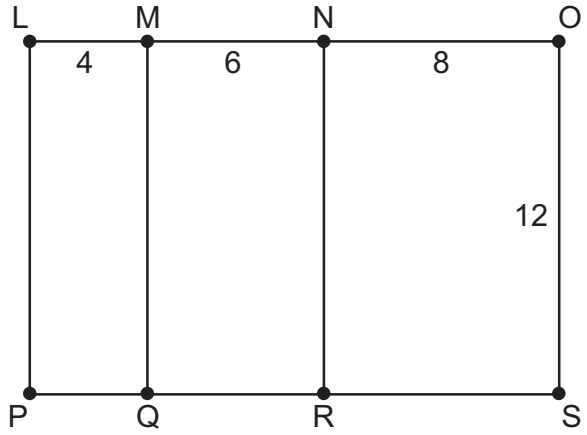
B. 9 chairs

C. 40.5 chairs

D. 162 chairs

Session 1—Mathematics (No Calculator)

4. Rectangle LOSP is shown below. The lengths, in units, of some of the line segments are also shown. Line segments MQ and NR are perpendicular to line segment LO.



Which shape is similar to rectangle LOSP?

A. LMQP

B. LNRP

C. MNRQ

D. OSRN

5. Paul creates a scatter plot with a negative association. The *x*-axis of the scatter plot is titled, "Minutes Spent at Mall". Which label is **most likely** the title of the *y*-axis of Paul's scatter plot?

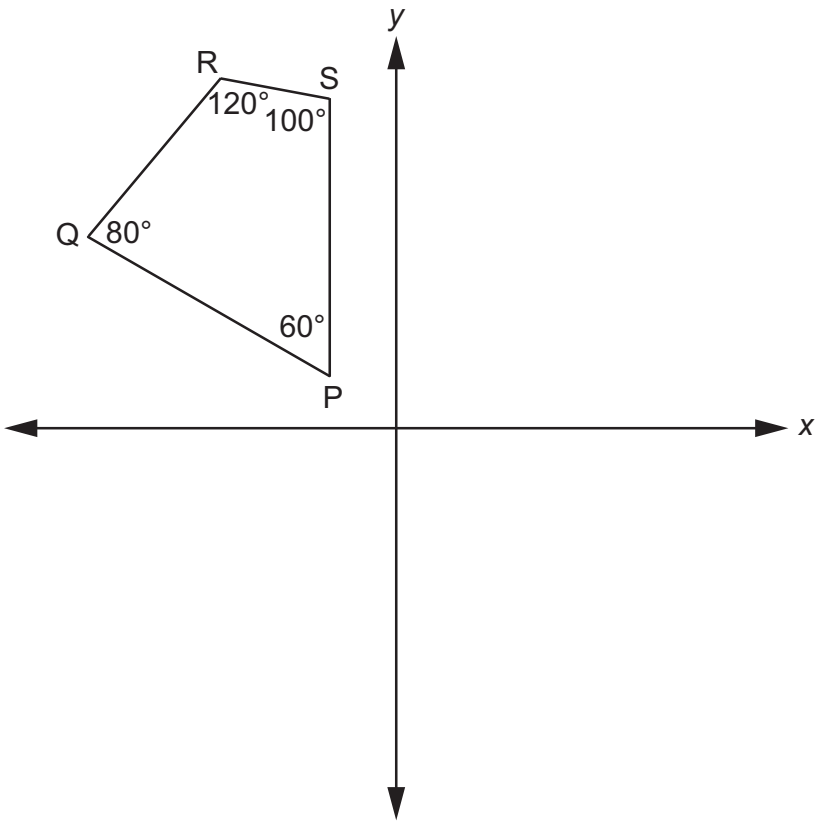
A. Distance Walked

B. Money Available to Spend

C. Number of Movies Seen

D. Number of Stores Visited

6. Use the graph below to answer the question.



Quadrilateral PQRS will be rotated 90° clockwise about the origin resulting in quadrilateral P'Q'R'S'. Which statement is true?

A. $\overline{RS}$ will be parallel to $\overline{R'S'}$.

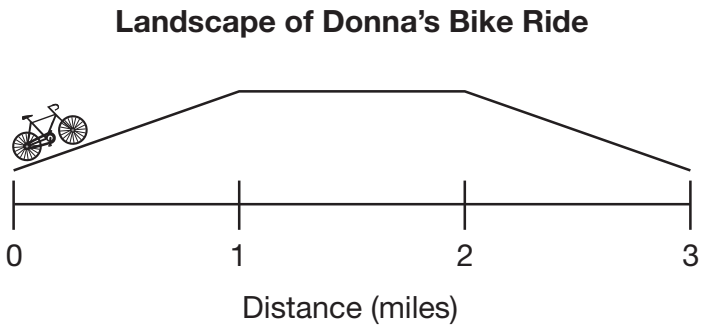
B. $\overline{SP}$ will be parallel to $\overline{R'S'}$.

C. The measure of $\angle P'$ will be 80°.

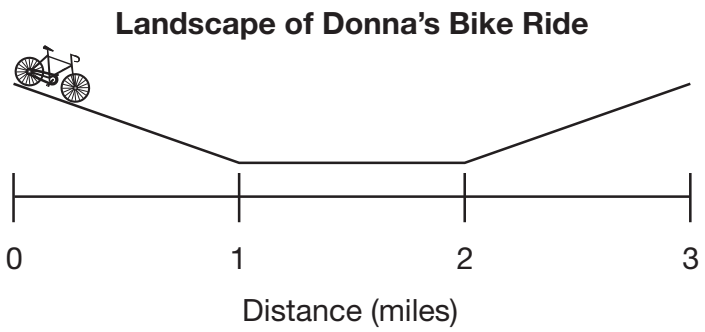
D. The measure of $\angle Q'$ will be 80°.

7. Donna rode her bike for three miles. She traveled 18 miles per hour the first mile, 15 miles per hour the second mile, and 21 miles per hour the third mile. Which diagram shows the most likely landscape of Donna's bike ride?

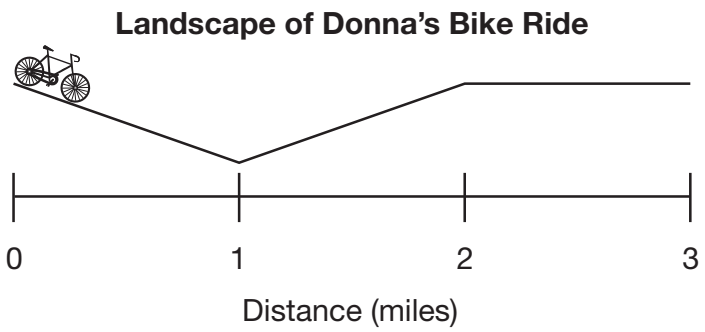
A.



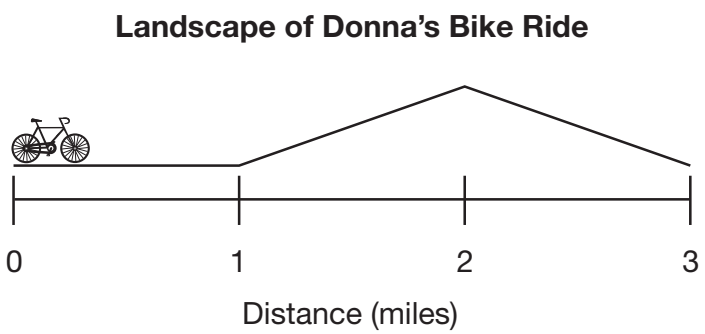
B.



C.



D.



8. Camille placed blocks on a table in rows and columns. All the rows and columns had the same number of blocks in them and formed a square. Which could be the total number of blocks Camille placed on the table?

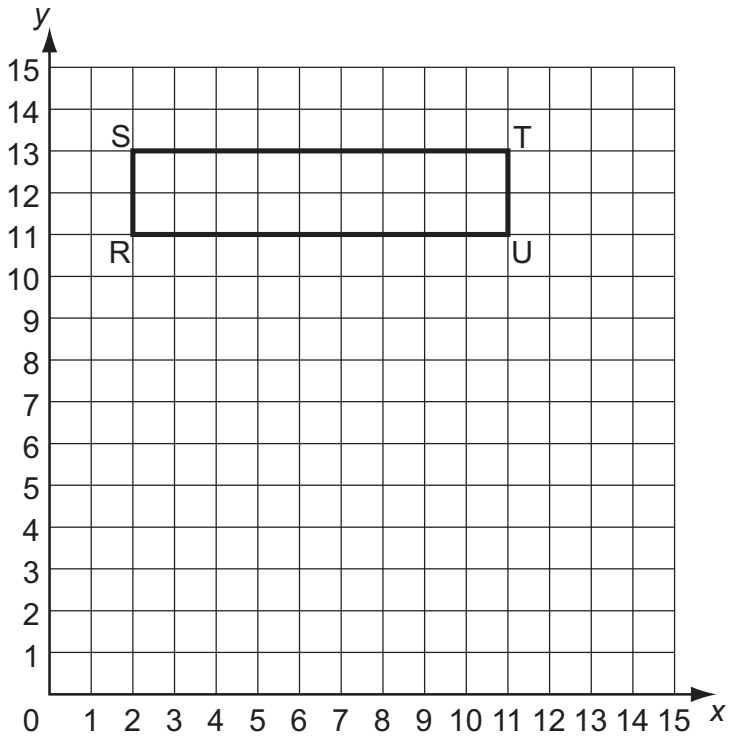
A. 111 blocks

B. 121 blocks

C. 181 blocks

D. 222 blocks

9. Use the grid below to answer the question.



Rectangle RSTU is rotated around point T to create rectangle R'S'T'U'. The *x*-coordinate of point T' is less than the *x*-coordinate of point U', and their *y*-coordinates are equal. What are the coordinates of point R'?

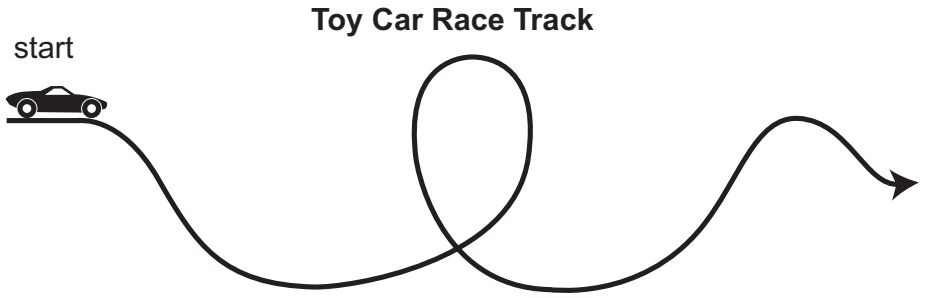
A. (9, 22)

B. (11, 4)

C. (13, 4)

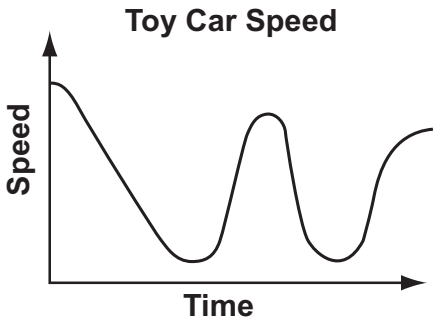
D. (20, 15)

10. Use the picture to answer the question below.

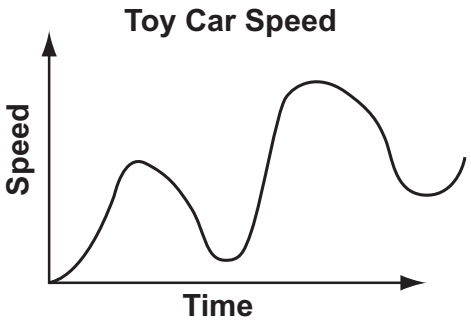


The picture shows the beginning of a racetrack for a toy car. Which graph models the estimated speed of the toy car as it moves through the racetrack?

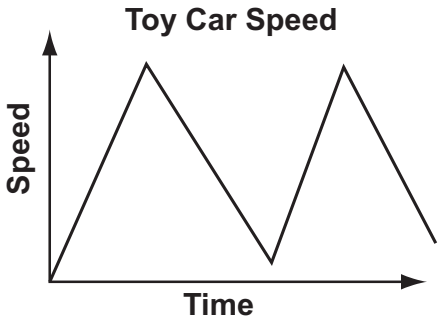
A.



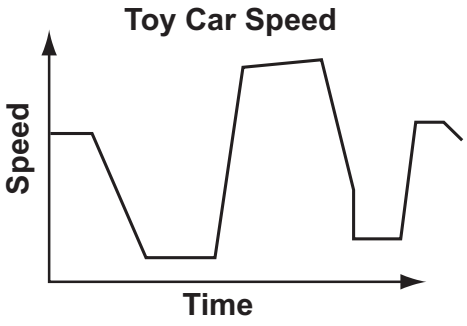
B.



C.



D.



11. The United States exported approximately 30,000,000 metric tons of wheat over an entire year. What is the number of metric tons of wheat written in scientific notation?

A. 3×10^4

B. 3×10^5

C. 3×10^6

D. 3×10^7

12. Which expression is equivalent to $(9^{-2})^8$?

A. -81^{32}

B. $\frac{1}{9^{16}}$

C. $\frac{1}{9^{10}}$

D. 81^8

13. What is 5×10^{-4} written in standard notation?

A. 0.00005

B. 0.0005

C. 5,000

D. 50,000

14. Which statement about $\sqrt{2}$ and $\frac{\pi}{2}$ is true?

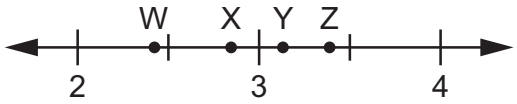
A. Since half of 2 is 1 and half of 3 is 1.5, then $\sqrt{2} < \frac{\pi}{2}$.

B. Since half of 2 is greater than $\frac{1}{2}$ of 3.14, then $\sqrt{2} > \frac{\pi}{2}$.

C. Since $\sqrt{2}$ is slightly less than 1.5 and half of π is slightly more than 1.5, then $\sqrt{2} < \frac{\pi}{2}$.

D. Since $\sqrt{2}$ is slightly greater than 1 and half of π is slightly less than 2, then $\sqrt{2} > \frac{\pi}{2}$.

15. Use the number line below to answer the question.



Which point on the number line is the **best** approximation for $\sqrt{6}$?

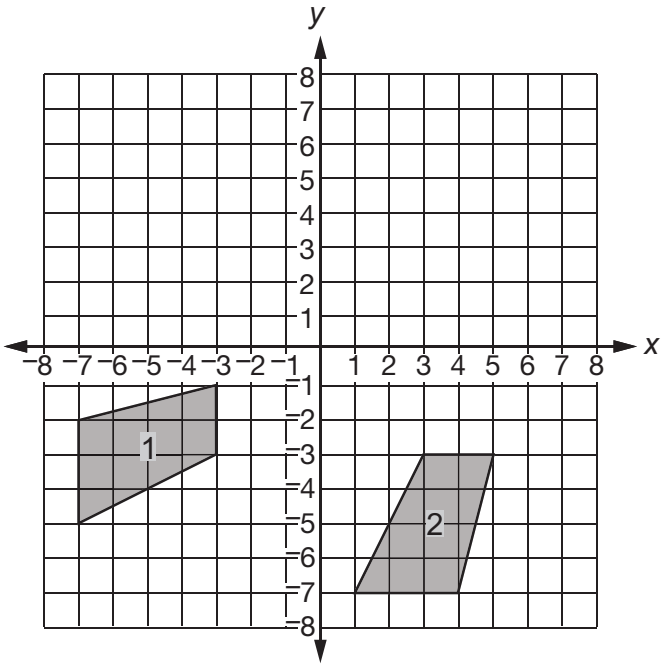
A. point W

B. point X

C. point Y

D. point Z

16. Use the graph to answer the question.



Which pair of transformations moves quadrilateral 1 to quadrilateral 2?

A. reflect it over the line $y = -3$, then rotate it 90° counterclockwise about the origin

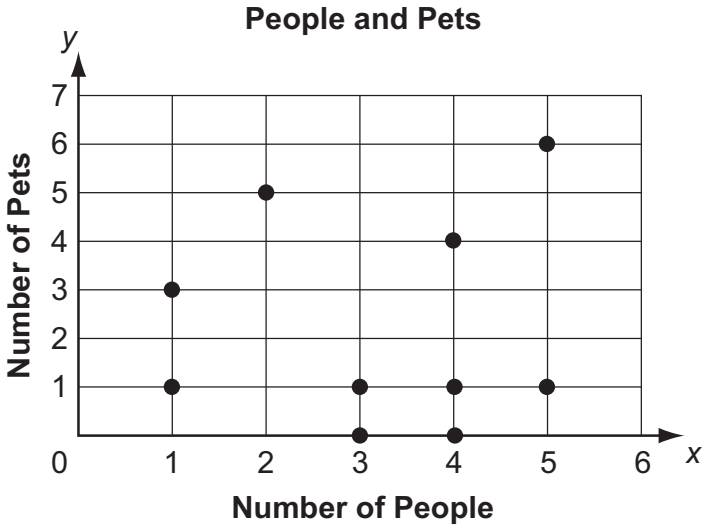
B. reflect it over the x-axis, then rotate it 180° about the origin

C. rotate it 90° counterclockwise about point (–3, –3), then translate it 8 units to the right

D. translate it 8 units to the right, then reflect it over the line $y = -3$

Session 1—Mathematics (No Calculator)

17. Misha asked ten different coworkers how many people and pets are living in their homes. She used the responses to create the scatter plot shown.



Which statement about the numbers of people and pets living in the homes of Misha's ten coworkers is true?

A. As the number of people living in the home increases, the number of pets increases.

B. As the number of people living in the home increases, the number of pets decreases.

C. As the number of people living in the home decreases, the number of pets decreases.

D. There is no relationship between the numbers of people and pets living in the home.

18. What is the value of $5^4 \times 5^{-6}$?

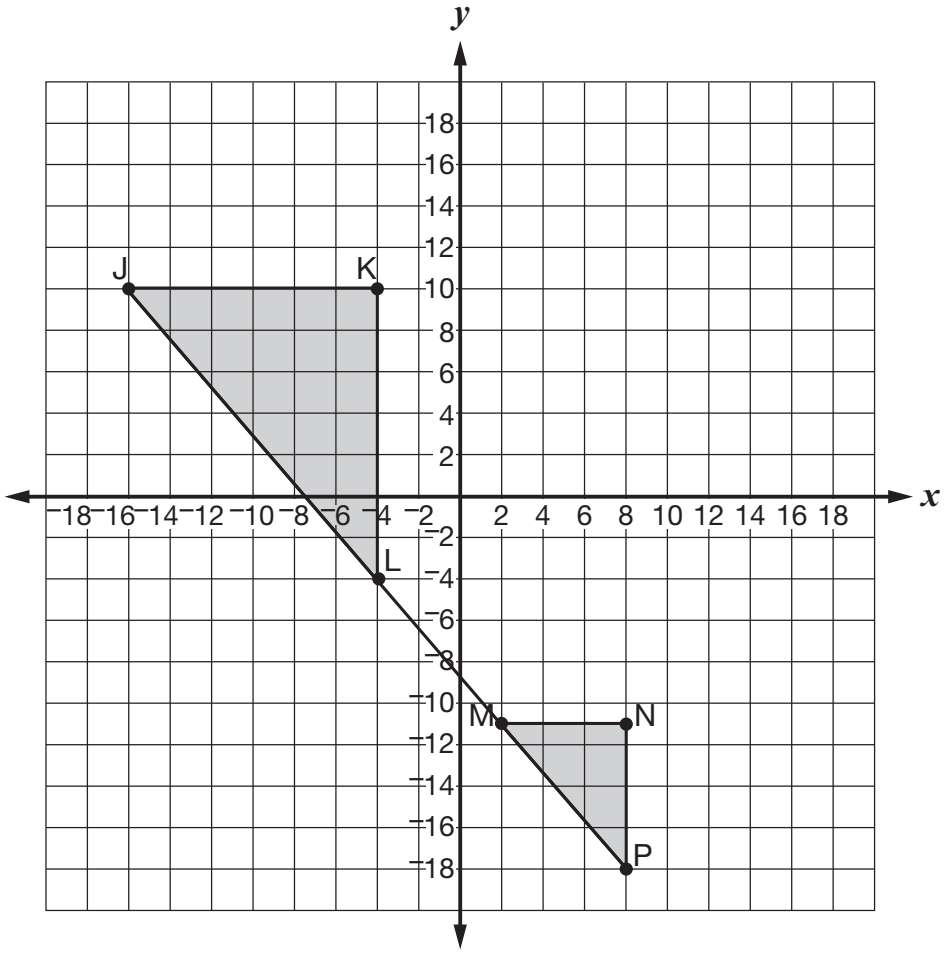
A. –25

B. $-\frac{1}{25}$

C. $\frac{1}{25}$

D. 25

19. The diagram below shows △JKL and △MNP.



Which statement about the slopes of $\overline{JL}$ and $\overline{MP}$ is true?

A. The slope of $\overline{JL}$ is the same as the slope of $\overline{MP}$ because △JKL is similar to △MNP.

B. The slope of $\overline{JL}$ is twice the slope of $\overline{MP}$ because the length of $\overline{JL}$ is twice the length of $\overline{MP}$.

C. The slope of $\overline{JL}$ is 4 times the slope of $\overline{MP}$ because the area of △JKL is 4 times the area of △MNP.

D. The slope of $\overline{JL}$ is 8 more than the slope of $\overline{MP}$ because the difference between the short legs of the triangles is 6 and the difference between the long legs of the triangles is 7.

20. Which comparison is true?

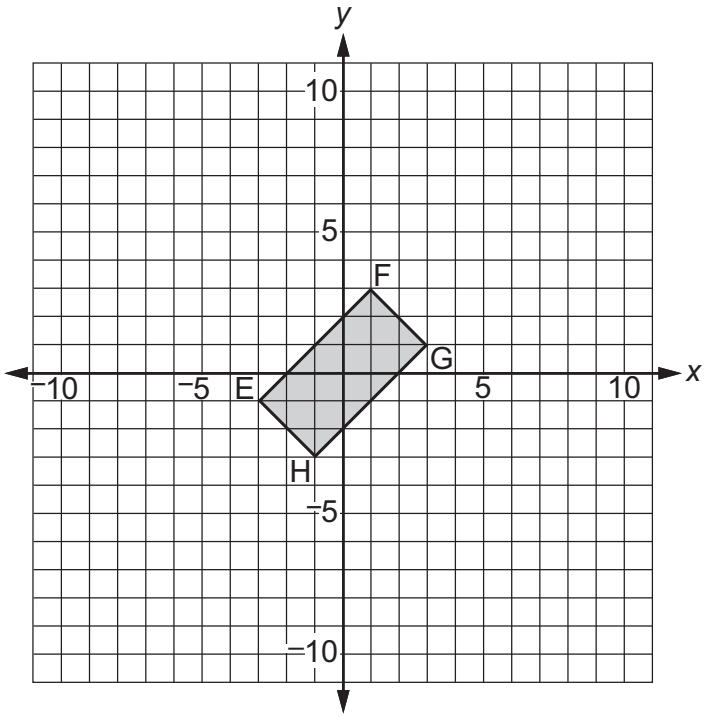
A. $4 < \sqrt{18} < 4.5$

B. $4.5 < \sqrt{18} < 5$

C. $8.5 < \sqrt{18} < 9.5$

D. $17 < \sqrt{18} < 19$

21. Use the coordinate grid below to answer the question.



Rectangle EFGH is dilated with its center at the origin and a scale factor of 3. The dilation is then rotated 90° clockwise about the origin to create rectangle E'F'G'H'. What are the coordinates of the vertices of rectangle E'F'G'H'?

A. E' (–4, 6)
F' (6, –4)
G' (4, –6)
H' (–6, 4)

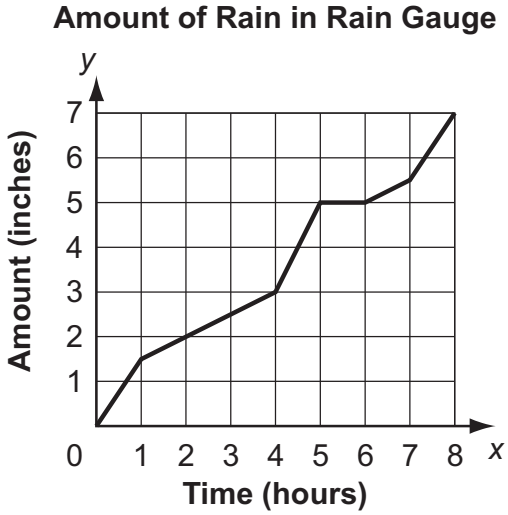
B. E' (4, –6)
F' (–6, 4)
G' (–4, 6)
H' (6, –4)

C. E' (–3, 9)
F' (9, –3)
G' (3, –9)
H' (–9, 3)

D. E' (3, –9)
F' (–9, 3)
G' (–3, 9)
H' (9, –3)

Session 1—Mathematics (No Calculator)

22. A weather station recorded the amount of rain that fell during an 8-hour time frame using a rain gauge. The findings are recorded in the graph below.



Between which hours was the rate at which the rain fell **greater** than the rate at which the rain fell between hours 0 and 1?

A. between hours 1 and 4

B. between hours 4 and 5

C. between hours 5 and 6

D. between hours 7 and 8

23. Each day of the month, Carl earns an allowance, in cents, equal to the square of that date of the month. Which is a number of cents Carl could earn in a single day?

A. 21

B. 31

C. 64

D. 111

Session 1—Mathematics (No Calculator)

24. Which set of ordered pairs models a function?

A. {(2, 9), (7, 5), (3, 14), (2, 6)}

B. {(5, 10), (5, 15), (5, 20), (5, 25)}

C. $\{(-\frac{1}{2}, -\frac{1}{3}), (\frac{1}{2}, -\frac{1}{4}), (-\frac{1}{2}, -\frac{1}{5}), (\frac{1}{2}, -\frac{1}{6})\}$

D. {(–10, 20), (–20, 30), (–30, 40), (–40, 10)}

25. A company used about 7.4×10^5 sheets of paper in a month. Of the paper used during the month, the accounting department used about 8.9×10^3 of the sheets. About how many sheets of paper were used by other departments during the month?

A. 1.5×10^2

B. 1.5×10^3

C. 7.3×10^4

D. 7.3×10^5

26. Which number is irrational?

A. $-\frac{4}{3}$

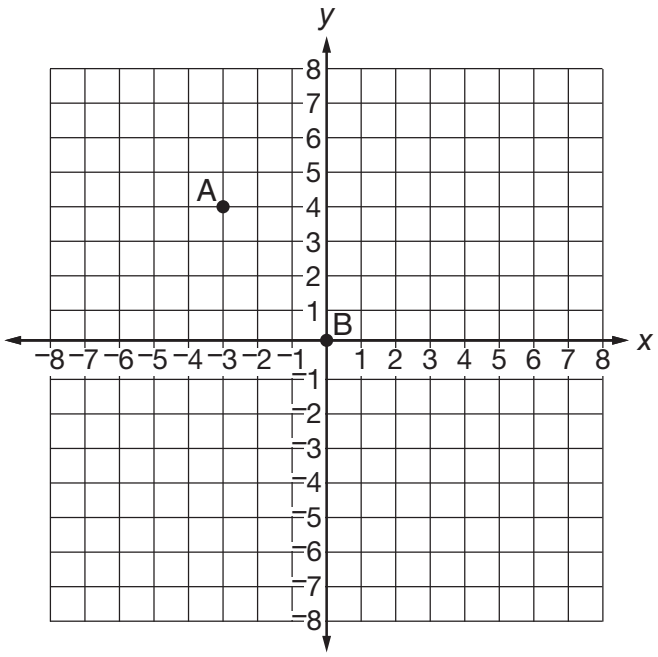
B. $\sqrt{121}$

C. 16.121314...

D. $0.00\overline{71}$

Session 1—Mathematics (No Calculator)

27. Use the graph below to answer the question.



Which equation represents a line that passes through points A and B plotted on the graph?

A. $y = -\frac{4}{3}x$

B. $y = -\frac{3}{4}x$

C. $y = \frac{3}{4}x$

D. $y = \frac{4}{3}x$

28. For which equation is $\sqrt[3]{36}$ the solution?

A. $x^3 = 36$

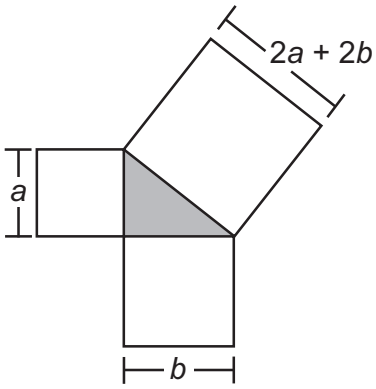
B. $x^2 = 36$

C. $\sqrt[3]{x} = 36$

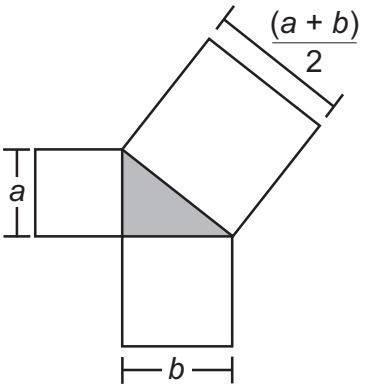
D. $\sqrt{x} = 36$

29. Ranee is creating a diagram to prove that a certain triangle is a right triangle. In her diagram she uses three white quadrilaterals that are squares. Which diagram could be the one that Ranee is creating?

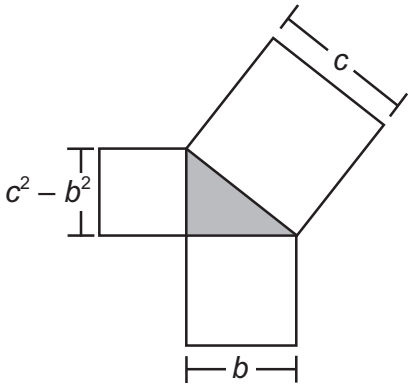
A.



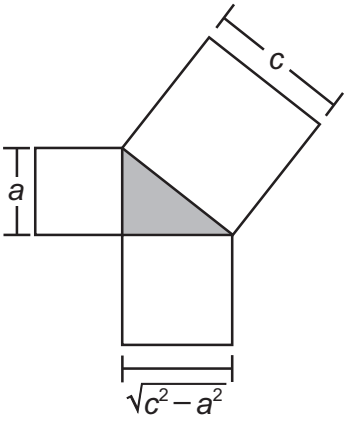
B.



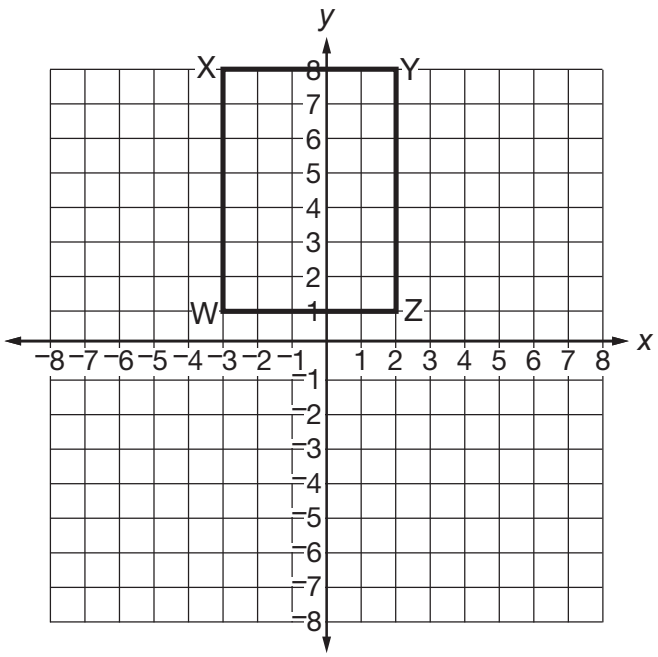
C.



D.



30. Use the graphic below to answer the question.



Rectangle WXYZ will be transformed so that W' is located at (–3, –1) and Z' is located at (2, –1). Which could be the coordinates of X' and Y' so that W'X'Y'Z' is congruent to WXYZ?

A. X' is located at (–3, –6) and Y' is located at (2, –6)

B. X' is located at (3, 8) and Y' is located at (–2, 8)

C. X' is located at (–3, 6) and Y' is located at (2, 6)

D. X' is located at (2, –8) and Y' is located at (–3, –8)

STOP

Mathematics—Sessions 1, 2, and 3
GENERAL INSTRUCTIONS

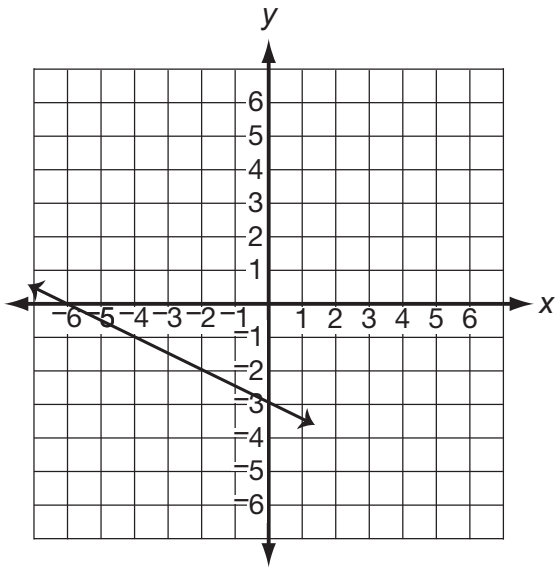
The Mathematics test has three sessions, two with multiple-choice questions and one with constructed-response questions. You may **not** use a calculator for session 1, but you may use a calculator for sessions 2 and 3.

Session 2—Mathematics (Calculator)

Write your answers for questions 31 through 60 in the spaces provided on page 45, session 2 answer sheet. Write only one answer for each question. You may work problems in your test booklet or on scratch paper, but you must mark your answer on your answer sheet. You may review your work in this session, but do not work on any other session.

You MAY use a calculator for this session.

31. Use the graph below to answer the question.



Which equation has the same *y*-intercept as the line in the graph, and a slope that is the opposite of the slope in the graph?

A. $y = \frac{1}{2}x - 3$

B. $y = \frac{1}{2}x + 3$

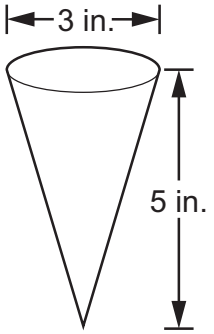
C. $y = -2x - 3$

D. $y = 2x - 3$

Session 2—Mathematics (Calculator)

32. Cecil has a paper cup in the shape of a cone, as shown below.

Cecil's Paper Cup



What is the volume of Cecil's paper cup?

A. $2\frac{1}{2}\pi$ cubic in.

B. $3\frac{3}{4}\pi$ cubic in.

C. 15π cubic in.

D. 60π cubic in.

33. For a few months, Dexter recorded the amounts, in fluid ounces, of laundry detergent remaining, y, after he and his family washed x loads of laundry. The equation of the line of best fit for his data is shown below.

$$y = -1.6x + 50$$

Which statement correctly describes the slope of Dexter's equation of the line of best fit in the context of the situation?

A. The bottle Dexter's family buys holds about 50 fluid ounces of detergent.

B. For each load of laundry, Dexter's family uses about 1.6 fluid ounces of detergent.

C. With 50 fluid ounces of detergent, Dexter's family can wash about 1.6 loads of laundry.

D. With 1.6 bottles of laundry detergent, Dexter's family can wash about 50 loads of laundry.

Session 2—Mathematics (Calculator)

34. Use the two functions below to answer the question.

Function A

$$y = \frac{1}{4}x - \frac{2}{3}$$

Function B

x	y
2	−8
4	−9
6	−10
8	−11

Which statement about the slopes of the functions is true?

A. The slopes of both functions are negative.

B. The slopes of both functions are positive.

C. The slope of function A is negative and the slope of function B is positive.

D. The slope of function A is positive and the slope of function B is negative.

35. Eastview Junior High students order sweatshirts and T-shirts in either purple or gold. Of the students who ordered a sweatshirt, the relative frequency of ordering a gold one is half of the relative frequency of ordering a purple one. Which two-way table could show the data from the orders?

A.

Sweatshirt and T-Shirt Orders

	Sweatshirt	T-Shirt
Purple	12	18
Gold	24	15

B.

Sweatshirt and T-Shirt Orders

	Sweatshirt	T-Shirt
Purple	28	26
Gold	22	44

C.

Sweatshirt and T-Shirt Orders

	Sweatshirt	T-Shirt
Purple	70	17
Gold	35	93

D.

Sweatshirt and T-Shirt Orders

	Sweatshirt	T-Shirt
Purple	45	50
Gold	25	25

Session 2—Mathematics (Calculator)

36. Caleb has a piece of rectangular paper that is 12 inches wide by 16 inches long. He drew a straight line along the diagonal of the paper. What is the length of the line Caleb drew?

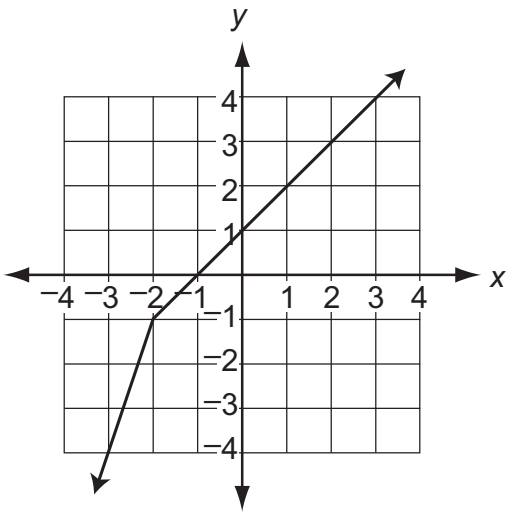
A. $\sqrt{28}$ inches

B. $\sqrt{112}$ inches

C. 20 inches

D. 28 inches

37. Use the graph of the function below to answer the question.



Which description of the function is true?

A. The function is linear and always increasing.

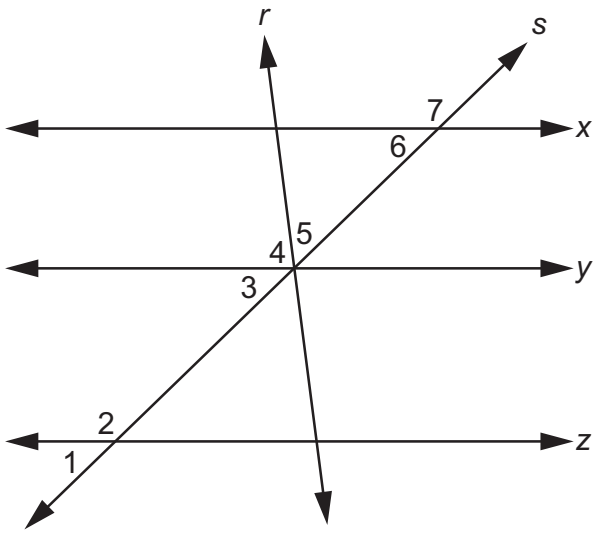
B. The function is nonlinear and always increasing.

C. The function is decreasing from negative infinity to –1 and increasing from –1 to infinity.

D. The function is decreasing from negative infinity to –2 and increasing from –2 to infinity.

Session 2—Mathematics (Calculator)

38. In the diagram below, lines *x*, *y*, and *z* are all parallel, and lines *r* and *s* intersect at line *y*.



Which equation must be true?

A. $m\angle 1 = 180° - m\angle 7$

B. $m\angle 2 = 90° + m\angle 5$

C. $m\angle 3 + m\angle 4 = m\angle 7$

D. $m\angle 5 + m\angle 6 = m\angle 7$

39. Which equation is **not** a linear function?

A. $y = xy + 2$

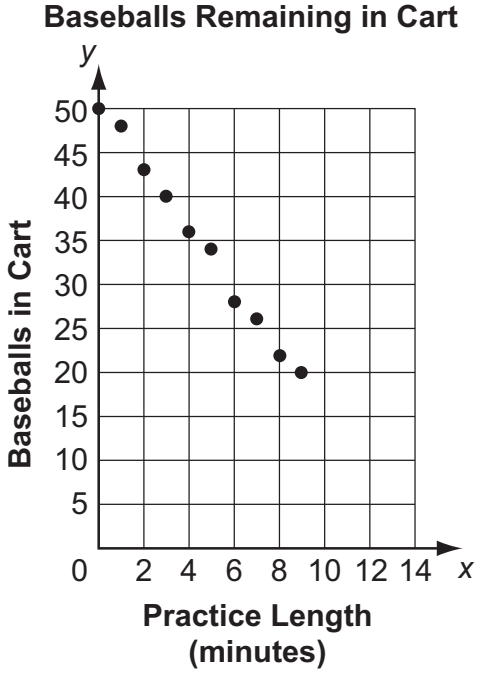
B. $y = x + 2y$

C. $y = -x - \frac{y}{2}$

D. $y = x - y + 2$

Session 2—Mathematics (Calculator)

40. A baseball coach places baseballs in a cart. He uses the baseballs to pitch to the players during practice. The number of baseballs remaining in the cart after different practice lengths, in minutes, are displayed in the scatter plot below.



Which statement about the scatter plot is true?

A. The scatter plot shows a positive association because all of the points have positive coordinates.

B. The scatter plot shows a positive association because the points on the graph go towards 50 baseballs.

C. The scatter plot shows a negative association because the practice length is always less than the number of baseballs in the cart.

D. The scatter plot shows a negative association because as the practice length increases, the number of baseballs in the cart decreases.

Session 2—Mathematics (Calculator)

41. Which equation has infinitely many solutions?

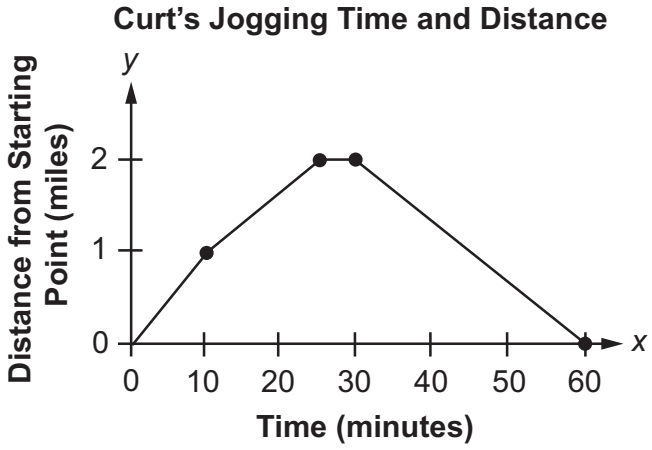
A. $x = \frac{1}{4}x + \frac{3}{4}$

B. $\frac{1}{3}x - 5 = \frac{2}{3}x - 5$

C. $\frac{1}{2}(1 + 4x) = 2x - 3$

D. $3 - 4x = -6\left(\frac{2}{3}x - \frac{1}{2}\right)$

42. Curt jogged on a path that was 2 miles long, took a break, and then jogged back along the same path to where he started. He jogged at different speeds for different distances along the path as shown in the graph.



Between which times did Curt jog the fastest?

A. 0 minutes and 10 minutes

B. 10 minutes and 25 minutes

C. 25 minutes and 30 minutes

D. 30 minutes and 60 minutes

Session 2—Mathematics (Calculator)

43. Karen and Henry each sold food at the fair. The table below shows the total number of corn dogs Karen sold at different times of the day.

Karen's Corn Dog Sales

Time	Total Corn Dogs Sold
12:00 P.M.	42
2:00 P.M.	56
4:00 P.M.	70
6:00 P.M.	84

Henry uses the equation below to show the number of hot dogs, h, he has sold after t hours.

$$h = 14t$$

Which statement about Karen and Henry is true?

A. The rate that Henry sells hot dogs is half the rate that Karen sells corn dogs.

B. The rate that Henry sells hot dogs is double the rate that Karen sells corn dogs.

C. The rate that Karen sells corn dogs is 7 times the rate that Henry sells hot dogs.

D. The rate that Karen sells corn dogs is the same as the rate that Henry sells hot dogs.

44. A group of four friends each mowed lawns after school and on the weekends for a month. The total number of lawns mowed can be represented by the equation below.

$$x + \frac{1}{3}x + \frac{1}{2}x + 16 = 49$$

Each friend is represented by a term in the equation. How many lawns, x, did the first friend mow?

A. 11

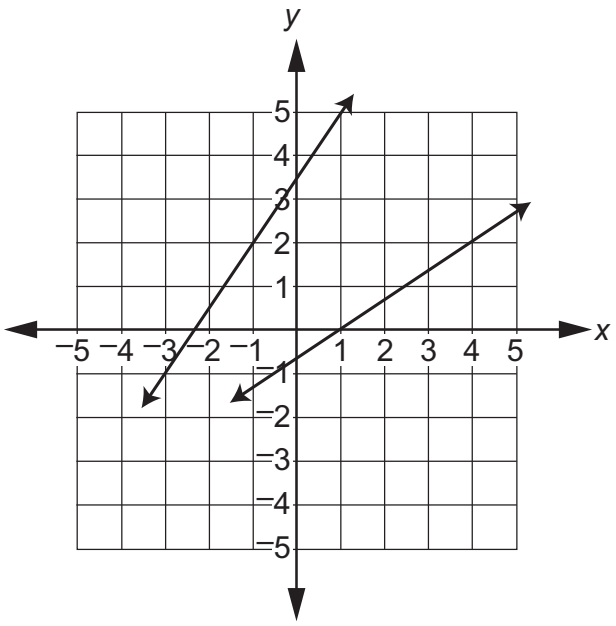
B. 18

C. 27

D. $31\frac{1}{6}$

Session 2—Mathematics (Calculator)

45. Use the system of two linear equations graphed below to answer the question.



What is the solution to the system of linear equations?

A. (–5, –4)

B. (1, 3.5)

C. $y = -x + 1$

D. $y = 3.5x + 1$

46. There were approximately 1.6×10^{11} pieces of mail processed by the United States Postal Service in 2012. This is about 75% of the number of pieces of mail processed in 2006. Approximately how many pieces of mail were processed by the United States Postal Service in 2006?

A. 1.2×10^{10}

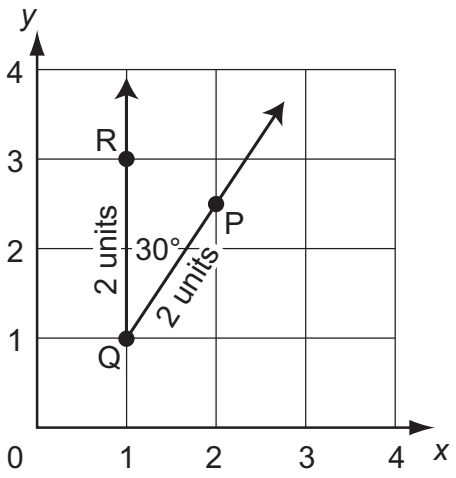
B. 1.2×10^{11}

C. 2.13×10^{10}

D. 2.13×10^{11}

Session 2—Mathematics (Calculator)

47. Use the figure below to answer the question.



A dilation of angle PQR will make the length of line segment Q'R' equal to 6 units. What is the measure of angle P'Q'R' after the dilation?

A. 10°

B. 30°

C. 60°

D. 90°

48. Parker states that any function written **without** exponents must be linear. Which function proves Parker's statement is incorrect?

A. $y = 5x + 3$

B. $y = x^5 + 3$

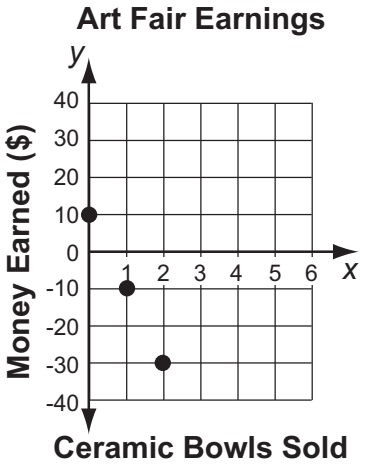
C. $y = \frac{x}{3} + 5$

D. $y = \frac{3}{x} + 5$

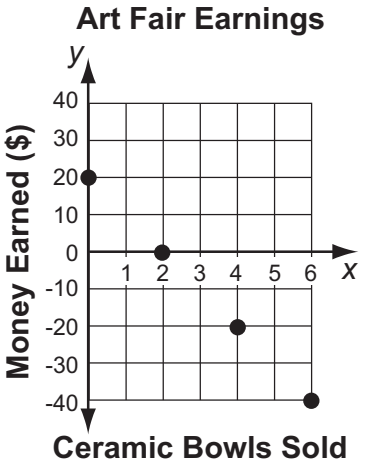
Session 2—Mathematics (Calculator)

49. Ayan paid a $20 fee for a booth at an art fair so she could sell her ceramic bowls. She will earn $10 for every ceramic bowl she sells. The equation $y = 10x - 20$ represents the amount of money, y, that Ayan will earn selling x ceramic bowls at the art fair. Which graph represents the amount of money Ayan could earn at the art fair?

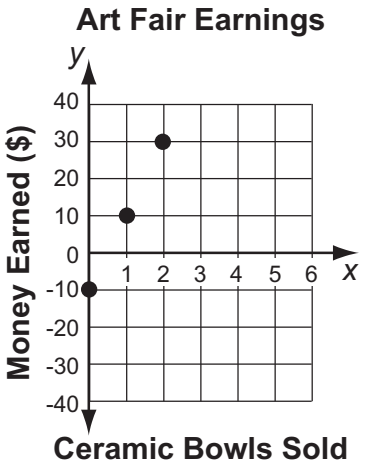
A.



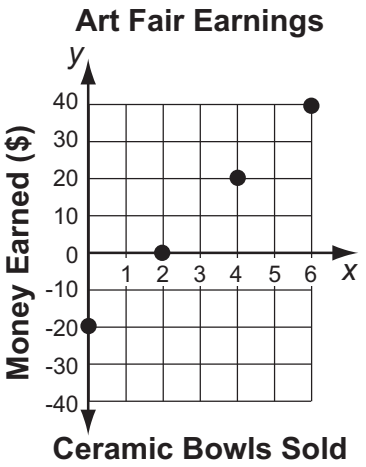
B.



C.



D.



Session 2—Mathematics (Calculator)

50. What is the solution to the equation $\frac{1}{3}(x + 2) = \frac{2}{3}x + 4$?

A. $x = -10$

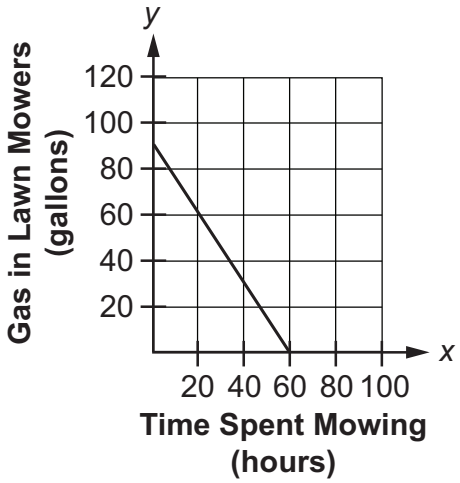
B. $x = -3$

C. $x = 6$

D. $x = 12$

51. The graph and table below show information about two landscaping companies.

Landscaping Company A



Landscaping Company B

Time Spent Mowing (hours)	Gas in Lawn Mowers (gallons)
0	110
24	80
48	50
72	20
88	0

Which statement about the two landscaping companies is true?

A. Landscaping company A mows for 20 more hours than landscaping company B.

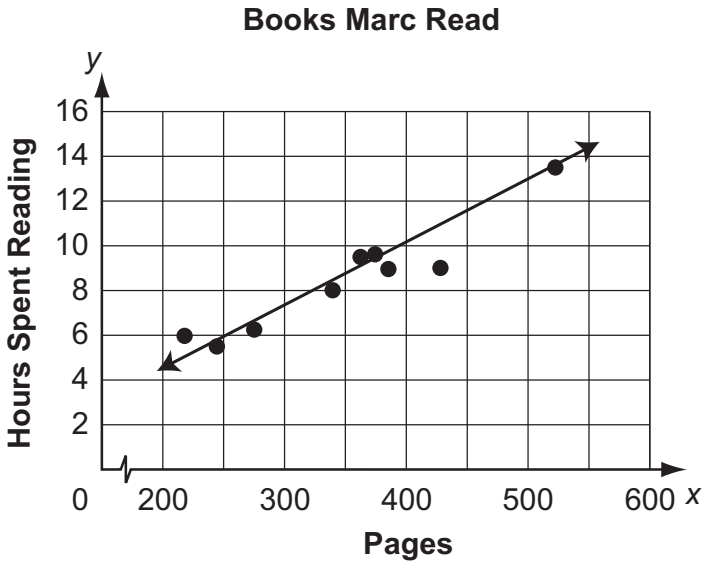
B. Landscaping company B mows for 20 more hours than landscaping company A.

C. Landscaping company A uses 0.25 of a gallon more gasoline per hour than landscaping company B.

D. Landscaping company B uses 0.25 of a gallon more gasoline per hour than landscaping company A.

Session 2—Mathematics (Calculator)

52. Marc read 9 books over the summer. He recorded the number of pages he read and the number of hours he spent reading each book. This information and a line of best fit are shown in the scatter plot.



Based on the scatter plot, which statement about the time Marc spent reading would most likely be true?

A. Marc read at a rate of about 50 pages per hour.

B. Marc read at a rate of about 75 pages per hour.

C. It would take Marc about 2 hours to read a 150-page book.

D. It would take Marc about 12 hours to read a 470-page book.

Session 2—Mathematics (Calculator)

53. Rudy surveyed 80 people about whether they prefer blueberry or cherry pie and whether they prefer the pie with or without ice cream. The results are shown in the table below.

Pie and Ice-Cream Preferences

	Blueberry Pie	Cherry Pie
With Ice Cream	29	24
Without Ice Cream	15	12

Which conclusion can be made based on the results shown in the table?

A. About $\frac{1}{3}$ of the people prefer pie without ice cream.

B. There are 2 times as many people who prefer blueberry pie to cherry pie.

C. Fewer people prefer cherry pie with ice cream than blueberry pie without ice cream.

D. The ratio of people who prefer blueberry pie to cherry pie is equivalent to the ratio of people who prefer pie with ice cream to pie without ice cream.

54. A company puts 36 cans into each box they send to a store. Each can has a radius of 1.5 inches and a height of 6 inches. What is the approximate total volume, in cubic inches, of the cans in each box the company sends to a store? Use 3.14 for π.

A. 42.39 cubic inches

B. 56.25 cubic inches

C. 1,526.04 cubic inches

D. 2,034.72 cubic inches

Session 2—Mathematics (Calculator)

55. Wyatt and Chira both open savings accounts on the same day. The table and graph below show their individual savings after several months.

Wyatt's Savings Account

Total Months	Total Money in Account (dollars)
5	30.75
8	49.20
13	79.95



Their saving patterns continue. Which statement about how much Wyatt and Chira are saving is true?

A. Wyatt will have more in his savings than Chira after 50 months.

B. Each month Chira has exactly $1 more in her savings than Wyatt.

C. Chira will have about $30 more in her savings than Wyatt after 30 months.

D. Chira has more money in her savings than Wyatt, but she saves less per month.

56. Which table represents a linear function?

A.

x	*y*
−4	8
−2	0
0	−4
2	−6

B.

x	*y*
−4	2
−2	0
0	2
2	4

C.

x	*y*
−4	2
−2	0
0	−4
0	−2

D.

x	*y*
−4	4
−2	2
0	0
2	−2

Session 2—Mathematics (Calculator)

57. Use the linear function in the table below to answer the question.

x	y
5	–6
10	–6
15	–6
20	–6
25	–6
30	–6

Which statement about the function in the table and the line represented by $y = 6$ is true?

A. The lines do not intersect.

B. The lines have the same *y*-intercept.

C. The lines both cross through the origin.

D. The lines both cross the *x*-axis but not the *y*-axis.

58. Glen spends a total of 9 hours writing a paper and finishing a project. He spends *x* hours on the paper and *y* hours finishing the project. Glen spends $1\frac{1}{2}$ more hours on the paper than he spends on the project. The equations below can be used to find how many hours he spends on the paper and finishing the project.

$$x + y = 9$$

$$x - y = 1\frac{1}{2}$$

How many hours does Glen spend writing the paper?

A. $3\frac{1}{4}$ hours

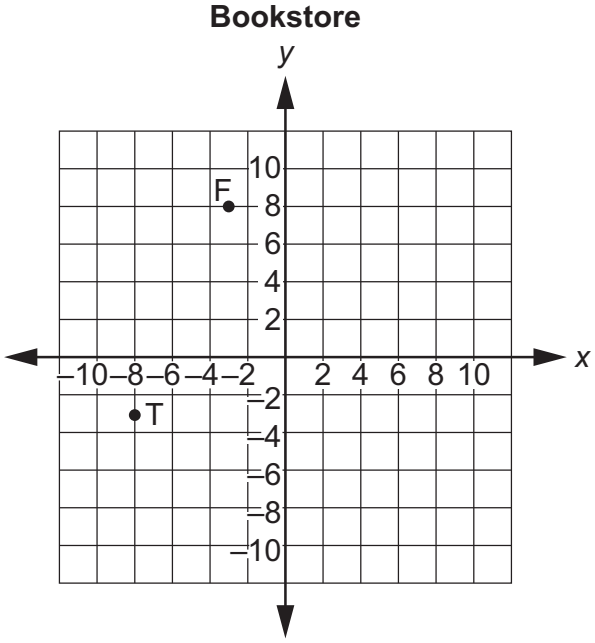
B. $3\frac{3}{4}$ hours

C. $5\frac{1}{4}$ hours

D. $5\frac{3}{4}$ hours

Session 2—Mathematics (Calculator)

59. Stanley marked two points on the grid below to show the locations of the fiction section, point F, and the travel section, point T, in a bookstore.



What is the shortest distance, in units, between the fiction section and the travel section in the bookstore?

A. $\sqrt{146}$

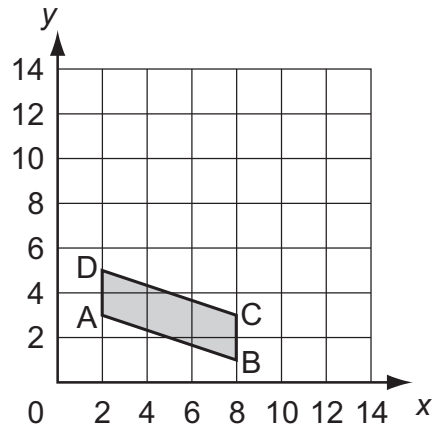
B. $\sqrt{242}$

C. 16

D. 25

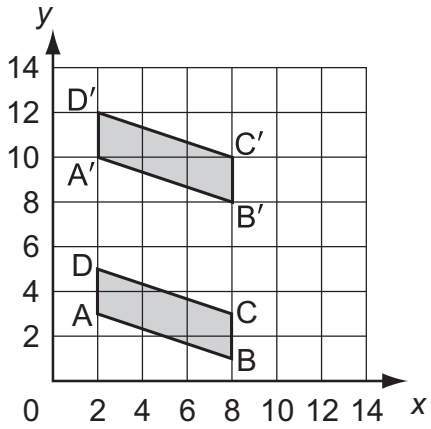
Session 2—Mathematics (Calculator)

60. Zane graphed a parallelogram on the coordinate grid shown.

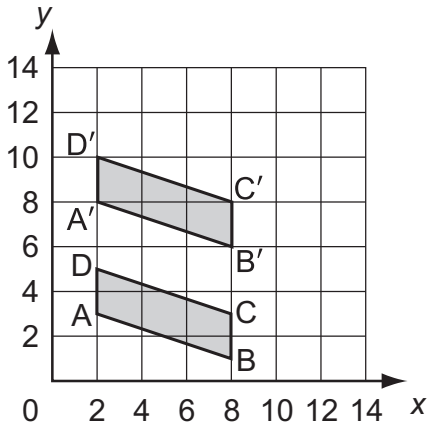


Zane then translated the parallelogram up 5 units. Which coordinate grid shows the figure after the translation?

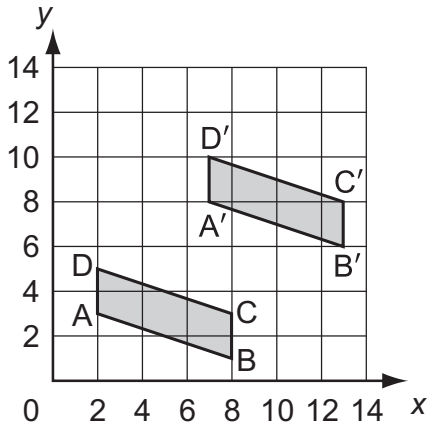
A.



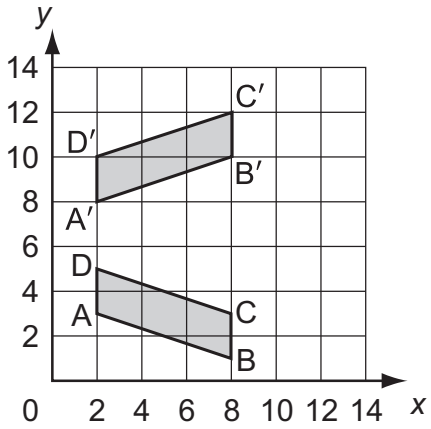
B.



C.



D.



STOP

Mathematics—Sessions 1, 2, and 3
GENERAL INSTRUCTIONS

The Mathematics test has three sessions, two with multiple-choice questions and one with constructed-response questions. You may **not** use a calculator for session 1, but you may use a calculator for sessions 2 and 3.

Session 3—Mathematics (Calculator)

Write your answers for questions 61 to 64 in the spaces provided below. The questions have more than one part. Show all the work you do to find your answers. Even if you cannot answer all parts, answer as many as you can. You may still get points for answering part of a question. Be sure to write clearly. You may review your work in this session, but do not work on any other session.



You MAY use a calculator for this session.

61. Greg started with a certain number of quarters. He then decided on a number of quarters he would save each day. He added the quarters he saved to the amount with which he started. At the end of day 2, Greg had a total of 26 quarters saved. At the end of day 5, he had a total of 35 quarters saved.

A. How many quarters does Greg start with? Show or explain your work.

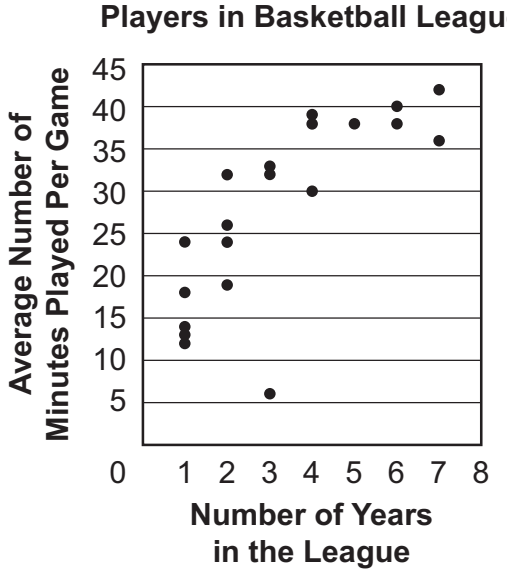
B. Write an equation to model the number of quarters Greg has saved, y, after x days.

C. Using the rate at which Greg is saving, explain why he can never have exactly 100 quarters saved by the end of any given day.

D. Starting with day 2 and going through day 20, Greg created a graph to show the relationship between the day and the total number of quarters he had saved by the end of that day. Greg plotted each of the 19 data points and then connected them. Describe what Greg's graph looked like.

Session 3—Mathematics (Calculator)

62. The standard length of a game in a basketball league is 48 minutes. For 20 basketball players, a reporter plotted the number of years each has been in the league against the average number of minutes each plays per game. The scatter plot the reporter made is shown below.



A. Draw a line of best fit on the scatter plot.

B. What is one way the line of best fit would change if you removed the data point representing the player who has been in the league for 3 years and plays an average of 6 minutes per game?

C. Based on the line of best fit you drew, what is the average number of minutes per game a player who has never played in the league before could expect to play?

D. Explain why the line of best fit would not provide a valid approximation of the average number of minutes per game a player who has been in the league for 15 years would play.

Session 3—Mathematics (Calculator)

63. Consider the family of linear equations of the form shown below, where z is a rational number.

$$\frac{2}{3}(3x + 2) = zx$$

A. Solve the equation when $z = 1$.

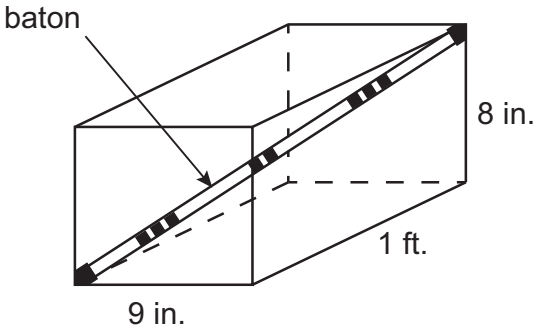
B. Find a value for z such that the equation has no solution. Explain how you know the equation has no solution for the value of z you specified.

C. Using what you know about constants and coefficients, explain why there is **no** value of z that will force the equation to have infinitely many solutions.

Session 3—Mathematics (Calculator)

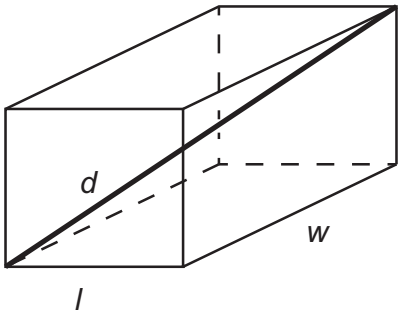
64. Olivia is shipping a baton and a few other things to a friend as a gift. The box measures 8 inches, by 9 inches, by 1 foot. She places the baton in the box as shown below.

Olivia's Box



A. What is the length, in inches, of the baton that she placed in the box? Show or explain your work.

B. Olivia thinks that the relationship between the longest diagonal in any rectangular prism, and the dimensions of length, width, and height of the rectangular dimension can be modeled by the diagram and equation below.



Olivia's Equation

$d^2 = l^2 + w^2 - h^2$

Without substituting in numbers for variables, show or explain why Olivia's equation is incorrect.

STOP

Multiple-Choice Answer Sheet

Name: _____



Session 1

1. _____	**16.** _____
2. _____	**17.** _____
3. _____	**18.** _____
4. _____	**19.** _____
5. _____	**20.** _____
6. _____	**21.** _____
7. _____	**22.** _____
8. _____	**23.** _____
9. _____	**24.** _____
10. _____	**25.** _____
11. _____	**26.** _____
12. _____	**27.** _____
13. _____	**28.** _____
14. _____	**29.** _____
15. _____	**30.** _____

Multiple-Choice Answer Sheet

Name: _____



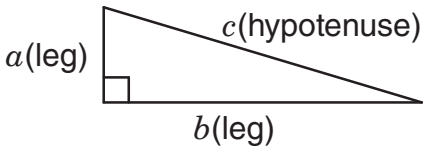
Session 2

31. _____	**46.** _____
32. _____	**47.** _____
33. _____	**48.** _____
34. _____	**49.** _____
35. _____	**50.** _____
36. _____	**51.** _____
37. _____	**52.** _____
38. _____	**53.** _____
39. _____	**54.** _____
40. _____	**55.** _____
41. _____	**56.** _____
42. _____	**57.** _____
43. _____	**58.** _____
44. _____	**59.** _____
45. _____	**60.** _____

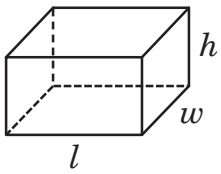
LEAP MATHEMATICS REFERENCE SHEET—GRADE 8

Use the information below to answer questions on the Mathematics test.

Pythagorean Theorem: $a^2 + b^2 = c^2$



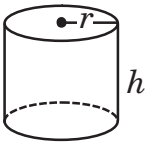
Rectangular Prism



Volume $= lwh$

Surface Area $= 2wl + 2lh + 2wh$

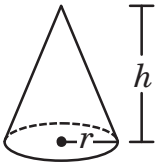
Cylinder



Volume $= \pi r^2 h$

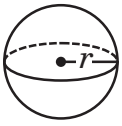
Surface Area $= 2\pi r^2 + 2\pi rh$

Cone



Volume $= \frac{1}{3}\pi r^2 h$

Sphere



Volume $= \frac{4}{3}\pi r^3$

Multiple-Choice Answer Key

Name: _____



Session 1

1.	C	16.	A
2.	D	17.	D
3.	B	18.	C
4.	D	19.	A
5.	B	20.	A
6.	D	21.	C
7.	D	22.	B
8.	B	23.	C
9.	C	24.	D
10.	B	25.	D
11.	D	26.	C
12.	B	27.	A
13.	B	28.	A
14.	C	29.	D
15.	A	30.	C

Multiple-Choice Answer Key

Name: _____



Session 2

31.	A	46.	D
32.	B	47.	B
33.	B	48.	D
34.	D	49.	D
35.	C	50.	A
36.	C	51.	C
37.	B	52.	D
38.	A	53.	A
39.	A	54.	C
40.	D	55.	C
41.	D	56.	D
42.	A	57.	A
43.	B	58.	C
44.	B	59.	A
45.	A	60.	B

Constructed-Response Scoring Rubrics



Session 3

61.

Scoring Rubric	
4	The student earns 5 points.
3	The student earns 3 or 4 points.
2	The student earns 2 points.
1	The student earns 1 point OR demonstrates minimal understanding of the standard being measured.
0	The student's response is incorrect, irrelevant to the skill or standard being measured, or blank.

Sample Answer:

Part A. Greg starts with 20 quarters. Over 3 days (5 – 2) Greg added 9 quarters (35 – 26). So he added 3 quarters each day (9 divided 3). Since he had 26 quarters on day 2, I subtracted 3 twice (once for each day) to get his starting number of quarters.

Part B. $y = 3x + 20$

Part C. Greg adds 3 quarters each day and has 26 quarters in his bank on day 2. If he added 72 quarters, which is a multiple of 3, he would have 98 quarters. If he added 3 more, he would have 101 quarters, skipping over 100.

Part D. Greg's graph would be a series of points on a straight line.

Points Assigned:

Part A. 2 points
1 point for correctly determining how many quarters Greg started with
AND
1 point for providing complete and accurate work or explanation of how they know Greg started with 20 quarters

Part B. 1 point
1 point for providing a correct equation

Part C. 1 point
1 point for providing complete and accurate work or explanation of why Greg would never have exactly 100 quarters

Part D. 1 point
1 point for correctly describing the graph as a straight line or as having all the points lying on a straight line

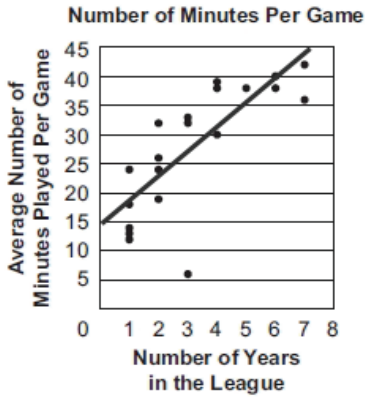
Note: Scorers should follow along with the student's work throughout. If the student makes an error in a previous part and subsequent answers are correct based on the earlier error, the student should not be penalized again.

62.

Scoring Rubric	
4	The student earns 4 points.
3	The student earns 3 points.
2	The student earns 2 points.
1	The student earns 1 point OR demonstrates minimal understanding of the standard being measured.
0	The student's response is incorrect, irrelevant to the skill or standard being measured, or blank.

Sample Answer:

Part A. (For the line $y = mx + b$; $3 \leq m \leq 6$ and $13 \leq b \leq 17$)



Part B. The slope would decrease OR the line would shift upward OR the *y*-intercept would increase.

Part C. 14 minutes (13 – 17 minutes)

Part D. The line wouldn't provide a valid approximation because there are only 48 minutes in a basketball game for this league and the *y*-value of the line would be above 48 when $x = 15$.

Points Assigned:

Part A. 1 point
1 point for drawing a valid line of best fit

Part B. 1 point
1 point for providing one way in which the line of best fit would change if (3, 6) were removed from the data set

Part C. 1 point
1 point for providing the *y*-intercept of the line of best fit drawn in part A

Part D. 1 point
1 point for explaining that the *y*-value would exceed the number of minutes in a basketball game when $x = 15$

Note: Scorers should follow along with the student's work throughout. If the student makes an error in a previous part and subsequent answers are correct based on the earlier error, the student should not be penalized again.

63.

Scoring Rubric	
4	The student earns 4 points.
3	The student earns 3 points.
2	The student earns 2 points.
1	The student earns 1 point OR demonstrates minimal understanding of the standard being measured.
0	The student's response is incorrect, irrelevant to the skill or standard being measured, or blank.

Sample Answer:

Part A. $x = -\frac{4}{3}$ (or equivalent)

Part B. $z = 2$. When $z = 2$, the equation is $2x + \frac{4}{3} = 2x$. When you subtract $2x$ from both sides, you get $\frac{4}{3} = 0$, which is never true.

Part C. In order for the equation to have an infinite number of solutions, both sides must simplify to the same constant **and** coefficient of x. It is not possible to have the same constant $\left(\frac{4}{3} \text{ or } 0\right)$ because we can only change the value of the coefficient, z.

Points Assigned:

Part A. 1 point
1 point for providing a correct answer

Part B. 2 points
1 point for providing a correct answer
AND
1 point for providing a complete and accurate explanation of why $z = 2$ results in an equation that has no solution

Part C. 1 point
1 point for providing a complete and accurate explanation of why there is no value of z that will force the equation to have infinitely many solutions

64.

Scoring Rubric	
4	The student earns 4 points.
3	The student earns 3 points.
2	The student earns 2 points.
1	The student earns 1 point OR demonstrates minimal understanding of the standard being measured.
0	The student's response is incorrect, irrelevant to the skill or standard being measured, or blank.

Sample Answer:

Part A. 17 inches; First I found the diagonal of the base by solving $\sqrt{9^2 + 12^2}$, which equals 15 inches. I then used that measure as the base of the right triangle, and 8 inches as the height to find the hypotenuse, or the length of the baton. I found the length of the baton by solving $\sqrt{15^2 + 8^2}$, which equals 17 inches.

Part B. I'll name the base leg to the right triangle for which *d* is the hypotenuse *x*. So then we know that $x^2 + h^2 = d^2$. The length of *x* can be found by using the equation $l^2 + w^2 = x^2$. Then I substitute $(l^2 + w^2)$ for x^2 to find the equation for the length of *d*. That equation becomes $(l^2 + w^2) + h^2 = d^2$. I can now take off the parenthesis around $l^2 + w^2$ because they are not necessary and the correct equation is $l^2 + w^2 + h^2 = d^2$. So you add h^2 and not subtract it.

Points Assigned:

Part A. 2 points
1 point for providing the correct length of the baton
AND
1 point for providing complete and accurate work or explanation of why 17 inches (or equivalent) is correct

Part B. 2 points
2 points for providing complete and accurate work or explanation of why Olivia's equation is incorrect
OR
1 point for providing partially correct work (e.g. incorrectly substituting in $l^2 + w^2$) or substitutes in numbers instead of using variables to show why Olivia's equation is incorrect
OR
1 point for providing partially complete work (e.g. identifies that you need to add h^2 and not subtract it but does not explain why)

Grade 8 English Language Arts

Reading Comprehension

DIRECTIONS

This session contains two reading selections with fourteen multiple-choice questions and two open-response questions. Mark your answers to these questions in the spaces provided in your Student Answer Booklet.

Paul Laurence Dunbar was an African American poet who wrote in the late 1800s and early 1900s. His poem "Sympathy" speaks of the feelings of a bird in a cage. Read the poem and answer the questions that follow.

SYMPATHY

I know what the caged bird feels, alas!
When the sun is bright on the upland slopes;
When the wind stirs soft through the springing grass,
And the river flows like a stream of glass;
When the first bird sings and the first bud opes,[1]
And the faint perfume from its chalice[2] steals—
I know what the caged bird feels!

I know why the caged bird beats his wing
Till its blood is red on the cruel bars;
For he must fly back to his perch and cling
When he fain[3] would be on the bough[4] a-swing;
And a pain still throbs in the old, old scars
And they pulse again with a keener sting—
I know why he beats his wing!

I know why the caged bird sings, ah me,
When his wing is bruised and his bosom sore,—
When he beats his bars and he would be free;
It is not a carol of joy or glee,
But a prayer that he sends from his heart's deep core,
But a plea, that upward to Heaven he flings—
I know why the caged bird sings!

—Paul Laurence Dunbar

[1] *opes* — opens
[2] *chalice* — a cup or goblet
[3] *fain* — gladly
[4] *bough* — branch

"Sympathy" by Paul Laurence Dunbar. In the public domain.

1 Which of the following words **best** describes the feeling created by the description in line 3?

A. peaceful
B. surprised
C. impatient
D. suspenseful

2 In line 4, the phrase "like a stream of glass" suggests the water is

A. cold.
B. deep.
C. dirty.
D. smooth.

3 In line 5, what do the "first bird" and the "first bud" **most likely** represent?

A. the cage
B. the springtime
C. the bud's beauty
D. the bird's ancestor

4 How is the first stanza **most** different from the rest of the poem?

A. The stanza suggests the bird is bored with his life.
B. The stanza describes how the bird looks, rather than how he acts.
C. The stanza suggests the bird is unwise for wanting his life to change.
D. The stanza describes what the bird likely desires, rather than what he experiences.

5 Which of the following words **best** describes the tone of the poem?

A. fearful
B. apologetic
C. passionate
D. wondering

6 Which meaning of the word *faint* is used in line 6?

A. exhausted
B. whispered
C. lacking courage
D. barely noticeable

Name: _____ Date: _____

Reading Comprehension Worksheet

Steve Jobs

Read the passage. Then answer the questions.

Steven Paul Jobs was an American information technology entrepreneur and inventor. He was the co-founder, chairman, and chief executive officer (CEO) of Apple Inc. Steve Jobs was born on February 24, 1955, he was adopted at birth in San Francisco, and raised in San Francisco Bay Area during the 1960s. As a boy, Jobs and his father worked on electronics in the family garage, Paul showed his son how to take apart and reconstruct electronics. A few years later, while Jobs was enrolled at Homestead High School, he was introduced to his future partner Steve Wozniak.



In 1974, Jobs took a position as a video game designer with Atari. In 1976, when Jobs was just 21, he and Wozniak started Apple Computer. Jobs and Wozniak are credited with revolutionizing the computer industry by making machines smaller, cheaper, and accessible to consumers. Jobs in charge of marketing Apple initially marketed the computers for $666.66 each. The Apple I earned the corporation around $774,000. Three years after the release of Apple's second model, the Apple II, the company's sales increased by 700 percent to $139 million. Jobs left Apple in 1985 to begin a new hardware and software enterprise called NeXT, Inc. The following year Jobs purchased an animation company which later became Pixar Animation Studios. The studio merged with Walt Disney in 2006, making Jobs Disney's largest shareholder. In 1996, Jobs returned to his post as Apple's CEO. Jobs put Apple back on track. Apple introduced products as the Macbook Air, iPod and iPhone, all of which have dictated the evolution of modern technology. In 2008, iTunes became the second-biggest music retailer in America.

In the early 1990s; Jobs met Laurene Powell and they married on March 18, 1991, and lived in Palo Alto, California, with their three children. Jobs was diagnosed with a pancreatic neuroendocrine tumor in 2003 and died of respiratory arrest related to the tumor on October 5, 2011. Palo Alto. He was 56 years old.

<u>Answer the questions.</u>

1. **What is the main idea of this passage?**
2. **Underline five sentences in the passage that support the idea.**
3. **Write a summary. Tell what is the most important.**

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Oversleeping

So Jake spread his arms, leaped skyward from the sidewalk, and began to fly, rocketing up over the neighborhood. Suddenly he heard the distant voice of his father calling, as if from another universe, and Jake pried open sleep-heavy eyes . . .

"Get up, pal," said Jake's father, "or you'll miss the school bus."

"Just let me sleep a little longer," Jake mumbled. Then he groaned and turned over, pulling the covers up over his head like a tent, as if to somehow recapture his dream. Jake loved to sleep. It wasn't that he was lazy or lacked energy. Jake was a normal fourteen-year-old kid in every way. But he loved to curl up under a soft white cloud of sheets, rest his head on a marshmallow pillow, and luxuriate in the twilight world of slumber where life is exciting and dreams always come true.

So Jake was sitting at a table at Chez Maurice's in Hollywood, having lunch with his buddy, Tom Cruise. Tom was offering Jake a role in his next movie when . . .

"Get up," said Jake's father, gently shaking his son's shoulders. Jake yawned and hauled his legs over the side of the mattress, where he sat for a few moments to reconcile himself with the shocking reality of upright existence. He dragged himself into the shower, where he briefly dreamed of tropical rain forests, and at last shuffled downstairs to breakfast.

"Jake's going to sleep his life away!" teased Taylor, his nine-year-old sister, as she sat at the table, kicking her dangling legs excitedly as if to show by comparison how wide awake she was.

"He's just a growing boy," said Jake's father, washing dishes at the kitchen sink. "Right?" Jake nodded sleepily and finished his breakfast. He trudged out the front door with Taylor, still half-sleepwalking, and they waited on the curb for their school bus, as usual.

At school, finally fully awake, Jake cycled through the pleasant routine of another typical day. He greeted his buddy Benjamin at the locker they shared. They discussed hockey games and books. Then there was science with Mr. Albert, math with Ms. Freed, and lunch with Benjamin, who always told great jokes. After school, there was homework, dinner with his dad and Taylor, maybe a little TV, and then off to dreamland. And so went week after week, and month after month.

So Jake swung the bat, sending the ball out of Dodger Stadium and into the Baseball Hall of Fame . . .

"Come on, get up," giggled Taylor, holding a ringing alarm clock only inches from her brother's face. "You'll be late for school!" Jake shook his head in disbelief and ducked under the covers.

Moments later Jake awakened to an empty, quiet room. He noted with puzzlement that all the buttons on his pajama top had popped off in the night. Then he pulled himself from bed and padded sleepily to the shower. The bathroom mirror reflected a face that was oddly unfamiliar—one with heavier eyebrows and new creases in its brow. Jake rubbed a hand over his face and felt the unexpected sandpaper abrasion of whiskers. Mystified and dazed, he staggered downstairs to the kitchen, where he was shocked to discover a teenaged Taylor sitting at the breakfast table beside his father, who was grayer and heavier.

"So you finally woke up," commented Jake's father, casually sipping his coffee. "We thought you'd sleep forever."

"You certainly overslept!" added Taylor in a surprisingly mature voice.

Jake shook his head as if to disperse the fog of dreams. "What are you talking about?"

"You've been asleep for four years," Jake's father replied calmly. "Better get dressed, or you'll be late for your last day of school." This statement set Jake's mind reeling. His last day of school? Had he really slept so long? Was he now *eighteen* years old?

Lost in a whirl of confusion, Jake went to his room to dress for school and discovered that none of his clothes fit him. He borrowed a shirt, pants, and shoes from his father—and they made him look and feel even older.

Taylor led zombie-like Jake out the front door to the curb. Boarding his bus, Jake stared in bewilderment at the aged faces of his friends. "Hey, it's Jake!" shouted someone from the back of the bus. "He's back!" One by one, his schoolmates began to recognize him.

"Buddy, you sure look older!" said someone sitting near where Jake stood. Jake looked down to discover his friend Benjamin smiling heartily and looking startlingly like his older brother. Jake sat beside Benjamin, who eagerly told what had happened during Jake's years of slumber—how Mr. Albert had retired from teaching science, and how Ms. Freed had married. Benjamin spoke excitedly of hockey games won and lost; of books read and remembered; of school plays, classes, pep rallies, and car washes. They were small, ordinary events, but to Jake they seemed extraordinary because they had happened without him. He had missed grades nine through twelve. And now there would be no more school days with Benjamin, his teachers, or his other friends. Jake had slept them all away.

"Come on, buddy, get up," called Jake's father. Jake pried open leaden eyelids to see his father standing at the foot of his bed, looking younger and leaner. Beside him was a nine-year-old Taylor, seemingly more girlish and bubbly than ever before.

20 "Come on, sleepyhead!" she giggled. Her laughter seemed as bright as the yellow sunshine splashing about the room. "You don't want to miss school, do you?"

Jake beamed and looked at his family. "No, I wouldn't want to do that," he said as he threw back the covers and leaped out of bed.

1. What conclusion can be made based on the fact that Jake's pajamas do not fit?

   A. He has cheap pajamas that came apart while he slept.

   B. He has grown lots in the four years he was asleep.

   C. He ate too much the night before and gained weight.

   D. He had a growth spurt that happened overnight.

2. In paragraph 20, the phrase “as bright as the yellow sunshine” is an example of which term?

   A. simile
   B. metaphor
   C. personification
   D. onomatopoeia

3. Which event happens first?

   A. Jake dreams about having lunch with Tom Cruise.
   B. Jake dreams about flying over the neighborhood.
   C. Jake dreams about playing baseball for the Dodgers.
   D. Jake dreams about sleeping for four years.

4. Why does Jake leap out of bed at the end of the story?

   A. He does not want his dad bugging him.
   B. He does not want his sister laughing at him.
   C. He does not want to sleep his life away.
   D. He does not want to grow anymore.

5. What do the italicized sentences represent in the story?

   A. dreams
   B. conversations
   C. opinions
   D. titles

6. After reading the passage, what could be the belief of the author?

   A. Teenagers should not listen to their friends.
   B. Teenagers should not listen to their parents.
   C. Teenagers should not let opportunities pass them by.
   D. Teenagers should not sleep more than ten hours a night.

7. What could be another title for the story?

   A. Life is Full of Important Things to Do
   B. Annoying Sisters Keep You Awake
   C. He is Just a Growing Boy
   D. Alarm Clock Jitters

From Sandals to Sneakers—Shoes Step Forward

Shoes—we wear them nearly every day. We walk, run, jump, climb, and stand in them for hours on end. Yet we hardly think about them because they are such an ordinary part of our daily lives. Shoes were not always an important part of people's wardrobes. The ancient Greeks, Egyptians, and Persians made and wore sandals, but actually went barefoot most of the time. These people lived in regions where the weather was temperate, and shoes were not needed to keep their feet warm. Archaeologists have found shoes in the ruins of these civilizations, but they seem to have been worn mainly by royalty, who could afford to employ tailors and shoemakers.

Shoes in Early Civilizations

As shoes became more common in ancient Egypt, the first ones were simple sandals created mainly to protect the soles of the feet from rough surfaces. The easiest way to make shoes in these ancient times was to use materials that were readily available, including tree bark, leaves, and grasses. In ancient Egypt, sandals were made of rushes, which are grassy plants with hollow stalks. Rushes are the same plants used today to make chair bottoms, mats, and baskets.

Among the ancient Greeks, sandals were woven of similar plant materials, but the Greeks also varied the process by tying small pieces of wood together with dried grass. In later years, they made sandals with leather from the hides of animals. The first Greek shoes were purely functional, but over time most were dyed and decorated to make fashion statements. Women began to wear soft, enclosed leather shoes, and these grew increasingly fancy in the later years of the Greek civilization.

The Romans wore sandals much like the Greeks did, but used more pieces of leather to make them. Some Roman sandals had straps that wrapped around the ankles. Shoemakers often dyed these sandals in bright colors that represented the different jobs held by the people wearing them. The patricians, or privileged classes, wore red sandals with moon-shaped ornaments on the back. Senators wore brown shoes with four black leather straps wound around the lower leg. Consuls, or legal officers, wore white shoes, and soldiers wore heavy leather sandals that were more like boots—but with bare toes!

Meanwhile, people who lived in cold northern climates were making their shoes from the hides of furry animals, such as polar bears and yaks. The soles and tops of these shoes were made from pieces of soft leather sewn together. This type of shoe—whether or not it used fur—was called a moccasin. Some Native American groups made and wore moccasins for thousands of years. Some moccasins were plain, and others were **adorned** with beadwork.

The Shoemaking Process

As the centuries passed, the primary material for shoes continued to be leather, and the process of making shoes did not change quickly. A wood and metal framework called a "last" was wrapped with pieces of leather that were then sewn together. As late as the mid-1800s, lasts were straight on both sides; this meant that there was no difference in shape between left and right shoes. It also meant that shoes were uncomfortable and that breaking them in was not easy. The lasts were made in different sizes, but for a long time only two widths were available—thin and stout.

For centuries, shoes were sewn by hand, just as they had been by the ancient Egyptians. Machines to assist shoemakers were not used until the rolling machine was invented in 1845. This device was used to pound pieces of leather into thin strips. About the same time, Elias Howe invented the sewing machine, and pieces of shoe leather could now be sewn together more quickly. Another inventor, Lyman Reed Blake, created a machine for sewing the soles of shoes to the upper parts. Because shoes could be made faster and more cheaply, people who had never owned shoes before could now afford to buy and wear them.

New Trends, Materials, and Designs

In Europe and North America during the seventeenth century, most people wore boots because they were practical. Even in many large cities, dirt roads were common, and people had to walk along muddy pathways and across streams. By the eighteenth century, however, more city streets were paved with cobblestones, and it was easier to keep shoes clean. Shoes became more decorative, and fancy buckles of gold and silver were often used. Most shoes worn in the United States throughout the nineteenth century were patterned after European styles.

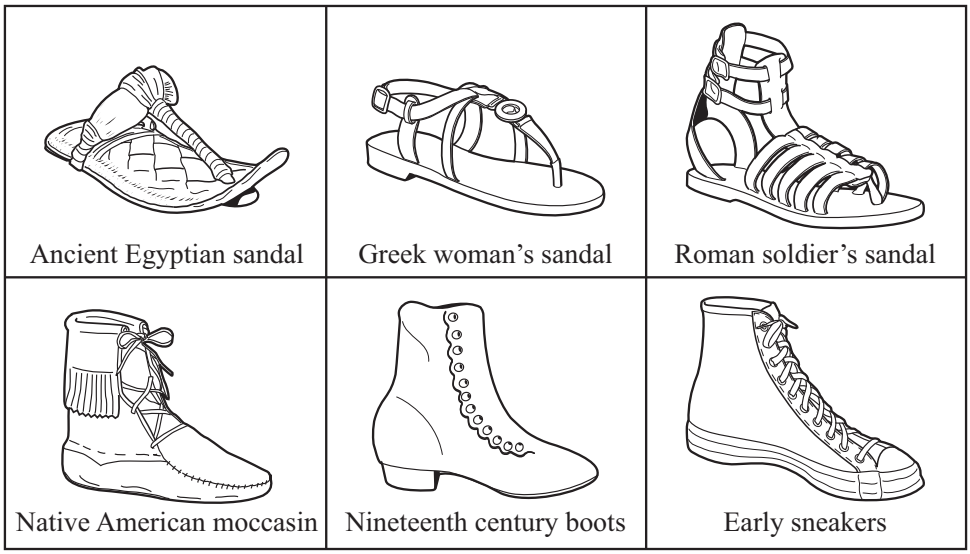
The major change in shoes over the last century has been the use of materials other than leather. Humphrey O'Sullivan invented the first rubber heel for shoes in 1898. Rubber heels were popular because they lasted much longer than heels made of leather. The use of rubber soles came next. The first rubber-soled shoes were called plimsolls, and they were manufactured in the United States in the late 1800s.

The first American shoes made without leather were invented in 1917. The upper material was made of a flexible canvas. Those were the original "sneakers," a word that was used because the rubber sole made the shoe very quiet, unlike most leather shoes, which often squeaked when people walked.

Many people today choose athletic shoes for casual wear, but not until the late 1970s were shoes designed with amateur athletes in mind. Shoes made of rubber and canvas were worn by tennis, volleyball, and basketball players. By the 1980s, companies began to design athletic shoes for specific sports, helping athletes perform better while protecting their feet and providing comfort.

Shoes have come a long way since the ancient Egyptians created their first sandals. Many more types of materials are used, and shoes have never been more comfortable or supportive for feet. Even so, it is interesting that the basic sandal, crafted by people more than four thousand years ago, still has many similarities to shoes we wear today.

The History of Shoes



8. What was the purpose of the first shoe?

   A. comfortable
   B. fashionable
   C. functional
   D. popularity

9. Which event happened first in the history of shoes?

   A. the making and wearing of moccasins
   B. the making and wearing of sandals
   C. the making and wearing of boots
   D. the making and wearing of sneakers

10. Which civilization was the first to wear shoes to make a fashion statement?

    A. Greek
    B. Roman
    C. Egyptian
    D. Persian

11. What is the correct hyphenated word?

    A. moon-shaped
    B. fur-was
    C. shoe-whether
    D. available-thin

12. "Some moccasins were plain, and others were **adorned** with beadwork." What type of context clue is used to help you define the word **adorned**?

    A. antonym
    B. synonym
    C. example
    D. explanation

13. Which is the correct analogy?

    A. Thin is to stout as skinny is to long.
    B. Thin is to stout as narrow is to wide.
    C. Thin is to stout as short is to thin.
    D. Thin is to stout as tall is to fat.

14. What is the author's purpose in writing the passage?

    A. to inform about the first sneaker
    B. to inform about the history of moccasins
    C. to inform about ancient Greeks
    D. to inform about the history of shoes

15. An example of personification would be

    A. nonleather shoes.
    B. fancy buckles of gold.
    C. paved with cobblestones.
    D. squeaked when people walked.

Name: _____

Context Clues 2.5

Directions: read each sentence and determine the meaning of the word using cross sentence clues or your prior knowledge. Then, explain what clues in the sentence helped you determine the word meaning.

1. **signify:** She considered that Byron's latest efforts in the classroom might **signify** his desire to make a positive change.

Definition: _____

What clues in the sentence lead you to your definition?

2. **laborious:** Dexter wanted to take honors math, but the course load was too **laborious** alongside his football practices.

Definition: _____

What clues in the sentence lead you to your definition?

3. **furtively:** After Mom found the devoured cake, the dog crouched **furtively** behind the couch..

Definition: _____

What clues in the sentence lead you to your definition?

4. **melodious:** The choir delighted the audience with their **melodious** tune.

Definition: _____

What clues in the sentence lead you to your definition?

5. **smitten:** When I saw that she was making a special Valentine's Day card just for Kevin, I knew that she was **smitten** with him.

Definition: _____

What clues in the sentence lead you to your definition?

6. **grotesque:** The giant garbage monster moved his **grotesque** head from side to side as he yelled at the children for stepping on his lawn.

Definition: _____

What clues in the sentence lead you to your definition?

7. **prodigy:** The music teacher didn't usually take such young children, but when he saw the four year old play Beethoven's 5th without missing a note, he had to make an exception for this **prodigy**.

Definition: _____

What clues in the sentence lead you to your definition?

8. **profound:** His reading abilities have improved in a **profound** way since he stopped playing around in class and started doing his homework every night.

Definition: _____

What clues in the sentence lead you to your definition?

9. **unison:** The two girls responded in **unison**, "We didn't do anything," which only made the principal more suspicious.

Definition: _____

What clues in the sentence lead you to your definition?

10. **indignant:** I became **indignant** after the hostess seated another group of people that arrived at the restaurant after we did.

Definition: _____

What clues in the sentence lead you to your definition?

11. **sagacity:** The people in the community respected their mayor for the **sagacity** he has shown in managing the town's government through hard times.

Definition: _____

What clues in the sentence lead you to your definition?

12. **tremulous:** Janna was able to control her nerves during rehearsals, but on opening night her voice was **tremulous** and difficult to understand.

Definition: _____

What clues in the sentence lead you to your definition?

Name: _____

Identifying Figurative Language of Shakespeare

Directions: Write which technique is being used on the line. Then, explain how you know your answer.

Answers: Simile, Metaphor, Personification, and Hyperbole

1. Thy youth's proud livery, so gazed on now, / Will be a tatter'd weed, of small worth held:

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

2. What say you, Hermia? be advised fair maid: / To you your father should be as a god;
One that composed your beauties, yea, and one / To whom you are but as a form in wax
By him imprinted and within his power / To leave the figure or disfigure it.

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

3. Not to-night, good Iago: I have very poor and / unhappy brains for drinking: I could well wish courtesy would invent some other custom of / entertainment.

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

4. I hold the world but as the world, Gratiano; / A stage where every man must play a part,
And mine a sad one.

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

5. Come, then; for with a wound I must be cured. / Draw that thy honest sword, which thou hast worn

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

6. I must hear from thee every day in the hour, / For in a minute there are many days:
O, by this count I shall be much in years / Ere I again behold my Romeo!

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

7. As flies to wanton boys, are we to the gods. / They kill us for their sport.

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

8. If music be the food of love, play on; / Give me excess of it, that, surfeiting,
The appetite may sicken, and so die.

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

9. When I have seen by Time's fell hand defaced / The rich proud cost of outworn buried age;

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

10. Here's the smell of the blood still: all the / perfumes of Arabia will not sweeten this little hand. Oh, oh, oh!

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

11. The web of our life is of a mingled yarn, good and / ill together

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

12. I say 'your city,' to his wife and mother; / Breaking his oath and resolution like
A twist of rotten silk, never admitting / That pages blush'd at him and men of heart

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

13. But if it be a sin to covet honour, / I am the most offending soul alive.

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

14. Whether 'tis nobler in the mind to suffer / The slings and arrows of outrageous fortune,
Or to take arms against a sea of troubles,

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

15. Say that she frown, I'll say she looks as clear / As morning roses newly wash'd with dew:

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

16. I shall laugh myself to death at this puppy-headed / monster. A most scurvy monster!

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

17. Nativity, once in the main of light, / Crawls to maturity, wherewith being crown'd,
Crooked elipses 'gainst his glory fight, / And Time that gave doth now his gift confound.

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

18. You seem to me as Dian in her orb, / As chaste as is the bud ere it be blown;

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

19. O, she is fallen / Into a pit of ink, that the wide sea / Hath drops too few to wash her clean again
And salt too little which may season give / To her foul-tainted flesh!

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

20. But yesterday the word of Caesar might / Have stood against the world; now lies he there.

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

21. So are you to my thoughts as food to life, / Or as sweet-season'd showers are to the ground;

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

22. Wilt thou draw near the nature of the gods? / Draw near them then in being merciful:
Sweet mercy is nobility's true badge: / Thrice noble Titus, spare my first-born son.

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

23. You are a thousand times a properer man / Than she a woman: 'tis such fools as you
That makes the world full of ill-favour'd children

What technique is being used? _____
Simile, Metaphor, Personification, or Hyperbole

How do you figure?
Explain how you got your answer

Name: _____

Personification Worksheet 6

Directions: In each sentence, an object or idea is personified. Identify the object or idea that is being personified and explain which human trait or action is applied to the object or idea.

Personification: a figurative language technique where an object or idea is given human traits or characteristics.

1. Your little voice
Over the wires came leaping
and I felt suddenly dizzy

What is being personified? _____

Which human trait or quality is given?_____

2. Love built himself a house,
And whoso entered in, Love bade him stay,
Nor ever from that feast to come away
Dissatisfied or weary of the fare
Love set him there.

What is being personified? _____

Which human trait or quality is given?_____

3. While through the windows, steel-barred, stern and tall,
Pale daylight greets us like a plaintive song.

What is being personified? _____

Which human trait or quality is given?_____

4. And, as of old, in the horizon-sky,
The sun can find a lovely place to die.

What is being personified? _____

Which human trait or quality is given?_____

5. The nights went by like the moaning wind
And the days like drifting snow.

What is being personified? _____

Which human trait or quality is given?_____

6. Then you came with flowers crowned and sun-kissed hair.

What is being personified? _____

Which human trait or quality is given?_____

7. Wasting the golden hours indoors,
Washing windows and scrubbing floors,
While happy winds go laughing by.

What is being personified? _____

Which human trait or quality is given?_____

8. Over the snow my creaking feet
Disturbed the slumbering village street

What is being personified? _____

Which human trait or quality is given?_____

9. They danced until the shy moon looking down
Deemed herself lost above some Grecian glade;

What is being personified? _____

Which human trait or quality is given?_____

10. Beyond the cliffs brown fishing boats go by
Under the reach of the wide laughing sky.

What is being personified? _____

Which human trait or quality is given?_____

Name: _____

Genre and Subgenre Worksheet 3

Directions: Read the descriptions of the texts. Look for details that reveal the genre. Write the genre and subgenre on the lines and write a sentence explaining your answer.

1. Fallen Walkers by Wells Taylor Dyson
Far below the surface of earth, a group of children engage in a secret government program. They are trained to pilot Mech-Walkers, which are giant mechanical insects. These kids protect Earth from hostile space barbarians using their robo-insect powers. Vander, the leader of the Mech-Walkers, mysteriously disappears in combat. Now the Mech-Walkers need to find a new leader. Seth, a boy from the surface, stumbles into Mech-Walkers while being chased by bullies. Now he has become an unlikely candidate.

Genre: _____ Subgenre: _____

Explain your Answer

2. Super Fun Science Book for Kids by Pam Orbison
Have you ever wondered why a submarine can stay underwater for so long? How a web page shows up on a phone screen? Or how to build a robot that plays basketball? Science doesn't have to be dusty and boring. This functional science textbook teaches the fundamentals of science. It describes technologies in ways that are interesting and relevant to young people. This text contains 32 experiments that students can try at school or home. There is also a vocabulary practice activity for each section.

Genre: _____ Subgenre: _____

Explain your Answer

3. From Athena to Zeus: The Greek Gods and Goddesses retold by Chris Reed
This book retells the epic stories of the gods, goddesses, and heroes in Ancient Greece. All of the classic stories are in this text: the adventures of Perseus, the battles of Heracles, Odysseus and the Trojan wars, and the voyage of Jason and the Argonauts.

Genre: _____ Subgenre: _____

Explain your Answer

4. Diary Wanted by Gail Labors
Katie Oaks is one of the most trusted girls in her class. Maybe they like how Katie listens, or maybe they just feel comfortable around her, but all of the other girls tell their secrets to Katie. When Katie gets a diary for her birthday, she can't help but to write down the secrets that she learns, but when her diary goes missing, Katie finds herself in a tight corner.

Genre: _____ Subgenre: _____

Explain your Answer

5. Mr. Lincoln's Groceries by Curtis D. Davis
The year is 1835 and Bobby Pierce is working as a delivery boy at a local grocery store. One of his duties is to deliver groceries to a young state politician named Abraham Lincoln. The two get off to a rough start, but Soon Bobby learns the wisdom of Lincoln's ways. They learn to respect one another and each offers the other advice when it is needed most.

Genre: _____ Subgenre: _____

Explain your Answer

6. Dog Soldiers: Warriors of the Cheyenne by M. D. Carroll
The Dog Soldiers were one of six elite military societies of the Cheyenne Indians. During the 1830s they played a strong role in repelling and pushing back American expansion in Kansas, Nebraska, Colorado, and Wyoming. The Dog Soldiers were known for their highly aggressive and effective attacks and their peculiar habit of "pinning down" their long tails to the ground. Once "pinned down," Dog Soldiers fought to the death or until a tribe mate "unpinned" the tail of the warrior. This text describes the Dog Soldiers' society and role in history.

Genre: _____ Subgenre: _____

Explain your Answer

7. John Henry retold by Elijah Newman
John Henry was born with a hammer in his hand and he came out swinging it. When he was a baby, he built his own crib. As a toddler, he got sick of sharing his bedroom with his sister, so he built his own house. As an adult he laid track for the railway and was renowned as the best steel driver in world. His abilities are put to the test when he is challenged to race against a steam-powered drill through a mountain.

Genre: _____ Subgenre: _____

Explain your Answer

8. Why Are They Booing? by Mr. Morton
In this candid and gripping account, Mr. Morton describes his real life career as a musician. After playing the trumpet in the school band for two years, Mr. Morton thinks that he has what it takes to make it big as a musician. He then quits his job teaching and starts making demo tapes in the studio, even though nobody has a cassette player anymore. Will Mr. Morton strike it big as a musician or will he crawl back to his principal begging for his old job? Find out in this compelling 940-page text written by Mr. Morton and about Mr. Morton.

Genre: _____ Subgenre: _____

Explain your Answer

Name: _____

Point of View Worksheet 4

Directions: determine from which perspective the passage is narrated. **If it is third-person, circle each time characters' thoughts or feelings are narrated**. Explain your answers in the box.

Viewpoints: first-person, second-person, third-person objective, third-person limited, and third-person omniscient.

1. Walter crumpled the business section of the newspaper. He couldn't believe the headline: "Zanogram Sold for 4 Billions Smackaroos!" He could recall starting that company with his partner Zap just a few years earlier. Now Walter had nothing and was riding the bus while Zap took champagne bubble baths. The bus driver noticed that Walter looked distressed. He was genuinely concerned about Walter, but he had learned a long time ago not to pry into the fare's affairs.

Narrator's Perspective: _____

Explain how you know:

2. "Ding!" Katie looked at her phone. It was a text message from Jeff. "Ugh! Not now," she said to herself. She was mad at Jeff for a comment that he had made the last time that they spoke. Meanwhile, while Katie was ignoring Jeff, he was at home trying to figure out why Katie was mad at him. "Did I say something that might have made her angry?" he thought to himself. "No, I have been a perfect gentleman," he concluded.

Narrator's Perspective: _____

Explain how you know:

3. "Crash!" The sound of falling bowling pins fills the air. You walk to the counter and address the attendant. You mention that he has given you shoes in the wrong size. He politely corrects the error. You walk back to your party. It is your turn. You put on your shoes, find your ball, and approach the lane. You wait until the lanes are clear. Then you waddle up to the lane and roll the ball between your legs, grandma style. Your friends cheer. The bumpers ensure that the roll is devastating.

Narrator's Perspective: _____

Explain how you know:

4. The tombstone was in place, but there was a gaping hole where there was supposed to be a field of grass. "Oh, great," I said, "the body's been exhumed." Cliff looked at me curiously and asked, "What does 'exhumed' mean?" I pointed to the hole in the ground and replied with an irate tone, "Well, Cliff, there's an empty hole where the body is supposed to be. Based on the context of this situation, can you infer what 'exhumed' means?" Cliff shrugged his shoulders.

Narrator's Perspective: _____

Explain how you know:

5. Bones loaded the rifle on his lap. He wasn't sure he could win, but he knew he wasn't going down without a fight. He wasn't afraid, but he was nervous with anticipation. He knew that they were coming. Then three men on ATVs pulled up to his house. They were wearing leather jackets with red skulls on the back. One of the men wore a yellow band on his arm. He had a green Mohawk. He was the one who screamed, "Give us the girl and we'll let you live." Bones didn't believe them. He looked at the girl. Bones thought that she looked scared. He would never let them have her.

Narrator's Perspective: _____

Explain how you know:

6. Diego looked over the edge. He thought about how far the ground was. The wind gusted. Whitney turned to him and said, "It's beautiful up here, huh?" Diego could not think about beauty. All he could think about was not falling off the edge. He said, "Yeah, Whitney, it really is beautiful. Hey, how long do you want to stay up here?" Whitney laughed and said, "Let's stay up here the rest of our lives!" Diego grimaced. He was afraid that this scenario was all too likely.

Narrator's Perspective: _____

Explain how you know:

7. A young girl in a scout uniform knocked on the front door of a white mansion. A man wearing a tuxedo with tails answered the door. "May I help you?" the man asked. The young girl began speaking, "Would you like to buy some cookies? Some of the proceeds go to charity." The man cut off the young girl by saying, "Let me see if the head of the home is available." The young girl smiled and straightened the buttons on her uniform.

Narrator's Perspective: _____

Explain how you know:

8. Juan held the space rock in his hand and imagined that he was on the moon. He started bouncing around the gymnasium as though he were in a zero gravity setting. Mr. Worser chased after him and said, "Juan, put that moon rock back on the table!" Juan couldn't hear Mr. Worser because Juan was so involved in his imaginary scenario. "Beep! Commander, bring the lunar rover in for a landing," Juan was saying to himself. Mr. Worser grabbed Juan by the shoulder. This brought Juan back to reality.

Narrator's Perspective: _____

Explain how you know:

9. Texas Joe pointed his shotgun at the rustler. "Well, mister, I can't very well let you take my horse," said Texas Joe. The rustler's eyes darted back and forth and he said, "Please, Mister, let me go. I promise you won't regret it." Texas Joe put his gun back into his poncho and said, "It's your lucky day, partner." The rustler replied, "Yours too, mister. There's a hunting party sneaking up on you right now." Then the rustler ran. Texas Joe drew his weapon again and turned around.

Narrator's Perspective: _____

Explain how you know:

10. "She is your sister, and she is a part of our family. You will not treat her like that!" Mom yelled in the midst of her rampage. I can't explain why she was so mad at me. Maybe Sophia told her a lie. The truth is, I was so busy trying to keep my own activities together that I barely even noticed Sophia, or mom for that matter, but this was something new. "You walk around this place like a stranger apart!" Mom continued. I didn't even know what that meant. I didn't want to bother to think about it either. I just wanted her to stop yelling at me.

Narrator's Perspective: _____

Explain how you know:

11. Alyssa put her groceries on the belt with care. She arranged the items by type. Heavy items were in the front, followed by boxes and cold items in the middle, and light and fragile items in the back. Much to her dismay, the bagger paid no regard to her sorting. He was putting the meats with the dry goods and the bananas under the canned goods. This irritated Alyssa to no end. She grabbed the bagger by the shoulder and said, "Please, let me do that." The bagger gave her a confused look. Alyssa nodded and smiled, even though her heart was filled with rage. The bagger slowly backed away.

Narrator's Perspective: _____

Explain how you know:

12. You are sitting on a sofa enjoying a drink when a man walks into the coffee shop. He is wearing dark sunglasses and a black suit. He sits right next to you. You find this odd since there are so many other open seats that aren't right next to you. You look at him suspiciously. He opens his briefcase and pulls out a manila envelope and hands it to you. You look at the envelope for a second before taking it from his hand. The man smiles at you from behind his dark sunglasses.

Narrator's Perspective: _____

Explain how you know:

13. Larry held the fragile seed in his palm as though he were cradling a baby bird. He knew that the hopes of humanity very well hinged on this seed. He looked to Olga, his protector. She smiled at Larry. She was resting her heavy stone axe on her shoulder and watching him. Olga was happy to be taking a break from fighting, and she was even happier to see Larry take to his new role so well. "You are doing good, boy," she grunted at Larry. Larry smiled, pleased that she had said something nice for once.

Narrator's Perspective: _____

Explain how you know:

14. "Crunch, crunch, crunch..." Brian was chewing his chips with his mouth open. Lucy looked up at him and scoffed, "You're so gross, Brian! Chew with your mouth closed." Brian laughed and miniscule chip crumbs projected from his mouth and landed on his desk. Mr. Romal kept writing on the board with his back to the class. "You must be jealous. Here!" Brian said as he threw a chip at Lucy. He missed. Lucy shook her head and continued writing in her notebook. Brian crumpled up the empty chip bag and shot it at the garbage can. He missed again.

Narrator's Perspective: _____

Explain how you know:

15. You made a smart move when you bought your Super Fun Clay Fun Pack. You're going to love playing with Super Fun Clay. There are just a few rules that you need to follow when playing with your Super Fun Clay Fun Pack. First, only play with your Super Fun Clay Fun Pack on glass surfaces. Super Fun Clay will burn through carpet, wood, and stone. Also, you need to wear thick latex or rubber gloves when playing with Super Fun Clay. Super Fun Clay will burn off your skin even with brief contact. Just follow these two simple rules and you'll have lots fun with Super Fun Clay!

Narrator's Perspective: _____

Explain how you know:

16. Red spun the barrel of his six shooter with his palm and said, "Well, is we going to do it or not?" Texas Joe checked the shells in his shotgun and spit his chaw onto the dusty road, "Yeah, let's do it quick, before the law starts sniffing round." So the two dangerous criminals walked into the ice cream shop and ordered a banana milkshake. "Two straws," said Red. The clerk put a second straw into the creamy confection. This pleased Red. He loved sharing with his friends. Texas Joe licked his lips in anticipation. Banana milkshakes were his favorite.

Narrator's Perspective: _____

Explain how you know:

17. The magician took off his stovepipe hat and placed it on the table. He waved his hands over the hat and said, "Alakazam! Alakazoo!" A small group of people was watching the magician perform on a sidewalk. The magician reached deep into the hat. He pulled out his fist and slowly opened it. There was a tiny foam ball in his hand. He held up one finger, and then he closed his fist again. This time when he opened it, there were three foam balls. The people in the crowd gasped.

Narrator's Perspective: _____

Explain how you know:

18. I couldn't believe that he wanted to play cards at a time like "Would you like to play spades?" he asked nonchalantly, while hovering over my breakup. "No, I don't want to play cards, you twit. My world has been destroyed," I replied in seething rage. He shrugged and continued shuffling the deck.

Narrator's Perspective: _____

Explain how you know:

19. "Where is the crystal?" hissed General Zim. Leo spoke slowly. He knew that General Zim would have his head if he failed to respond properly. He figured that the General might have his head even if he did respond properly. "The rebel scum took it, my liege. We are tracking their movements as we speak." General Zim's face curled up. His reptilian tongue flicked in and out of his mouth. "Good. See that you retrieve it, or else." Leo gulped and rubbed the back of his neck. He understood what General Zim was implying.

Narrator's Perspective: _____

Explain how you know:

Name: _____

Context Clues 3.4

Directions: read each sentence and determine the meaning of the word using cross sentence clues or your prior knowledge. Then, explain what clues in the sentence helped you determine the word meaning.

1. **lamentable**: Lia, it is **lamentable** that you and Derrick separated, but it has almost been a year. Don't you think that it's about time to move on with your life?

Definition: _____

What clues in the sentence lead you to your definition?

2. **adorn**: To prepare the cafeteria for the big dance, the planning committee **adorned** the walls with colorful streamers and balloons.

Definition: _____

What clues in the sentence lead you to your definition?

3. **ambuscade**: Ducked down in the tall grass, the warriors waited patiently on the hillside for the next group unfortunate enough to walk through their **ambuscade**.

Definition: _____

What clues in the sentence lead you to your definition?

4. **uninhabitable**: The flood caused toxic molds to grow on the walls of our old house and now it is **uninhabitable**.

Definition: _____

What clues in the sentence lead you to your definition?

5. **opaque**: Brian attempted to see who was riding inside of the limousine, but the **opaque** window tinting prevented him from getting even the slightest glimpse.

Definition: _____

What clues in the sentence lead you to your definition?

6. **parsimonious**: Due to his **parsimonious** nature, Brian enjoys borrowing movies from the library and copying them, buying day old bread from the bakery, and recording music from the radio even though he has a lot of money.

Definition: _____

What clues in the sentence lead you to your definition?

7. **insolence**: Katie talked back to the principal and called him by his first name so he sent her to the office for her **insolence**.

Definition: _____

What clues in the sentence lead you to your definition?

8. **rebuke**: After the players got caught cheating on the exam, the coach **rebuked** them harshly.

Definition: _____

What clues in the sentence lead you to your definition?

9. **eminence**: Large companies and wealthy clients wanted Donzo to take their pictures, as Donzo was well known for his **eminence** in photography.

Definition: _____

What clues in the sentence lead you to your definition?

10. **obsequies**: "Teacher, you forgot to assign homework," said James, expressing the **obsequies** nature that made him unpopular.

Definition: _____

What clues in the sentence lead you to your definition?

11. **aversion**: John gave me two tickets to the basketball game, but I have an **aversion** to going to crowded places like sports arenas, so would you like to have them?

Definition: _____

What clues in the sentence lead you to your definition?

12. **pertinent**: The principal concluded his speech, "Now that I have introduced the new program, I will answer a few questions, so long as they are pertinent to the matter at hand."

Definition: _____

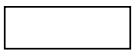
What clues in the sentence lead you to your definition?

Formula Card:

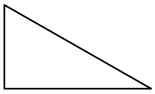
Circle - $A = \pi \cdot r^2$ $C = \pi \cdot d$ $\pi \approx 3.14$



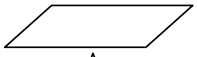
Rectangle - $A = l \cdot w$ $P = l + l + w + w$



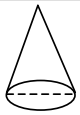
Triangle - $A = \frac{1}{2} b \cdot h$ $P = sum\ of\ all\ of\ the\ sides$



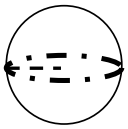
Parallelogram - $A = b \cdot h$ $P = sum\ of\ all\ of\ the\ sides$



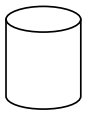
Cone - $V = \frac{1}{3} \pi \cdot r^2 \cdot h$



Sphere - $V = \frac{2}{3} \pi \cdot r^2 \cdot h$



Cylinder - $V = \pi \bullet r^2 \bullet h$



Graphing: Remember to graph the x (horizontal) and then the y (vertical). (x, y)

Absolute Value: distance away from zero (always positive)

Example 1: $|10 - 7| = |3| = 3$ Example 2: $|-3 + -5| = |-8| = 8$ Example 3: $|-8 - 2| = |-6| = 6$

Measures of Central Tendency

- **Mean:** average; $\frac{\text{sum of all numbers}}{\text{total numbers in list}}$
- **Median:** middle number in list of numbers going from least to greatest
- **Mode:** number that appears most often in a list of numbers
- **Range:** difference between largest number and smallest number

Example: 5, 10, 2, 6, 2, 2

Mean: $\frac{5 + 10 + 2 + 6 + 2 + 2}{6} = \frac{27}{6} = 4.5$ Mode: 2

Median: 2, 2, (2, 5), 6, 10 Range: 10-2 = 8

$\frac{2 + 5}{7} = \frac{7}{2} = 3.5$

Multiplying Fractions

1. Reduce fractions, if possible.
2. Multiply across.
3. Check that your answer is in lowest terms.

Example: 1. $\frac{5}{10} \bullet \frac{3}{8}$

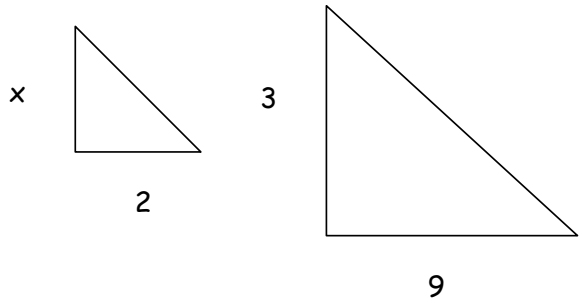
2. $\frac{1}{2} \bullet \frac{3}{8}$

3. $\frac{3}{16}$

Order of Operations

1. Parentheses
2. Exponents: $4^3 = 4 \cdot 4 \cdot 4$
3. Multiplication or Division (left to right)
4. Addition or Subtraction (left to right)

Ratios & Proportions



$\frac{2}{9} = \frac{x}{3}$

$9 \bullet ? = 3$

$3 \div 9 = \frac{1}{3}$

$2 \bullet ? = x$

$2 \bullet \frac{1}{3} = \frac{2}{3}$

Inequalities

≥ greater than or equal to
(at least)



> greater than



≤ less than or equal to
(at most)



< less than



Adding Fractions

Ex. 1) $\frac{2}{3}+\frac{4}{5}=$

$=\frac{10}{15}+\frac{12}{15}$

$=\frac{22}{15}$

Evaluating Area with Pi

Ex. 2) Find the area of a circle with a radius of 5 in. $A=\pi r^2$

$A=\pi\cdot 5^2$

$A=25\pi\ in.^2\ or\ 78.5\ in.^2$

Evaluating Expressions/Equations

Ex. 3) Solve for y if x = 4:

y = 2x + 5
y = 2(4) + 5
y = 8 + 5
y = 13

Ex. 4) Solve for x if y = 7:

y = 3x - 6
7 = 3x - 6
+6 +6
13 = 3x

$\frac{13}{3}=\frac{3x}{3}$

$\frac{13}{3}=x$

Symbolic Method

One Step Equations:

Example 1: x + 5 = 12
-5 -5
x = 7

Example 2: x – 8 = 6
+ 8 +8
x = 14

Example 3: $\frac{5x}{5}=\frac{-20}{5}$
x = -4

Two Step Equations:

1. Get "x" by itself by adding or subtracting from each side.
2. Divide both sides by the coefficient (number next to "x").

Example 1: 2x + 7 = 5
-7 -7
$\frac{2x}{2}=\frac{-2}{2}$
x = 2

Example 2: -5x + 10 = -20
-10 -10
$\frac{-5x}{-5}=\frac{-30}{-5}$
x = 6

Show your work! Show your work! Show your work!

Name _____

Summer Review - Week # 1

1) Solve for x if y = -10:

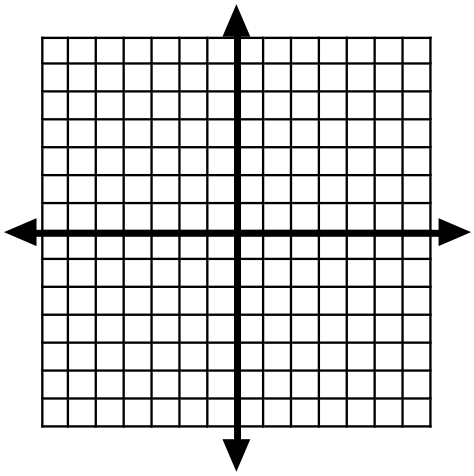
a) y = x + 12 b) y = 7x – 42 c) y = 4x – 16 d) y = -2x - 45

2) Solve for y if x = 5:

a) y = x + 13 b) y = 6x – 32 c) y = 2x – 15 d) y = 8x - 5

3) Graph each coordinate pair on the graph and then indicate which quadrant or axis the point lies on.

Coordinate pair	Quadrant or Axis
(-2, -3)	
(-3, -5)	
(-4, 1)	
(-1, 3)	
(3, -4)	
(1, 0)	
(2, -6)	
(-4, -3)	



4) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-24-11|$ b) $|31-60|$ c) $|-37-49|$ d) $|-96+75|$

5) Solve for x:

a) $\frac{7}{6}=\frac{x}{36}$ b) $\frac{10}{8}=\frac{4}{x}$ c) $\frac{x}{60}=\frac{9}{10}$

Show your work! Show your work! Show your work!

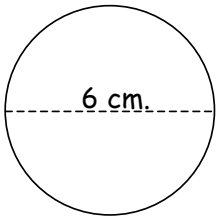
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Name _____

Summer Review - Week #2

1) Find the circumference and area of each circle:

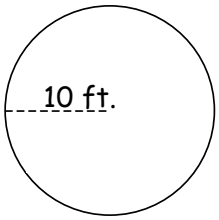
a)



C = _____ or _____

A = _____ or _____

b)



C = _____ or _____

A = _____ or _____

2) Solve for x if y = 7:

a) y = x + 24 b) y = -2x – 26 c) y = -3x – 11 d) y = 6x - 1

3) Solve for y if x = -1:

a) y = x + 12 b) y = 6x – 31 c) y = 2x – 14 d) y = 4x - 15

4) Try to reduce before you compute the answers! (This will help when you are trying to reduce.)

a) $\frac{12}{30}\cdot\frac{9}{12}=$ b) $\frac{25}{24}\cdot\frac{8}{10}=$ c) $\frac{72}{72}\cdot\frac{72}{72}=$ d) $\frac{20}{12}\cdot\frac{16}{30}=$

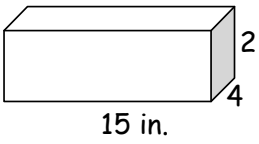
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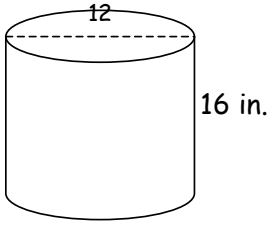
Name _____

Summer Review - Week #3

1) Find the surface area and volume of each of the figures.

a) 

Surface Area = Volume =

b) 

Surface Area = Volume =

2) Solve for x if y = -3:

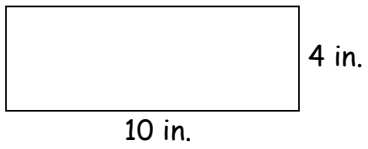
a) $y = x + 17$ b) $y = 4x - 43$ c) $y = -3x - 19$ d) $y = -2x - 46$

3) Solve for y if x = 12:

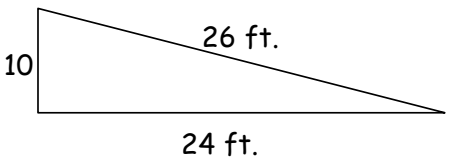
a) $y = 3x + 14$ b) $y = 2x - 12$ c) $y = -2x - 91$ d) $y = -7x - 24$

4) Find the area and perimeter of the following figures.

a) A = P =



b) A = P =



Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

5) Simplify:

a) $-\frac{4}{15}-\frac{3}{5}=$ b) $\frac{3}{16}-\frac{7}{32}=$ c) $\frac{9}{7}-\frac{11}{6}=$ d) $\frac{7}{9}-\frac{4}{4}=$

6) Solve for x if y = 0:

a) y = x + 24 b) y = 6x − 90 c) y = 2x − 22 d) y = 4x - 36

7) Solve for y if x = -8:

a) y = -2x + 3 b) y = 3x − 39 c) y = -4x − 35 d) y = 5x - 12

8) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-26-12|$ b) $|81-67|$ c) $|-39-41|$ d) $|-95+92|$

9) Solve for x:

a) $\frac{9}{12}=\frac{x}{36}$ b) $\frac{7}{8}=\frac{4}{x}$ c) $\frac{x}{30}=\frac{4}{5}$

10) Write an equation that represents the points in the table.

x	y
3	4
5	6
7	8

y = _____

Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

Summer Review - Week # IV Name _____

1) Solve for x if y = -3:

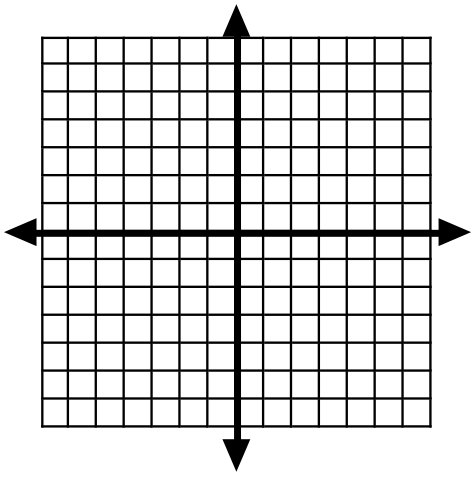
a) y = 4x + 42 b) y = -2x − 4 c) y = 7x − 1 d) y = 40x - 8

2) Solve for y if x = 1:

a) y = -x + 3 b) y = -6x − 2 c) y = -2x − 5 d) y = -4x - 26

3) Graph each coordinate pair on the graph and then indicate which quadrant or axis the point lies on.

Coordinate pair	Quadrant or Axis
(-4, -3)	
(-6, -5)	
(-3, 1)	
(-2, 3)	
(2, -4)	
(5, 0)	
(3, -6)	
(-1, -3)	



4) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-21-17|$ b) $|39-26|$ c) $|-17-79|$ d) $|-9+25|$

e) $|-21-61|$ f) $|61-74|$ g) $|-31-79|$ h) $|-12+55|$

Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

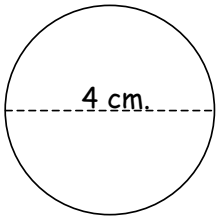
Name _____

_____

Summer Review - Week #5

1) Find the circumference and area of each circle:

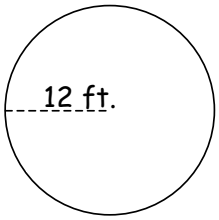
a)



C = _____ or _____

A = _____ or _____

b)



C = _____ or _____

A = _____ or _____

2) Solve for x if y = 7:

a) y = x + 91 b) y = 4x − 2 c) y = 5x − 46 d) y = 6x - 86

3) Solve for y if x = 13:

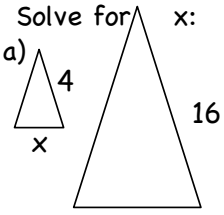
a) y = -x + 3 b) y = -2x − 2 c) y = -3x − 75 d) y = 8x - 36

4) Try to reduce before you compute the answers! (This will help when you are trying to reduce.)

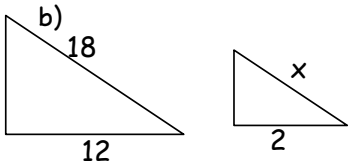
a) $\frac{18}{27}\cdot\frac{30}{40}=$ b) $\frac{10}{15}\cdot\frac{24}{32}=$ c) $\frac{36}{72}\cdot\frac{9}{12}=$ d) $\frac{24}{18}\cdot\frac{18}{24}=$

5) Solve for x:

a)



b)



Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

Name _____

_____

Summer Review - Week #6

1) Solve for x if y = -30:

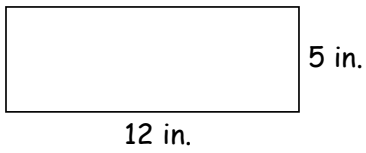
a) y = x + 11 b) y = -2x – 32 c) y = -3x – 1 d) y = 5x - 10

2) Solve for y if x = -6:

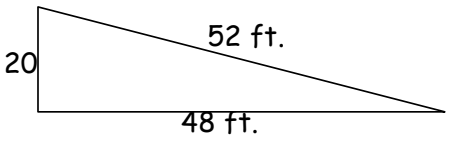
a) y = x + 3 b) y = -2x – 72 c) y = 3x – 65 d) y = 4x - 26

3) Find the area and perimeter of the following figures.

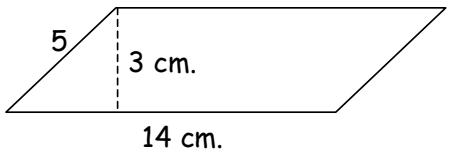
a) A = P =



b) A = P =



c) A = P =



4) Simplify:

a) $-\frac{8}{9}-\frac{4}{6}=$ b) $\frac{4}{5}-\frac{7}{25}=$ c) $\frac{1}{6}-\frac{2}{10}=$ d) $\frac{9}{10}-\frac{1}{2}=$

Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

5) Solve for y if x = 3:

a) y = -5x + 17 b) y = 3x – 22 c) y = 2x – 25 d) y = 6x – 39

6) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-81-17|$ b) $|8-20|$ c) $|-76-29|$ d) $|-91+45|$

7) Solve for x:

a) $\frac{1}{8}=\frac{x}{32}$ b) $\frac{9}{5}=\frac{3}{x}$ c) $\frac{x}{40}=\frac{3}{20}$

8) Write an equation that represents the points in the table.

x	y
-2	4
0	2
5	-3

y = _____

9) Solve for x if y = -5:

a) y = -x + 13 b) y = 2x – 23 c) y = -3x – 17 d) y = 8x - 29

10) Solve for y if x = -8:

a) y = x + 92 b) y = 3x – 72 c) y = -5x – 35 d) y = 7x - 26

Show your work! Show your work! Show your work!

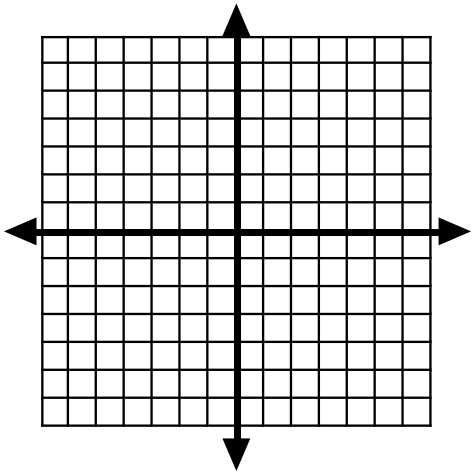
Show your work! Show your work! Show your work!

Name _____

Summer Review - Week #7

1) Graph each coordinate pair on the graph and then indicate which quadrant or axis the point lies on.

Coordinate pair	Quadrant or Axis
(-2, -4)	
(-3, -6)	
(-4, 2)	
(-1, 4)	
(3, 0)	
(1, -1)	
(2, -7)	
(-4, -5)	



2) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-29-13|$ b) $|39-62|$ c) $|-59-41|$ d) $|-26+71|$

3) Solve for x:

a) $\frac{7}{8}=\frac{x}{48}$ b) $\frac{9}{2}=\frac{8}{x}$ c) $\frac{x}{80}=\frac{3}{4}$

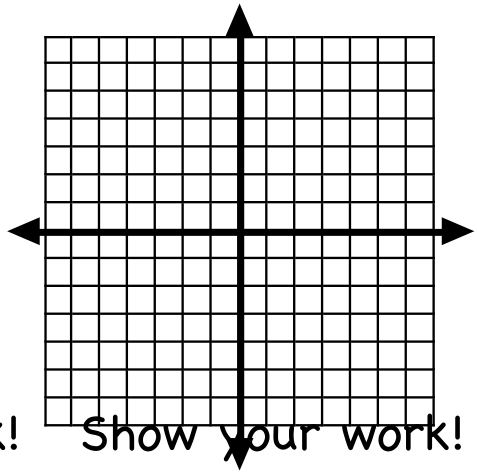
4) Graph the following lines on the coordinate plane:

a) y = x + 5

b) y = -2x + 6

c) $y=\frac{1}{4}x-2$

d) $y=-\frac{2}{3}x+3$



Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

Name _____

Summer Review - Week # 8

1) Solve for x if y = -3:

a) y = x + 17 b) y = 2x – 4 c) y = 9x + 24 d) y = -2x - 1

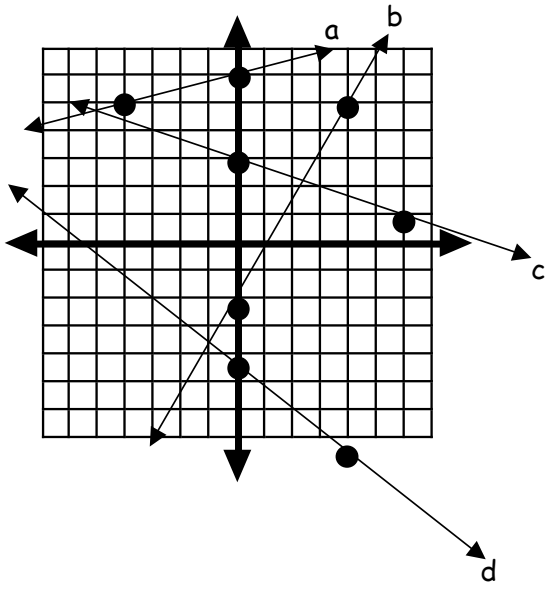
2) Solve for y if x = 7:

a) y = -3x + 63 b) y = 2x – 38 c) y = 4x – 25 d) y = 10x - 16

3) Try to reduce before you compute the answers! (This will help when you are trying to reduce.)

a) $\frac{12}{24} \cdot \frac{10}{5} =$ b) $\frac{23}{24} \cdot \frac{14}{46} =$ c) $\frac{3}{4} \cdot \frac{36}{18} =$ d) $\frac{15}{18} \cdot \frac{21}{3} =$

4) Write an equation that represents each of the lines.



a) y =

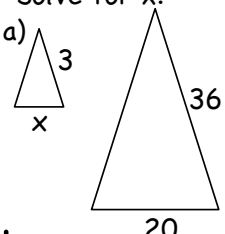
b) y =

c) y =

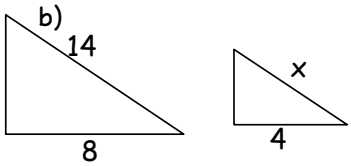
d) y =

5) Solve for x:

a)



b)



Show your work! Show your work! Show your work!

Student Name _____

Teacher Name _____

School _____

System _____

ACH



Tennessee Comprehensive Assessment Program

Achievement Test ~ Grade 8

Practice Test

PEARSON

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Table of Contents

Introduction 1

What is the TCAP Achievement Test? 1

What are the questions testing? 1

Who will be tested? 1

How long will the tests take? 1

How will the tests be scored? 1

May calculators be used? 1

Which test accommodations may be used? 2

What is the purpose of the practice test? 2

Here are some tips for preparing students for the test 2

Reading/Language Arts 3

Mathematics 61

Science 103

Social Studies 141

Answer Key 180

Introduction

What is the TCAP Achievement Test?

The TCAP Achievement Test is a multiple-choice test designed to measure student achievement in certain skills in four content areas: Reading/Language Arts, Mathematics, Science, and Social Studies. The questions in this practice test are examples of items used in the actual test.

What are the questions testing?

Questions are written to test student performance in state content standards. The State Content Standards and Performance Indicators were developed by the Tennessee Department of Education. These Standards and Performance Indicators are listed on the State Department of Education Web site at http://www.state.tn.us/education/curriculum.shtml.

Who will be tested?

Students in grades 3 through 8 will be tested.

How long will the tests take?

The length of the tests will vary, depending on the grade level. The time limits are generous and allow most students time to finish. Extended time limits only apply to students who are eligible for special or English Language Learner (ELL) accommodations.

How will the tests be scored?

The test answers will be machine scored. Results from the test provide information about how well students performed on the content being tested.

May calculators be used?

Calculators may be used on Part 1 and 2 of the mathematics portions of the TCAP Achievement Test (grades 3–8) as per system policy.

Which test accommodations may be used?

The TCAP Achievement Test may be administered using various procedures that are used during the student's daily educational program. Certain conditions must be met for students to be eligible for Special and ELL accommodations.

What is the purpose of the practice test?

In a classroom learning session, these questions can be used to prepare students for the actual test. Teachers can use the practice test to help familiarize students with the format of test questions and how the actual test will be administered. This practice test can also be used to inform parents of the type of test their children will be taking.

Here are some tips for preparing students for the test.

Remind students to:

Relax: It is normal to be somewhat anxious before the test. Remember that the score is only one of a number of measures of performance.

Listen: Listen to and read the test directions carefully.

Plan Use of Time: First, answer all the questions you are sure about. Do not spend too much time on any one question. If a question seems to take too long, skip it and return to it later if you have extra time.

Pause and Think: If you are not sure how to answer a question, carefully read it again. Rule out answer choices that you know are incorrect and then choose from those that remain.

Reading/Language Arts



Part 1

Directions **Read both stories. Then answer Numbers 1 through 7.**

The Champion of Miller's Lane

by Michael David Hardy

1 Derek Barnes adjusted the straps of his helmet, straightened his sunglasses, and pulled on his black leather gloves, stretching his fingers for a snug fit.

2 Derek, the defending champion of the Miller's Lane bike race, looked to his left at the crowd of eager bikers hoping to strip him of his title.

3 "You ready, D.B.?" asked Joey Mains, Derek's longtime friend and neighbor.

4 "You bet! We couldn't have practiced any harder." Derek smiled and pushed the hair from his eyes.

5 "Yeah," Joey agreed. "And this time *I'm* gonna beat *you*."

6 Derek just laughed. "We'll see. Let's do it."

7 Joey slipped a pair of motorcycle goggles over his eyes. He turned to Derek, who was trying hard not to laugh. "What? So maybe I like wearing goggles, OK?" Derek smiled and gave Joey the "thumbs up." Joey returned the smile.



8 "On your mark," announced the starter. "Get set . . . *Go!*" The small crowd cheered as the bikers bolted from the line.

9 The pack of racers stayed close together as they left the school and sped along the Congress Street bike

Go On ▶

lane. Derek, pedaling comfortably, positioned himself just behind the leaders and waited for the right time to move.

10 Derek gripped his handlebars tightly, pumping the sleek, red bicycle past the bus stop that marked the halfway point of the two-mile race. He glanced to his right and gave Joey a nod.

11 Both boys burst from the pack and quickly overtook the leaders, who had used much of their energy in the early going. Derek and Joey pedaled furiously as they battled for the lead. Derek got the inside track as they screamed around Buttermilk Curve, and he pulled to the front.

12 The panting racers, now forming two packs rather than one, quickly approached the covered footbridge. The bridge's wooden planks rumbled as the bikers zipped across the narrow span. Derek could feel the thumping of the uneven boards vibrate up his arms. This part of the course always made his ears tickle.

13 Bolting from the bridge into the hot afternoon sun, Derek leaned hard into the sharp right turn, looking over his shoulder to check the competition. Joey and two others were hot on his trail like hounds after a fox. Most of the others had fallen behind.

14 Derek barely slowed down as he turned onto Miller's Lane and flew past a small group of kids who had gathered to watch the racers go by. He was on the homestretch now, but he knew he couldn't let up.

15 Sweat stung his eyes as he steered his bike around the last sharp corner before Pop's Dairy Delight and the finish line. Again he turned his head to check the other riders. He had put a little more distance between himself and Joey, who seemed to have second place all but wrapped up.

16 Suddenly Joey's bike started shaking uncontrollably. Derek watched in horror as it lurched to the right and hit the curb sharply, launching Joey through the air like a football.

17 The finish line was just ahead, but Derek slammed on his brakes, leaving a long, black tire mark on the pavement. He spun the bike around and went like a shot back up the street.

18 "Joey! Hey, Joey, are you OK?" Derek jumped off his bike and let it fall to the ground. Joey sat on the sidewalk, holding his scraped right arm.

19 "Not exactly like we practiced was it?" Joey joked.

20 "Not exactly," Derek said.

21 "Man, you really had us beat, D.B.," Joey said. "Thanks for coming back to help."

22 "No sweat," Derek said, patting Joey's shoulder. "We'll get 'em next year."

"The Champion of Miller's Lane" by Michael David Hardy, from *Highlights for Children*, July/August 1992, copyright © 1992 by Highlights for Children, Inc. Columbus, Ohio. Used by permission.

If at First You Don't Succeed, Try, Try Again

by Hannah Blau
Illustrated by Claire O'Neill Sanger

The story below is about a girl named Izzy who is practicing for a big race. She gets encouragement from her older sister Natalie, and her friend Jessie.

1 Izzy and her sister, Natalie, stepped onto the asphalt at Bergman's Running Track on Norm Street. This was Izzy's favorite time of day. Quiet. The sun was rising. Izzy began to run, slowly at first, then speeding up. By the time she reached Natalie again she was at full speed.

2 "Time?" asked Izzy.

3 "Two-thirty," replied Nat.

4 "Yes!" Izzy exclaimed. "One more time."

5 The big race, three miles, was three weeks away—so far yet so near. Izzy spent afternoons practicing with her teammates. She practiced at the track near her house on Saturdays. Natalie, who raced for her high school, went along. Nat made Izzy feel confident. She was pretty and kind. Izzy admired her. She was a streak when she ran yet she was so happy and carefree. She would never be like Nat but oh how she wished. Izzy was also a little competitive with Nat. Izzy sort of thought it was good to be a little competitive. Maybe.

6 For the next hour, Izzy pushed herself to beat her best time. She loved running and the sensation of wind against her face at top speed. But she also wanted to win.

7 "Let's stop for a drink," Natalie suggested.

8 Izzy was glad. She was hot and sweaty. It was not an uncomfortable feeling, just a little feeling saying "mission accomplished." They headed to Brooks convenience store, where she bought a bottle of water. Then they walked up Norm Street towards home.

9 Every Saturday, Izzy kept to the same routine: she got up with her sister at five A.M., worked out at the track until seven, and returned home a half hour later. At ten, her best friend Jessie would come by. During those hours, Izzy amused herself by trying to watch a movie (Harry Potter), or reading a book (Harry Potter) or fitting together the pieces of a puzzle (Harry Potter), though she could hardly pay attention. Finally, ten o'clock came and so did Jessie. She tapped out the secret knock, although it wasn't very secret anymore.

10 The door swung open and the two friends gave each other a quick hug. They grabbed some Power Bars and left for the pool. That was how it went every Saturday. Izzy liked it.

11 It was the last Saturday before the race. Jessie had decided to join Izzy and Natalie for their Saturday routine.

12 "On your mark, get set, go!" instructed Natalie.

Go On ▶

13 Izzy and Jessie ran and ran. On this morning, Izzy didn't notice the wonderful silence or the beautiful sunrise.



14 "Time?" Izzy breathed after finishing twelve hard laps, hopping from one foot to the other.

15 "Thirty-five minutes flat," Natalie replied.

16 "Not bad for three miles," Jessie said, trying to laugh. She was trying to be funny but Izzy could tell she was worrying about the race.

17 They practiced for another hour, trying. Izzy and Jessie were pleased. Better.

18 "You've got a whole week to practice," Natalie said. Her words were reassuring, but seven days didn't seem enough.

19 When they got home Izzy and Jessie were exhausted. No swimming.

20 Izzy's time was improving, but butterflies were beginning to form in her stomach. They came flying in as the day drew nearer. And finally just when there was no room for another butterfly, not even a moth, it was time.

21 Izzy and Jessie arrived twenty minutes early, as did the rest. The girls greeted each other with chatter. They warmed up alongside the track.

22 Parents, teachers and friends arrived. Then noise.

23 "I'm scared," Izzy whispered to Natalie, who stood with her.

24 "Don't worry, you'll do fine," she replied.

25 Izzy took her place on the track.

26 The whistle blew.

27 Before Izzy could think, her legs were carrying her. Going, going, Izzy felt so tired and she began to slow. It seemed like forever before the finish line came into view. And it seemed even longer before she crossed it. Everyone else was there already, it seemed.

28 She had failed.

29 Izzy had thought she was a good runner, and now what? Should she quit? She sat down with the rest of her team. She couldn't hear the loudspeaker as it called out the winners. Tears pressed hot behind her eyes. She looked down. This was more than embarrassing.

30 Weeks went by, races were missed. Practice didn't go well either. Nothing could comfort Izzy. She hadn't run for days. You'd have to be very smart to think of anything that would upset Izzy more than this, but your guess would probably be wrong anyway.

31 Almost every day Natalie would ask, "Are you sure you don't want to run today?"

32 And Izzy would always say, "Just leave me alone!"

33 One day, Jessie sat down beside Izzy in her room to talk.

34 "We've been losing all this time, and if you don't start coming to practices *today* we won't get to go to the championship race. You need to be back. And I miss you with me."

35 "Huh?" Izzy was stunned.

36 "You're a great runner, Izzy."

37 "But I let you down," Izzy sighed, "didn't I?"

38 "You didn't. You were nervous. Everyone has those days. Don't let a silly little race tear you away from something you love," Jessie explained reassuringly.

39 "Really?" Izzy asked excitedly.

40 "Yeah," was Jessie's calm answer.

41 Izzy felt like crying.

42 "Thanks," was all she could say.

43 "So will you win?" asked Jessie. Her tone had changed. Now it was determined.

44 Izzy nodded. They hugged, then walked out the door of Izzy's house and headed to go—what else?—running. As she sprinted, wind whipping at her hair, a smile crossed her face. She was back.

45 Izzy and Jessie were the first runners at the championship race. Then the crowd and then noise. But Izzy didn't hear the noise; she was happy.

46 "On your mark. Get set. Go!"

47 Izzy knew exactly what to do.

48 She felt like wind. Sunlight shone on her cheeks, her heart bursting with joy. She felt as if she had already won. And it didn't matter anymore. *Is it possible? Am I more like Nat? Yes. At last*, she thought. *This isn't all about winning. It's about having fun. That was what Jessie had tried to tell me*. She felt the steady beat of her feet against the pavement.

49 Just then someone passed her.

50 "*No*," thought Izzy, "*not this time*."

51 And that's when Izzy ran.

"If at First You Don't Succeed, Try, Try Again" text by Hannah Blau, illustration by Claire O'Neill Sanger, from *Stone Soup, the Magazine by Young Writers & Artists*, copyright © 2007 by the Children's Art Foundation. Used by permission.

Go On ▶

1 **Which theme is best expressed in both stories?**

A Sacrifice is necessary to gain success.

B Winning is the most important thing.

C Others' envy is the enemy of success.

D Believing in yourself will ensure success.

2 **In each story, Derek's and Izzy's experiences differ mainly because**

F Derek does not overcome his defeat.

G Derek knows how it feels to win.

H Izzy does not have a friend to help her.

J Izzy competes in a track race.

3 **Read this sentence from Paragraph 9 of "The Champion of Miller's Lane."**

The pack of racers stayed close together as they left the school and sped along the Congress Street bike lane.

Which synonym for pack matches how the word is used in the sentence above?

A container

B heap

C bag

D group

4 **Which event will most likely happen next in "The Champion of Miller's Lane"?**

F Derek will help Joey get back on his bike.

G Joey and Derek will ride their bikes home.

H Derek will make sure Joey gets home safely.

J Derek and Joey will finish the race.

5 **Choose the sentence that best indicates the rising action in "The Champion of Miller's Lane."**

A The pack of racers stayed close together as they left the school and sped along the Congress Street bike lane.

B Both boys burst from the pack and quickly overtook the leaders, who had used much of their energy in the early going.

C Derek watched in horror as it lurched to the right and hit the curb sharply, launching Joey through the air like a football.

D Derek jumped off his bike and let it fall to the ground.

Go On ▶

6 **Which question is answered in the passage "If at First You Don't Succeed, Try, Try Again"?**

F What are the rules of championship racing?

G How did Izzy become interested in running?

H Why did Izzy stop running for several weeks?

J What is the outcome of the championship race?

7 **The author most likely wrote the passage "If at First You Don't Succeed, Try, Try Again" in order to**

A describe the training techniques of a runner.

B help readers understand the emotions of athletes.

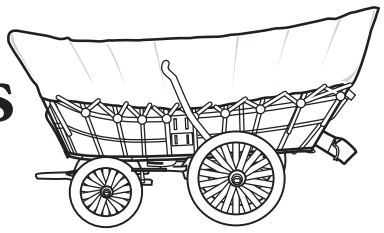
C encourage readers to participate in healthful sports.

D share the lesson one girl learns about competition.

Directions **Read the poem. Then answer Numbers 8 through 13.**

Conestoga Heroes

by Alberta Haught



I never could remember dates
Of treaties, wars, and such.
Reciting lists of Presidents
Did not impress me much.

But stories of the pioneers
And settlers of this land?
Now, them I liked to read about,
That sturdy, stalwart[1] band.

The loaded Conestogas[2] rolled
Across the Western plains.
And many people traveled in
Those early wagon trains.

They came from homes in Tennessee,
And Pennsylvania too,
Left settled towns for untamed lands,
Where everything was new.

[1]**stalwart:** strong, robust
[2]**Conestogas:** covered wagons of the 1800s

Go On ▶

How hard they worked to clear their farms!
They reared[3] their children there.
The men built homes, the women cooked,
And sewed warm clothes to wear.

They never chose to write their names
In books of history,
But I think all of these heroes
Lived lives of bravery.

"Conestoga Heroes" by Alberta Haught, from *Hopscotch For Girls*, April/May, copyright © 2007 by Bluffton News Publishing. Used by permission.

[3]**reared:** took care of

8 **Read Lines 5 through 8.**

But stories of the pioneers
And settlers of this land?
Now, them I liked to read about,
That sturdy, stalwart band.

The phrase sturdy, stalwart band refers to a group of people who are

F eager to plan for the future.

G accustomed to long-distance travel.

H interested in exploring new places.

J determined to accomplish their goals.

9 **Looking back on this time period, the poet views the pioneers mostly as**

A fearless.

B truthful.

C fair.

D strange.

10 **Which words help establish the 1800s time period of the poem?**

F dates, wars, Presidents, history

G treaties, pioneers, wagon trains

H Western plains, Tennessee, Pennsylvania

J worked, reared, built, cooked, sewed

11 **The speaker of the poem believes that the pioneer heroes**

A preferred to move often.

B were rarely content.

C overcame difficulties easily.

D were often unknown.

Go On ▶

12 **The poet's main purpose for writing this poem is to**

F persuade readers to take a trip.

G share an experience of moving to another state.

H teach a lesson about traveling by wagon.

J inform readers about pioneer days.

13 **Complete the analogy.**

Conestogas are to wagons as helicopters are to _____.

A aircraft

B jets

C birds

D rockets

Directions **Read the passage. Then answer Numbers 14 through 19.**

Living Above the Boiling Earth

by Gail Jarrow

1 You know immediately that something strange is going on in the city of Rotorua. The air smells like rotten eggs. Plumes of steam rise from road drains. Peculiar crusts of yellow, white, and red cover the rocks. Mud puddles bubble. Rocks burn your hands. The ground vibrates as a hissing geyser spews hot water 100 feet into the air.

2 Welcome to New Zealand's North Island, where the earth boils beneath your feet. This hot spot is part of the Ring of Fire, a circle of volcanoes and earthquake-prone areas that surrounds the Pacific Ocean. New Zealand sits above a crack between two enormous sections of the earth's outer shell, called plates. As the two plates slowly move together, the edge of one plate is pushed under the other, where it melts into hot molten rock. This molten rock heats rocks and groundwater lying above it, creating a thermal zone.

3 Underneath Rotorua lies a huge reservoir of steam and hot water heated by molten rock. The steam escapes into the air through cracks in the rocks. Scalding hot water rises to the surface through openings in the ground, forming hundreds of hot springs and geysers throughout the city.

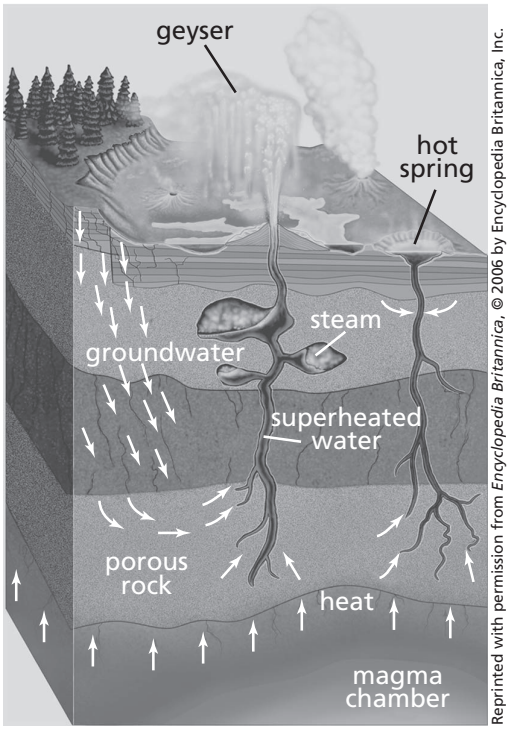


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Hot underground gases bubble to the surface and cause mud to fly in the air.

Go On ▶

Magma Chamber: Cross Section of Geyser and Hot Spring



4 Minerals in the boiling water coat the ground near the hot springs and geysers with different colors—white from silica, red from iron, yellow from sulfur. The sulfur fumes tarnish silver and corrode electronic equipment such as televisions and computers. The sulfur gives Rotorua its rotten-egg smell. No wonder the city's nickname is "Rotten-rua"!

5 Rotorua may not sound like the ideal place to live, but people who make their homes in the thermal zone have adapted well. The first settlers, the Maori, arrived 600 years ago and built villages around the hot springs. They considered the thermal areas sacred treasures and sources of spiritual and physical comfort. The Maori used the hot water to wash and keep warm. They cooked their food by placing flax baskets full of meat and vegetables into steaming pools. Today, Maori in traditional villages still use the geothermal heat the same way their ancestors did.

6 Modern New Zealanders found a new use for the heat under their feet. Since the 1950s, they have produced electricity by drilling into underground pockets of steam, then piping the steam to electricity-generating plants where it turns turbines. Hot water from subterranean[1] reservoirs heats many homes and businesses, and homeowners bore the ground to obtain steam and hot water for washing, bathing, and swimming. In the 1980s, people noticed that increased extraction of steam and water from underground

[1]**subterranean:** underground

had reduced geyser activity. In order to preserve the unique thermal areas of Rotorua, the government closed many bores. Today a regional council oversees the use of geothermal resources. It limits new borings and prohibits drilling within a mile of Rotorua's major thermal areas—especially those considered sacred by the Maori.

7 The people of Rotorua have learned to live with the dangers of boiling earth. The ground in the thermal areas of Rotorua is so thin and hot that the early Maori settlers had to bury their dead in aboveground tombs. Walkers in hot spots must stay on marked paths, or risk crashing through the thin ground and tumbling into a pool of boiling water. For safety, houses are not built in known thermal areas. But sometimes the steam and hot water break through the ground in unexpected places, and a house must be abandoned. Imagine a geyser suddenly appearing in your front yard!


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A geyser erupts in Rotorua.

"*Living Above the Boiling Earth*" by Gail Jarrow from *Faces*, January 2001 issue: New Zealand, copyright © 2001 by Carus Publishing Company, published by Cobblestone Publishing. All rights reserved. Used by permission of the publisher.

Go On ▶

14 **The caption under the first photograph helps the reader understand**

F why mud is unusual in Rotorua.

G where hot mud can be found in Rotorua.

H what causes the mud to boil in Rotorua.

J how mud is used in Rotorua.

15 **Which detail from the passage best supports the main idea that people on Rotorua have found ways to use their environment to their advantage?**

A This hot spot is part of the Ring of Fire, a circle of volcanoes and earthquake-prone areas that surrounds the Pacific Ocean.

B The steam escapes into the air through cracks in the rocks.

C They cooked their food by placing flax baskets full of meat and vegetables into steaming pools.

D Today a regional council oversees the use of geothermal resources.

16 **Based on the diagram in the passage, what makes a geyser erupt?**

F groundwater that seeps through porous rocks

G steam that has been trapped under the surface

H the increased temperature in a hot spring

J the porous rock above the magma chamber

17 **Which word best completes the analogy below?**

Geysers is to Rotorua as sand is to _____.

A glass

B desert

C garden

D hourglass

18 **The organizational structure of Paragraphs 5 and 6 can best be described as**

F chronological.

G cause-effect.

H comparison-contrast.

J problem-solution.

19 **Which resource is best for finding more information for a research paper about the moving plates under Rotorua?**

A a fictional story about the eruption of a volcano

B a Web site about the history of the Maori people

C an encyclopedia article about New Zealand geography

D an article about human interaction with the environment

Go On ▶

Directions **Read the rough draft of Patrick's letter. It contains mistakes. Then answer Numbers 20 through 27.**

September 19, 2009

Dear Ms. Johanssen:

(1) I recently read on the Clarendon Middle School Web site that you are looking for an eighth grade editor for the local newspaper. (2) I have many qualities that would benefit our school newspaper. (3) I hope you will consider me for the position.

(4) First of all, I contribute to school newspapers since I was in third grade. (5) While at Oak Street Elementary School, I wrote a lot of articles for our newsletter, including one on the school history fair and another on Mrs. James afterschool homework program. (6) Mr. Perez the newspaper advisor really liked a piece "I wrote titled Looking Out for Younger Students." (7) As you know, the Clarendon Courier has printed many of my other articles as well. (8) In fact, you complimented me last year on my article called "Arbor Day: Don't Get Leafed Out!"

(9) I am a good student and take my studies very serious. (10) I turn in my homework assignments and am prepared on time for all class projects. (11) Therefore, I can easily meet the deadlines for the newspaper. (12) In seventh grade, I was voted president of the Quill Pens (the middle school creative writing club) and encouraged many students to join. (13) These accomplishments prove that I am very committed to everything I do.

(14) In addition, I have some ideas that could improve our newspaper. (15) Many students attend activities taking place in our town for example Clarendon Cleanup Day, the annual book sale at Kensington Memorial Library, and the Tri-County Fair are all interesting. (16) It would be a great idea to have a section called "Community Corner," which could include upcoming town events that kids would enjoy. (17) Clarendon students appreciate it. (18) It might increase participation in town activities.

(19) Thank you for considering me for the job of eighth grade editor. (20) If you choose me, I promise that I will help produce the best newspaper possible.

Respectfully,

Patrick King

20 **Read Sentence 4.**

First of all, I contribute to school newspapers since I was in third grade.

Choose the best way to revise the underlined word.

F will contribute

G have been contributing

H had contributed

J will be contributing

21 **Read Sentence 5.**

While at Oak Street Elementary School, I wrote a lot of articles for our newsletter, including one on the school history fair and another on Mrs. James afterschool homework program.

Choose the best way to revise the underlined words.

A articles' . . . Mrs. James's

B articles . . . Mrs. James's

C articles's . . . Mrs. James'

D articles' . . . Mrs. James'

Go On ▶

22 **Read Sentence 6.**

> *Mr. Perez the newspaper advisor really liked a piece "I wrote titled Looking Out for Younger Students."*

Choose the sentence that shows correct comma usage.

F Mr. Perez the newspaper advisor really liked a piece I wrote titled, "Looking Out for Younger Students."

G Mr. Perez, the newspaper advisor really liked a piece I wrote titled "Looking Out for Younger Students."

H Mr. Perez, the newspaper advisor, really liked a piece I wrote titled "Looking Out for Younger Students."

J Mr. Perez the newspaper advisor, really liked a piece I wrote titled, "Looking Out for Younger Students."

23 **Choose the correct way to write <u>Clarendon Courier</u>.**

A "Clarendon Courier"

B *Clarendon Courier*

C Clarendon Courier

D "*Clarendon Courier*"

24 **Read Sentence 9.**

I am a good student and take my studies very serious.

Choose the best way to revise the underlined words.

F very seriously

G seriouser

H more serious

J more seriously

25 **Read Sentence 10.**

I turn in my homework assignments and am prepared on time for all class projects.

Choose the best revision of this sentence.

A I turn in my homework assignments on time and am prepared for all class projects.

B I turn in on time my homework assignments and am prepared for all class projects.

C I turn in my homework on time assignments and am prepared for all class projects.

D I turn in on time and am prepared for homework assignments and all class projects.

Go On ▶

26 **Read Sentence 15.**

Many students attend activities taking place in our town for example Clarendon Cleanup Day, the annual book sale at Kensington Memorial Library, and the Tri-County Fair are all interesting.

Choose the best revision for this sentence.

F Many students attend activities taking place in our town; for example: Clarendon Cleanup Day, the annual book sale at Kensington Memorial Library, and the Tri-County Fair are all interesting.

G Many students attend activities taking place in our town for example Clarendon Cleanup Day. The annual book sale at Kensington Memorial Library, and the Tri-County Fair are all interesting.

H Many students attend activities taking place in our town, for example Clarendon Cleanup Day, the annual book sale at Kensington Memorial Library and the Tri-County Fair, are all interesting

J Many students attend activities taking place in our town. For example, Clarendon Cleanup Day, the annual book sale at Kensington Memorial Library, and the Tri-County Fair are all interesting.

27 **Read Sentences 17 and 18.**

Clarendon students appreciate it. It might increase participation in town activities.

What is the best way to combine these sentences?

A Neither would Clarendon students appreciate it, nor would it increase participation in town activities.

B Clarendon students appreciate it, but it might increase participation in town activities.

C Either Clarendon students appreciate it, or it might increase participation in town activities.

D Not only would Clarendon students appreciate it, but it might also increase participation in town activities.

Directions **A student wrote this passage for a class assignment. It contains mistakes. Read the passage. Then answer Numbers 28 through 36.**

Virginia Apgar: Healthy Babies

1 Until 1952, all care after a baby's birth was focused on the mother. Consequently, many babies suffered from medical problems because all the attention was on the mother's condition. Dr. Virginia Apgar was instrumental in changing the medical care babies receive.

2 Apgar chose to become a doctor and entered medical school in 1929. She was one of just a handful of female medical students. Apgar chose to specialize in surgery when she graduated.

3 Anesthesiologists give patients medicines to block pain. Some even put patients to sleep during surgery. Apgar entered the field at a time when potent medicines were being introduced. Thus, doctors, instead of nurses, needed to administer these medicines to patients.

4 There were almost no female surgeons at the time. Apgar was an excellent student, but the chairman of the department worried that few patients would agree to be operated on by a woman. Apgar decided to follow the chairman's advice to switch to the new field of anesthesiology.

5 After 10 years, Apgar specialized in the field even further by working solely to help control the pain of expectant mothers during the delivery of their babies. Apgar observed how pain medicines affected both mothers and newborn babies. Apgar was present for enough deliveries to observe how little care newborn babies received following delivery. No one checked vital signs of a baby's health, _____ the strength of its heartbeats, reflexes, and skin color in the minutes after a baby's birth. Through careful study, Apgar developed a system to evaluate and measure newborn health.

6 Apgar was destined to become a leader. Being in a new field of medicine was difficult for anesthesiologists because they were often not seen as equal to other doctors. She was only the second woman accepted as an anesthesiologist. Soon afterward, Apgar was asked to lead the Anesthesiology Department at Columbia Presbyterian Hospital. She became the first female department head at the hospital.

7 Apgar's system assigned zero to two points to five different areas: appearance, respiration, muscle tone, color, and reflexes. Babies testing at a two in each area were in good health. Those receiving a one in some areas warranted extra care.

8 Apgar's system was highly successful, and soon hospitals worldwide were using it. To honor Apgar, her name was made an acronym for the test. A for appearance, P for pulse, G for grimace (or reflex irritability), A for activity (or muscle tone), and R for respiration. Thanks to Dr. Apgar, babies' medical care was made forever better.

Go On ▶

28 **Which sentence is the best thesis statement for the passage?**

F After Dr. Virginia Apgar became an anesthesiologist, she assigned numbers to determine what care a newborn baby needed.

G Because Dr. Virginia Apgar was a pioneer in the new field of anesthesiology, she was honored by having the Apgar test named after her.

H Dr. Virginia Apgar, an excellent medical student and one of the first doctors to specialize in anesthesiology, observed and cared for mothers and babies during childbirth.

J Dr. Virginia Apgar, one of the first female anesthesiologists, was instrumental in improving the quality of care for newborn babies.

29 **Choose the most logical order for Paragraphs 3, 4, 5, and 6.**

A 5, 4, 3, 6

B 4, 3, 6, 5

C 6, 3, 4, 5

D 3, 5, 6, 4

30 **Read the following sentence from Paragraph 5.**

No one checked vital signs of a baby's health, _____ the strength of its heartbeats, reflexes, and skin color in the minutes after a baby's birth.

Choose the best transitional phrase to fill in the blank.

F in brief

G such as

H as usual

J in contrast

31 **Read Paragraph 6.**

> *Apgar was destined to become a leader. Being in a new field of medicine was difficult for anesthesiologists because they were often not seen as equal to other doctors. She was only the second woman accepted as an anesthesiologist. Soon afterward, Apgar was asked to lead the Anesthesiology Department at Columbia Presbyterian Hospital. She became the first female department head at the hospital.*

Choose the sentence that should be deleted from Paragraph 6.

A Apgar was destined to become a leader.

B Being in a new field of medicine was difficult for anesthesiologists because they were often not seen as equal to other doctors.

C She was only the second woman accepted as an anesthesiologist.

D Soon afterward, Apgar was asked to lead the Anesthesiology Department at Columbia Presbyterian Hospital.

32 **Read Paragraph 7.**

> *Apgar's system assigned zero to two points to five different areas: appearance, respiration, muscle tone, color, and reflexes. Babies testing at a two in each area were in good health. Those receiving a one in some areas warranted extra care.*

Choose the additional sentence that would best support the context and flow of ideas in this paragraph.

F Babies born prematurely usually have lower Apgar test scores.

G Lower scores are not a prediction for the baby's long-term health.

H Babies scoring zeros were considered high risk and received intensive care.

J The Apgar test is generally given twice, but if scores are low, it may be given again.

Go On ▶

33 **The purpose for writing this passage is to**

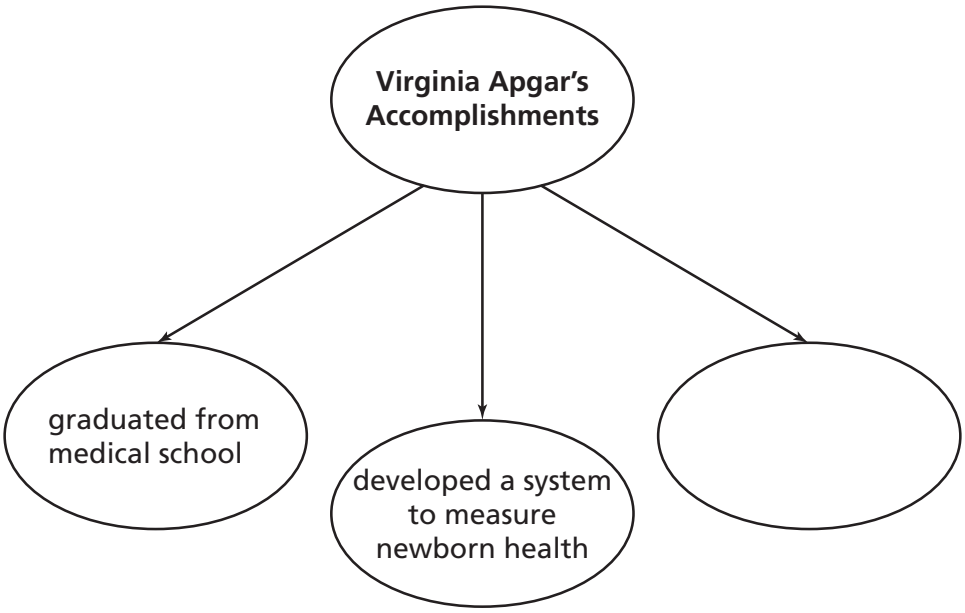
A inform readers about a person whose contribution permanently changed patient care.

B describe to the medical community the early practices of pain management.

C persuade doctors to care for patients in a new and specialized manner.

D entertain readers with a narrative about the first female anesthesiologist.

34 **Look at the web.**



Choose the best idea to fill in the blank.

F chose to specialize in surgery after graduating

G advised to enter the new field of anesthesiology

H became the first female department head at a major hospital

J observed the care newborn babies and their mothers received

35 **The key ideas in this passage would best be supported by**

A facts about Virginia Apgar's childhood and family.

B anecdotes of Virginia Apgar's experiences as a medical student.

C a detailed explanation of how Apgar administered medicine to block pain.

D an illustrated diagram of the Apgar test given by a doctor at birth.

36 **What source would be the most reliable to help determine the health of an infant?**

F a doctor's eyewitness account after examining the infant

G a baby's birth announcement printed in the local newspaper

H a hospital's Web page about the care offered to mothers and their babies

J a magazine article about infant care in different cultures

Go On ▶

Directions **Read and answer Numbers 37 through 42.**

37 **Joaquin is giving a presentation to his science class about grasshoppers. Which is an effective method for keeping the audience's attention during his presentation?**

A speak clearly

B face the teacher

C stop to answer questions

D read directly from notes

38 **Penny is organizing a presentation about her favorite meal, the history behind it, and how to prepare it. What is the best way to organize the note cards for her speech?**

F name of the dish, history of the dish, why she likes it, how to prepare it

G history of the dish, how to prepare it, name of the dish, why she likes it

H why she likes it, name of the dish, how to prepare it, history of the dish

J how to prepare it, why she likes it, history of the dish, name of the dish

39 **Read the sentence.**

The cedar fence post had grayed with age, but when Sean began sawing, he was surprised to find that the interior of the wood smelled as strong as if it had been cut the day before.

Choose a replacement for the underlined word that makes the description more vivid.

A interested

B shocked

C concerned

D troubled

40 **Meilin is writing her boss to request a two-day vacation. Which sentence best conveys her request?**

F I am too tired to work anymore this week and do not want to work Thursday and Friday.

G With your approval, I plan to take Thursday and Friday off to attend a family event.

H Because I worked so much overtime the last couple weeks, I think I deserve Thursday and Friday to myself.

J With your approval, I would like to take off work Thursday and Friday to go camping and hiking with my family and some neighbors out by Fisher's Lake.

41 **Which premise is true?**

A If the school is closed, it is a weekend.

B If you own a dog, you do not own a bird.

C If there are clouds in the sky, it will rain.

D If you hit a homerun, your team will score a point.

Go On ▶

42 **Look at this picture.**



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The items in this picture support the idea of

F good nutrition.

G saving money.

H outdoor activities.

J promoting recycling.

STOP

DO NOT

MARK

ON THIS

PAGE

Part 2

Directions **Read the drama. Then answer Numbers 43 through 49.**

The Lunchroom Incident

CHARACTERS:
JESSE and MARIO, each 14 years old
CHRIS, a classmate

(***Setting: The lunchroom of a middle school.***)

(*JESSE and MARIO walk into a crowded lunchroom. JESSE wears a book bag on his shoulder.*)

JESSE: Lunchtime! Finally! I'm starving!

MARIO: Me too. By the time 12:30 comes along, all I can think of is food.

JESSE: Tell me about it! For the last half hour I've been dreaming of nothing but chicken nuggets.

MARIO: Chicken nuggets? Is that on today's menu?

JESSE: I don't know. We'll see when we get closer to the front.

(*JESSE and MARIO join a long lunch line. They continue talking as they stand one behind the other. The line inches forward as the boys continue to talk.*)

MARIO: Look! Burgers! They sure are tasty.

JESSE: And macaroni and cheese! My favorite.

MARIO: I see kids eating chocolate cake. That must be one of the choices for dessert. I love that!

JESSE: Same here.

MARIO: My mouth is watering just thinking about it.

(*CHRIS walks up and stands behind JESSE in the lunch line.*)

JESSE: (*JESSE digs furiously through his book bag.*) Oh, no. I just remembered. I left my baseball cap outside of my locker. Can you hold my place for a minute? I'll be right back.

MARIO: Well, I . . .

JESSE: Just for a minute. It's my lucky cap. I'm hungry, but I've got to get that cap. I'll be back in a flash.

MARIO: Um, the other kids don't really like that so much.

JESSE: (*JESSE puts his book bag on the floor in his place.*) Here, I'll leave this. When the line moves up, just push it forward, as if it's me.

MARIO: I don't know about this.

JESSE: Thanks. This won't take long. (*JESSE turns and races offstage.*)

CHRIS: (*CHRIS taps MARIO on the shoulder.*) Mario, aren't you going to move ahead?

MARIO: What? Oh, yes.

(*MARIO takes a step forward in line. He pushes JESSE's book bag forward with his foot.*)

CHRIS: (*To MARIO.*) I'm so hungry. I have my eye on those burgers. (*JESSE returns. JESSE picks up his book bag.*) What's going on?

JESSE: Nothing.

CHRIS: Nothing? I think it's something.

JESSE: What's something?

CHRIS: You're breaking into the line.

JESSE: I didn't break into the line. I was in line all along. I just stepped away for a minute.

CHRIS: That's impossible. I was talking to Mario, and you weren't here. If you had been, I would have seen you.

JESSE: *I* may not have been here, but my book bag was in my place. Didn't you see my book bag?

CHRIS: Sure, I saw a book bag on the floor. But a book bag doesn't eat lunch. All I know is I was standing in line, waiting my turn like everyone else. You just barged into line ahead of Mario.

MARIO: Actually, no. He didn't barge in. He was here before. He had to get his cap.

JESSE: Yes, my cap. See? (*JESSE holds up the cap in his hand.*) I left my book bag in my place for just a minute.

CHRIS: You can't leave a book bag to hold a place. You need a person.

MARIO: *I'm* the person holding his place. I was holding his place and moving the book bag forward as if Jesse were still here.

Go On ▶

CHRIS: But you're not Jesse. Looks to me as if Jesse is breaking into the line. So, Jesse, take your book bag and go to the *end* of the line.

JESSE: That's not going to happen.

CHRIS: Oh, yes it will.

MARIO: Guys, guys. We've always gotten along so well. We don't need any problems. I have an idea. Remember what we learned about compromising?

(*CHRIS and JESSE nod.*)

MARIO: Chris, what's your favorite dessert?

CHRIS: Um, well, I have a few favorite desserts.

MARIO: Okay, good. What's one of your favorite desserts?

CHRIS: Chocolate cake.

MARIO: Chocolate cake . . . real tasty. If that's what's on the menu, is that what you're going to order?

CHRIS: Probably. Or maybe I'll have some chocolate pudding. I like that too.

MARIO: Chocolate cake and chocolate pudding. Both delicious. I bet you wish you could have them both, don't you?

CHRIS: Yes, sometimes.

MARIO: But you can only order one. Now, here's what I suggest. I'll bet that if you order chocolate cake, Jesse will order chocolate pudding and split it with you. *Right, Jesse?* So you'll have half cake and half pudding. And so will Jesse. If you let Jesse back in line where he actually belongs, he'll share his dessert with you. And you'll share yours with him. Fair enough?

CHRIS: Okay. I think that's fair.

MARIO: And that means we'll all sit at the same table and have fun like always, right? After all, if you are sharing dessert, it helps to sit at the same table, right?

CHRIS: True. Okay, Jesse, you can get back in line.

(*JESSE picks up his book bag and gets in line.*)

MARIO: Everybody wins! Except me, of course. No one will be sharing dessert with *me*.

CURTAIN

43 **Read the lines from the drama.**

> ***MARIO:*** *Guys, guys. We've always gotten along so well. We don't need any problems. I have an idea. Remember what we learned about compromising?*

Choose the meaning of the underlined word.

A debating an issue

B refusing to participate in a group

C giving in to someone's demand

D reaching an agreement

44 **The last lines of the drama suggest that the boys will**

F enjoy eating together.

G lose their place in line.

H quarrel again another day.

J continue arguing over lunch.

Go On ▶

45 **Read the lines from the drama.**

CHRIS: *(*CHRIS taps MARIO on the shoulder.*) Mario, aren't you going to move ahead?*

MARIO: *What? Oh, yes.*

*(*MARIO takes a step forward in line. He pushes JESSE's book bag forward with his foot.*)*

CHRIS: *(*To MARIO.*) I'm so hungry. I have my eye on those burgers. (*JESSE returns. JESSE picks up his book bag.*) What's going on?*

Choose the plot element illustrated in these lines.

A climax

B exposition

C rising action

D denouement

46 **Choose the main conflict present in this drama.**

F person vs. self

G person vs. person

H person vs. technology

J person vs. environment

47 **Read the lines from the drama.**

> ***JESSE:*** *(*JESSE digs furiously through his book bag.*) Oh, no. I just remembered. I left my baseball cap outside of my locker. Can you hold my place for a minute? I'll be right back.*
>
> ***MARIO:*** *Well, I . . .*
>
> ***JESSE:*** *Just for a minute. It's my lucky cap. I'm hungry, but I've got to get that cap. I'll be back in a flash.*

Based on these lines, choose the best description of Jesse's personality.

A critical

B forceful

C respectful

D thoughtful

48 **Read the line from the drama.**

> *CHRIS: . . . But a book bag doesn't eat lunch.*

Choose the best explanation of this line.

F Chris uses a simile to attack Mario's plan.

G Chris uses a pun to make a joke about Jesse.

H Chris uses hyperbole to suggest that Mario is correct.

J Chris uses personification to question Jesse's argument.

49 **This passage is considered a drama mostly because**

A it has dialogue and a plot.

B the characters resolve their conflict.

C a conflict exists between the characters.

D instructions are given for a stage production.

Go On ▶

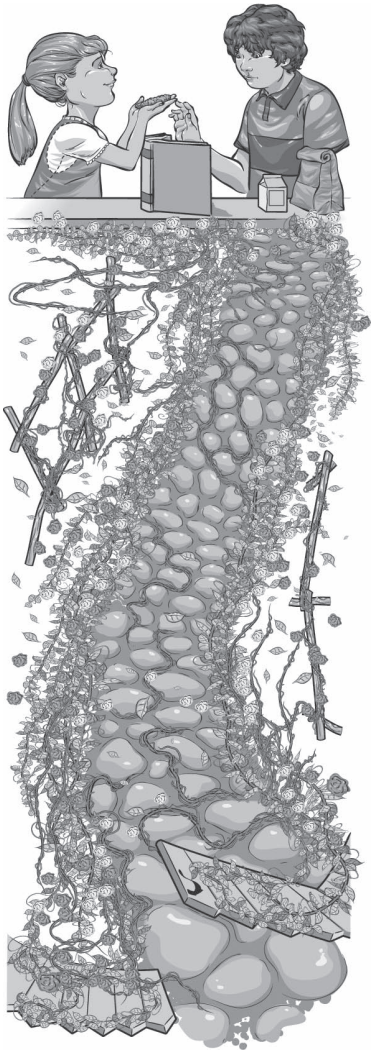
Directions **Read the poem. Then answer Numbers 50 through 54.**

Overgrown Garden

The overgrown garden
At the empty,
Old house, shivers
In the wild autumn wind
As I pass. Today
I will try to find
My way inside
Through the locked
Gate.

The garden
Is like a boy I know,
Untamed, with hair a mussy mess.
His eyes sometimes
Empty and dark,
Locking out those
Who want to know him.

Through the gate,
The garden looks
Anything but inviting.
Inside, tall, tangled weeds
Grab and snag at my ankles,
Like tiny octopus tentacles.
Tree branches block
The walkway.



Even flowers,
Brown and crisp as toast,
Turn their faces away,
As if trained not to care.

The boy shrugs his shoulders
When I ask if I can eat
At his table. He clutches
His lunch,
Props a book,
Like a fence, in front
Of his face, as if
He's trained himself
Not to care.

But I do.
In the garden, I bring out
My clippers, snipping away
At dry branches, snarled
Weeds, trimming tiny
Stems of flowers
To invite the rays of sunlight.

At lunch,
I offer the boy a coconut
Macaroon cookie.
"My favorite!"
He exclaims, and I watch
As his wild eyes
Find my face
And smile.

Go On ▶

50 **Which point of view is used in the poem?**

F first person

G third-person objective

H third-person limited

J third-person omniscient

51 **What does the speaker do that causes the boy to respond?**

A smiles at him

B trims the garden

C asks to eat at his table

D offers him a cookie

52 **What does the locked garden gate symbolize?**

F how hard it is to find the garden

G how difficult it is to know the boy

H how the garden is a dangerous place

J how the speaker likes to hide things

53 **The poet most likely repeats the phrase "trained . . . not to care" to**

A hide the boy's true feelings.

B connect the boy to the garden.

C suggest that the garden needs attention.

D prove that the boy's life is complicated.

54 **Read Lines 10 through 12.**

The garden
Is like a boy I know,
Untamed, with hair a mussy mess.

The poet uses a simile in these lines to

F show a contrast in themes.

G describe the setting.

H introduce a new character.

J build upon one kind of imagery.

Go On ▶

Directions **Read the speech. Then answer Numbers 55 through 63.**

Speech for the Defense

Before 1920, American women were not allowed to vote in elections. Susan B. Anthony was one of the people who worked tirelessly to gain this important right. In 1872, Anthony was arrested and put on trial for voting.

1 Gentlemen of the jury, I ask you to look at the defendant, Miss Susan Brownell Anthony. You will see a respected person of outstanding character, a person who cares deeply for law and order. This woman has committed no crime. She has broken no law. She does not deserve to be put on trial! All she did was exercise her right as a United States citizen. Isn't it a citizen's duty to vote? Should Miss Anthony be arrested and put on trial for performing her civic duty?



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Susan B. Anthony
1820 – 1906

2 Allow me, Miss Anthony's lawyer, to read the charge against my client; Miss Anthony is accused of "knowingly, wrongfully, and unlawfully" voting for a member of Congress "without having a lawful right to vote . . . being then and there a person of the female sex." My argument will show that this charge is ridiculous.

3 The prosecution says that Miss Anthony broke the law because it is illegal for a woman to vote. But that is simply not true. Miss Anthony's vote was legal, and I will tell you why. Four years ago, in 1868, Congress ratified the Fourteenth Amendment to the United States Constitution. This amendment states that "all persons born and naturalized in the United States . . . are citizens of the United States," and all citizens are entitled to the same privileges. States must provide "equal protection and due process of the laws" to every American citizen. Miss Anthony was born in Massachusetts. By birthright, she is an American citizen; no one can deny this truth. Therefore, the state of New York, where she now lives, must grant her the same rights as they do all other American citizens, including the right to vote.

4 Furthermore, the prosecution has argued that Miss Anthony knowingly and willfully broke the law in order to draw attention to her own views about women's rights. This is also untrue. Prior to casting her ballot, Miss Anthony consulted Judge Henry Selden, whom you will hear from today. Judge Selden will tell you that he carefully considered the law. He concluded that Miss Anthony was, beyond a doubt, as authorized as any man to vote in the election. He told this to Miss Anthony. When she cast her vote, she did so in good faith. She certainly did not think she was breaking the law and was completely shocked to be arrested and tried in this fashion.

5 The sad truth is Miss Anthony is being prosecuted because she is female. If she were a man, we would not be here today, would we? We would praise her for doing her part to preserve democracy in this great country of ours. Her action would be not only innocent but honorable. Does this action become dishonorable merely because it was carried out by a woman? Of course not!

6 It is wrong to prosecute a citizen of the United States who was merely trying to do her duty. It is wrong to put Miss Anthony on trial simply because she is female. Women make up half of the population of this country. They work as hard as their fathers, brothers, husbands, and sons. They deserve to have their voices heard, just as we men do. It is unfair to expect any citizen of a country to abide by laws which they had no say in making. Isn't that why the United States fought the Revolutionary War against England? We did not want to be treated like second-class citizens! Why should we expect women, who also sacrificed and contributed, to accept this kind of treatment?

7 Gentlemen of the jury, you have been given a rare opportunity to strike down injustice! Let me summarize the reasons why you must find Miss Anthony innocent of any wrongdoing. First of all, the Fourteenth Amendment guarantees the rights of all United States citizens, not just male citizens, and this clearly includes the right to vote. Secondly, even if you interpret the law differently, as the prosecution clearly does, Miss Anthony can only be innocent since she honestly believed she was exercising her rights, rather than willfully disregarding the law. Thirdly, please consider the absurdity of trying a person in a court of law for no better reason than that she happens to be female.

8 Miss Anthony harmed no one. She did not rob a bank. She *voted!* Let's end this farce and send a clear message that we will uphold the noble principles on which our nation was built. Exercise your civic duty and find Miss Anthony innocent.

Thank you.

Go On ▶

55 **To whom is this speech directed?**

A a group of lawyers

B the students in a history class

C the judge whom Susan B. Anthony consulted prior to voting

D the jury presiding over Susan B. Anthony's trial

56 **Choose the sentence that best expresses the main point of the speech.**

F Susan B. Anthony broke the law to bring attention to women's rights.

G The Fourteenth Amendment guarantees the rights of all United States citizens, including the right to vote.

H Citizens of the United States should not be expected to follow laws which they had no say in creating.

J Susan B. Anthony was within her rights as a woman when she voted.

57 **This speech is organized by**

A telling the cause and effects of Miss Anthony's actions.

B stating Miss Anthony's problem and offering a solution.

C listing topics of discussion about Miss Anthony in sequential order.

D presenting arguments for and against Miss Anthony.

58 **The purpose of this speech is mainly to**

F provide information about a historic event.

G describe the actions of a noteworthy person.

H persuade a group to make a decision.

J entertain students with a humorous performance.

59 **Read this excerpt from Paragraph 2.**

> *. . . Miss Anthony is accused of "knowingly, wrongfully, and unlawfully" voting for a member of Congress "without having a lawful right to vote . . . being then and there a person of the female sex." My argument will show that this charge is ridiculous.*

Which persuasive technique is the speaker using?

A testimonial

B bandwagon

C name-calling

D loaded words

60 **Which source about Susan Anthony is a primary source?**

F a diary written by her

G a biography about her

H an encyclopedia article about her

J an interview with someone who knew her

Go On ▶

61 **To keep his audience engaged, the speaker should**

A shout in a loud voice.

B make eye contact.

C use exaggerated arm gestures.

D read directly from note cards.

62 **Jerome wants to learn more about Susan B. Anthony. The best source of information about her would be from a**

F Web site called Famous Americans.

G history book about the rights of women.

H newsletter from an organization for women.

J TV show titled *Great Americans*.

63 **A class decides to do a mock trial about Susan B. Anthony's case. Groups were assigned to research and prepare information that would be presented during the trial. Which strategy is not appropriate for working together in a group?**

A taking turns listening and speaking with each other

B writing down ideas that are personally appealing

C asking relevant questions that move the group toward its goal

D summarizing information so group members are aware of project developments

Directions **The following directions contain mistakes. Read the directions and answer Numbers 64 through 66.**

(1) By using just 1 quart of milk and a little plain unflavored, unsweetened yogurt that contains live bacteria, you can make your own yogurt at home. (2) Pour the milk into a pan with a thick bottom and heat it over a low burner, stirring constantly to prevent scorching. (3) Use a candy thermometer to watch the temperature rise. (4) This kind of thermometer is also useful for making candy. (5) Watch for the temperature to reach 170–195°F. (6) Then remove the pan from the heat. (7) Let the milk cool to 105–120°F, then stir in 4 tablespoons of the starter yogurt until it is thoroughly mixed. (8) Pour the mixture into clean containers, cover them with lids, and set them in an ice chest. (9) Place pitchers of hot water in the ice chest to help maintain the heat inside. (10) Close the ice chest and avoid disturbing it for 6–8 hours, keeping the lid closed as much as possible to keep heat from escaping. (11) After 6 hours, check to see if the yogurt has turned partly solid. (12) If so, it is ready to refrigerate. (13) Place the containers in the refrigerator. (14) After the yogurt has gelled a little more, you have a chance to be creative with your own flavors. (15) Mix in berries or other fruit, granola or other crunchy cereal, nuts, coconut—use your imagination!

64 **Which sentence is irrelevant to the paragraph and should be removed?**

F This kind of thermometer is also useful for making candy.

G Place pitchers of hot water in the ice chest to help maintain the heat inside.

H After 6 hours, check to see if the yogurt has turned partly solid.

J Place the containers in the refrigerator.

Go On ▶

65 **Read Sentences 5 and 6.**

Watch for the temperature to reach 170–195°F. Then remove the pan from the heat.

Choose the best way to combine these sentences without changing the meaning.

A Watch for the temperature to reach 170–195°F, yet remove the pan from the heat.

B When the temperature reaches 170–195°F, remove the pan from the heat.

C While watching the temperature reach 170–195°F, so remove the pan from the heat.

D Watch for the temperature to reach 170–195°F, but remove the pan from the heat.

66 **Which sentence provides the best conclusion for this paragraph?**

F Making your own yogurt is a fun way to save money and have a good supply of healthful snacks.

G With a very few simple ingredients, it's not hard to make your own yogurt—but it does take a little time.

H The growth of the live bacteria is what makes the yogurt turn liquid milk into a semisolid.

J The bacteria in the starter yogurt would be killed if they were added while the milk was still too hot.

Directions **Read the passage. Then answer Numbers 67 through 74.**

Washed Away

1 Imagine spending hours, even days, creating a work of art, only to let the rain wash away all traces of it. A rare kind of artist will do exactly that, especially if he or she works in a medium as impermanent as chalk.

2 Julian Beever is this kind of artist. Born in England, Beever started making chalk drawings after he graduated from art school. His first attempts were two-dimensional, and he drew them on public pavement, receiving pennies from passing admirers. Then one day, Beever was working in Brussels and saw some street tiles being removed. He liked the idea of trying to re-create the depth of tiles and space in his chalk drawings, so he tried drawing a woman in a tile-lined swimming pool. Creating the illusion of depth in the picture was a real challenge—until Beever discovered a secret.

3 Looking through a wide-angle camera lens allowed Beever to gain a greater perspective. It has to do with how the brain judges distance when only looking through one eye, as when looking through the viewfinder of a camera. Or, as Beever says, "It makes the brain believe stuff that it otherwise wouldn't believe." Beever soon realized that by keeping a camera on a tripod in one spot and by checking every chalk mark he made, he could create images that appeared to have height, width, and depth.

4 Beever usually begins by drawing his intended design in miniature. Then he outlines a scribble on the pavement where he is drawing by using a rope to help create the lines. Once the lines are created, Beever constantly walks back and forth to the camera between sketching, which makes his work physically tiring. It is not uncommon for one of Beever's drawings to take three or more days to complete.

5 Aside from the challenges of actually making his chalk drawings, Beever's work conditions depend on the weather. If he is working on a drawing in winter, he has fewer daylight hours in which to work. If it is cold, windy, scorching, or humid, Beever simply has to struggle through whatever nature offers.

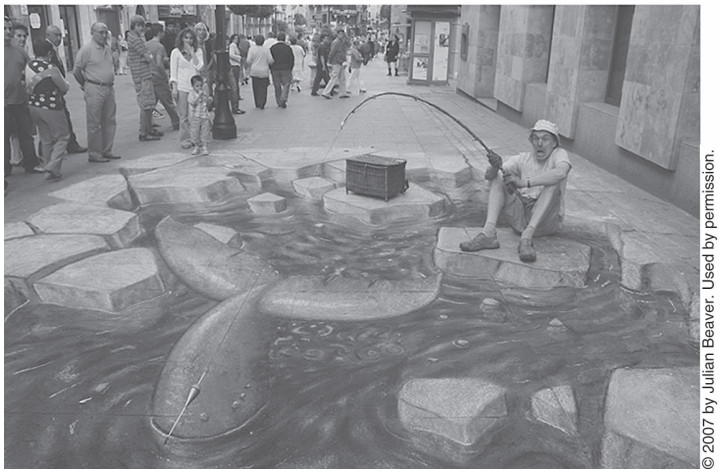
6 Then there are the difficulties posed by working in public places. Most artists work privately, but because of the locations Beever chooses, he is watched and questioned by bystanders. Some people even try to strike up conversations about current events or life in general. Through any distraction, Beever remains focused and involved in his artistic process.

7 The uniqueness and temporary quality of Beever's work make observers feel honored to witness his process or see the final result. However, some people do not like the fact that Beever's work is drawn in public places. A few have labeled it "graffiti." Beever doesn't mind, though. He believes that art is for the people, saying, "Art shouldn't be locked away in galleries and libraries and books." Moreover, people are excited to watch or wait for the final product.

8 Beever's three-dimensional chalk images often amaze people. Once Beever drew potholes on the pavement that looked so real drivers swerved to avoid them!

Go On ▶

9 Since his art is often washed or worn away over time, Beever has found a solution for creating something more lasting—a camera. The photographs Beever takes of his street art are permanent records of his creations. The photographs allow a whole new audience to experience his art, thanks to the far-reaching vehicle of the Internet. The Internet acts as a kind of virtual art gallery, or museum, where countless numbers of people can marvel at Beever's work anytime, from anywhere in the world. For an artist who believes art should be available to everyone, Julian Beever has found a wonderful way to achieve his goal of reaching many people with his chalk creations.



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67 **Which words in the passage help the reader know what medium means in Paragraph 1?**

A chalk, drawing, product, photographs

B perspective, brain, lens, depth

C weather, winter, cold, windy, nature

D gallery, museum, marvel, reaching

68 **Choose the question that is answered in the passage.**

F How many chalk drawings has Julian Beever created?

G Where did Julian Beever attend art school?

H What process does Julian Beever use to create his chalk art?

J At what age did Julian Beever know he was going to pursue a career in art?

69 **By looking at the photograph of Julian Beever's work, the reader can infer that the artist is**

A reserved and reluctant to communicate with the public.

B playful and wants to engage an audience.

C focused and anxious to start a new project.

D daring and likes to be perceived as rebellious.

70 **What is the main idea of Paragraph 9?**

F Julian Beever interacts with the public as part of his art.

G Julian Beever uses the Internet to showcase his art.

H Julian Beever believes that people should help him with his art.

J Julian Beever knows how to keep his artwork from being ruined by the weather.

71 **Read the instructions.**

Steps Julian Beever Uses to Create Chalk Drawings

Step 1 *make outline of sketch on pavement*
Step 2 *draw a sketch of idea on paper*
Step 3 *make adjustments to sketch for depth until complete*
Step 4 *check sketch on pavement through camera lens*

In what order should these steps be completed?

A 1, 4, 3, 2

B 2, 1, 4, 3

C 4, 3, 1, 2

D 2, 3, 4, 1

Go On ▶

72 **Choose the statement from the passage that is an opinion.**

F Born in England, Beever started making chalk drawings after he graduated from art school.

G Then one day, Beever was working in Brussels and saw some street tiles being removed.

H Moreover, people are excited to watch or wait for the final product.

J The photographs allow a whole new audience to experience his art, thanks to the far-reaching vehicle of the Internet.

73 **Beever uses a wide-angle camera lens to**

A take pictures for his Web site.

B arrange large scenes for his artwork.

C create the illusion of height, width, and depth.

D capture an image regardless of the lighting.

74 **A student wants to learn more about optical illusions. Choose the book that would provide the best information.**

F Bloom, Harold J. *The First Eye Doctors*. London: Brit Press, 1962

G Andres, Carlos. *The Science of Tricking the Eye*. Philadelphia, PA: Newton Press, 2001

H Chang, Elliott. *A Guide to Better Vision*. Sydney, Australia: Down Under Publishing, 2006

J Sylvester, Arlyss. *Drawing with Color and Perspective*. San Francisco, CA: Eye See, Inc. 2007

Directions **Read and answer Numbers 75 through 83.**

75 **Which sentence is written correctly?**

A The English author William Shakespeare, is probably the world's most famous playwright.

B The English author William Shakespeare is, probably, the world's most famous playwright.

C The English, author William Shakespeare, is probably the world's most famous playwright.

D The English author William Shakespeare is probably the world's most famous playwright.

76 **In which sentence is the underlined word misspelled?**

F My favorite desert is peach pie with vanilla ice cream.

G My sister takes courses in English, history, and math.

H The principal of our middle school is going to retire next year.

J The soldier walked with his head up, shoulders back, and spine straight.

77 **Choose the sentence that is written correctly.**

A Ricardo's car is out of gas.

B Virginias' piggy bank is full of pennies.

C The little puppys' food dish is empty.

D The new childrens' book is easy to read.

Go On ▶

78 **Choose the sentence that uses stationary or stationery correctly.**

F The stationary was blue with yellow flowers printed around the border.

G The letter of recommendation must be written on official school stationary.

H The deer remained stationary as we approached from the edge of the meadow.

J The stationery weather provided perfect conditions for their flight over the island.

79 **Which sentence is written correctly?**

A *Romeo and Juliet for Kids* is a book by Lois Burdett, written to help children understand Shakespeare's play "Romeo and Juliet."

B "Romeo and Juliet for Kids" is a book by Lois Burdett, written to help children understand Shakespeare's play "Romeo and Juliet."

C "Romeo and Juliet for Kids" is a book by Lois Burdett, written to help children understand Shakespeare's play *Romeo and Juliet*.

D *Romeo and Juliet for Kids* is a book by Lois Burdett, written to help children understand Shakespeare's play *Romeo and Juliet*.

80 **Choose the phrase that means "enthusiasm toward a common cause."**

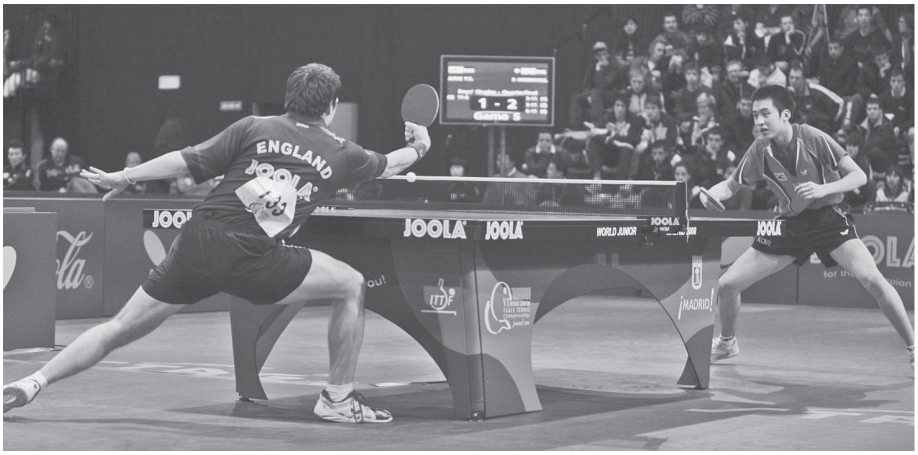
F *esprit de corps*

G *alma mater*

H *femme fatale*

J *faux pas*

81 **Look at this picture.**



© Grosremy/Dreamstime #7531520

Which kind of conflict is shown in the picture?

A person vs. self

B person vs. person

C person vs. technology

D person vs. environment

82 **Read the paragraph below.**

My friends are going to the beach this weekend. Everyone knows it is fun to be at the beach with your friends. They are going to swim in the ocean and play volleyball on the beach. On their way home, they are planning to stop for pizza. I will ask my parents if I can go with my friends.

Choose the sentence from the paragraph that contains bias.

F My friends are going to the beach this weekend.

G Everyone knows it is fun to be at the beach with your friends.

H They are going to swim in the ocean and play volleyball on the beach.

J On their way home, they are planning to stop for pizza.

Go On ▶

83 **Look at this picture.**



© tomas del amo/Alamy #AYF18A

Which line <u>best</u> communicates the message presented by the picture?

A It is important to wash your hands before touching food.

B Vegetables can add bright colors to a meal.

C Many people have fun cooking together.

D Cooking requires great concentration.

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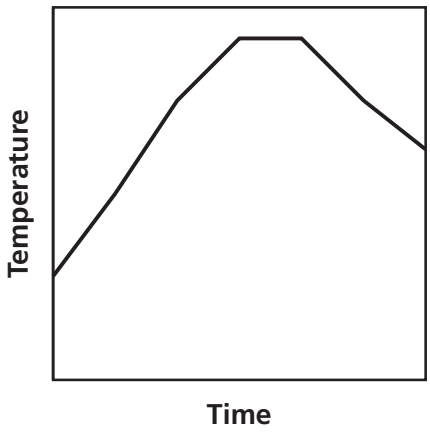
PAGE

Mathematics



Part 1

1 Ryuta's homework assignment was to measure the temperature in his backyard and then graph the results. The results are shown below.



Based on the graph, which statement best describes the change in temperature?

A The temperature decreased, then stayed constant, and then decreased again.

B The temperature decreased, then increased, and then stayed constant.

C The temperature increased, then stayed constant, and then decreased.

D The temperature increased, then decreased, and then increased again.

Go On ▶

2 Rennie rode her bicycle 2.2 miles up a hill in 0.2 hour. Then she rode back downhill on the same path in 0.12 hour.

$$\text{distance} = \text{rate} \times \text{time}$$

What is her average rate for the combined trip?

F 10.88 miles per hour

G 13.75 miles per hour

H 27.50 miles per hour

J 31.43 miles per hour

3 Which function is nonlinear?

A $f(x) = 5$

B $f(x) = 3x$

C $f(x) = 5x^2 - 2$

D $f(x) = -2x + 3$

4 What is the value of this expression?

$$\frac{(1.5 \times 10^{24})(6 \times 10^{-12})}{2 \times 10^{3}}$$

F 4.5×10^{4}

G 4.5×10^{9}

H 4.5×10^{12}

J 4.5×10^{15}

5 Which number is a rational number?

A 1

B π

C $\sqrt{6}$

D 0.832141141114 . . .

6 The table shows the coordinates of three points contained in the graph of a line.

x	*y*
–1	1
0	3
1	5

What is the slope of the line?

F -2

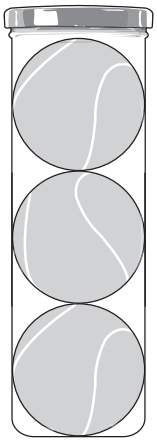
G $-\frac{1}{2}$

H $\frac{1}{2}$

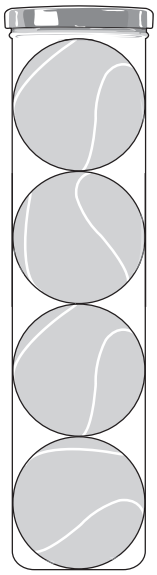
J 2

Go On ▶

7 Coach Smith went to a store to buy tennis balls. The following packages of tennis balls are available at this store.



3 tennis balls
$4.95



4 tennis balls
$6.00

Coach Smith needs to buy 24 tennis balls. How much money will she save by purchasing 24 tennis balls in packages with the lowest unit price compared to the highest unit price?

A $1.05

B $1.50

C $3.15

D $3.60

8 What is the solution for x in the equation $f(x) = g(x)$, where $f(x) = 30 - 0.5x$ and $g(x) = 2x - 15$?

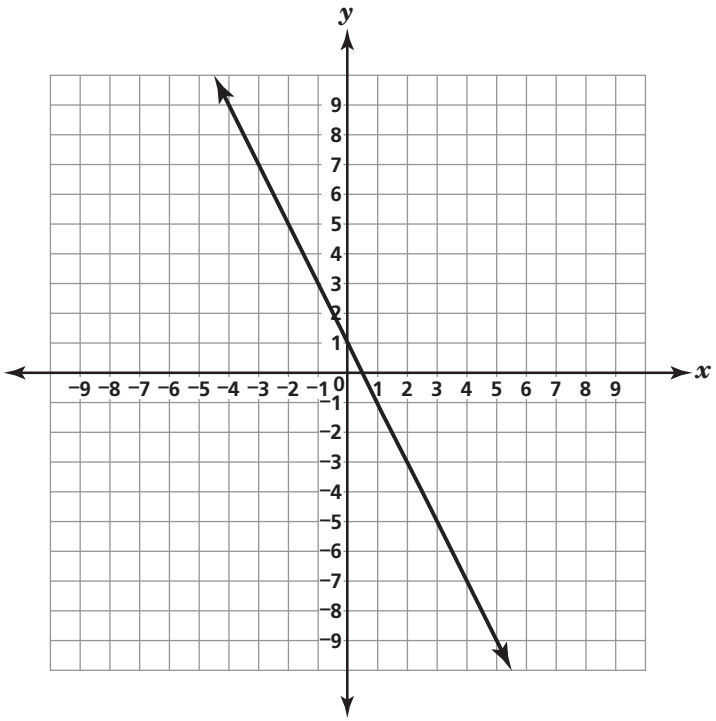
F $x = 6$

G $x = 10$

H $x = 18$

J $x = 30$

9 Which linear equation is best represented by this graph?



A $y = -2x + 1$

B $y = -x + 2$

C $y = 2x + 1$

D $y = x + 1$

Go On ▶

10 What is the value of y in the solution to this system of linear equations?

$$8x - 4y = 28$$
$$-3x + 6y = 12$$

F 2

G 3

H 5

J 6

11 Shelley received the four cards shown below.

$\sqrt{3}$	1.51	2	0.99
P	***R***	***S***	***T***

She was asked to put the cards in order from least to greatest value. Which list shows the correct order of the cards?

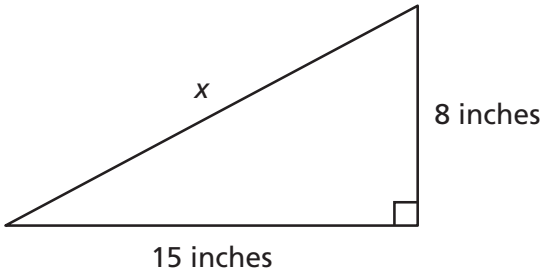
A *P, T, R, S*

B *S, P, T, R*

C *T, P, R, S*

D *T, R, P, S*

12 Brenna built a skateboard ramp with the measurements shown below.



$a^2 + b^2 = c^2$

What is *x*, the length of the ramp?

F 5 inches

G 14 inches

H 17 inches

J 23 inches

13 A brand new one-dollar bill is 4.3×10^{-3} inch thick. What would be the thickness of a stack of 200 brand new one-dollar bills?

A 0.63 inch

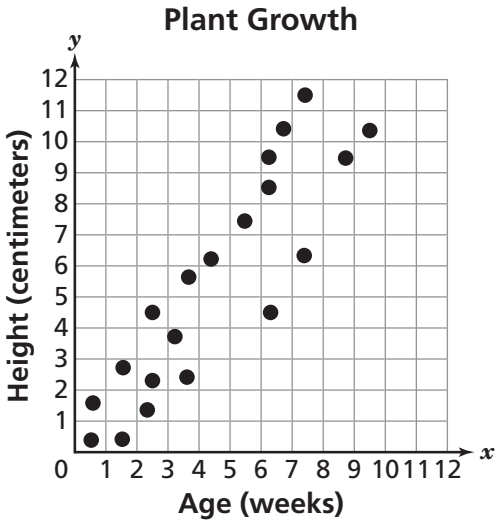
B 0.86 inch

C 6.3 inches

D 8.6 inches

Go On ▶

14 The ages and heights of a number of different plants of the same species are recorded on the scatterplot.



Which equation represents a line of best fit for this scatterplot?

F $y = \frac{5}{7}x$

G $y = \frac{5}{6}x$

H $y = \frac{6}{5}x$

J $y = \frac{9}{5}x$

15 Tamara read a newspaper article about the cost of attending a university in 2005.

- The average cost to attend a public university was about $12,000 per year.
- The average cost to attend a private university was about $30,000 per year.
- The author of the article stated that a person would save between $40,000 and $50,000 over 4 years by attending a public university.

Which statement best describes the author's statement?

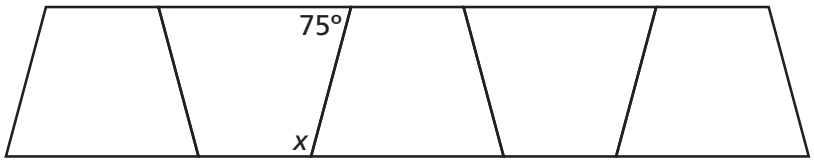
A It is valid because the total cost over 4 years of attending both types of universities is about $42,000.

B It is invalid because the total cost over 4 years of attending both types of universities is about $168,000.

C It is invalid because the difference in costs over 4 years of attending a private university to a public university is about $18,000.

D It is invalid because the difference in costs over 4 years of attending a private university to a public university is about $72,000.

16 Mrs. Myer put congruent trapezoid-shaped tiles in her kitchen, as shown below.



What is the measure of Angle *x*?

F 15°

G 75°

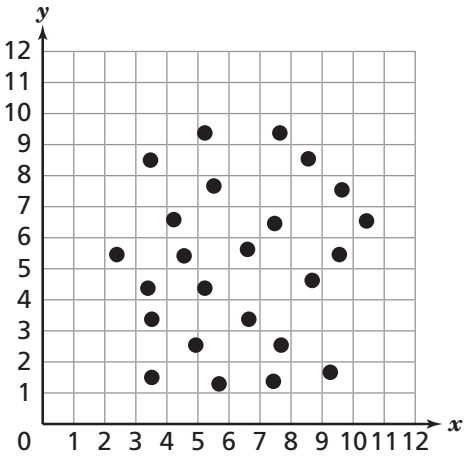
H 105°

J 285°

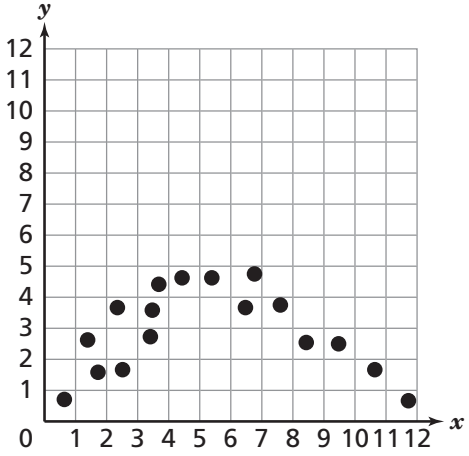
Go On ▶

17 Which scatterplot displays a negative relationship over the entire set of data?

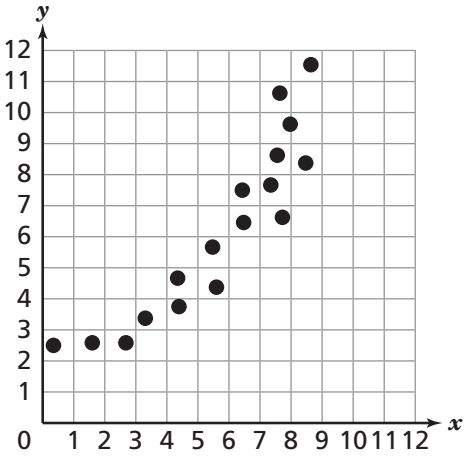
A



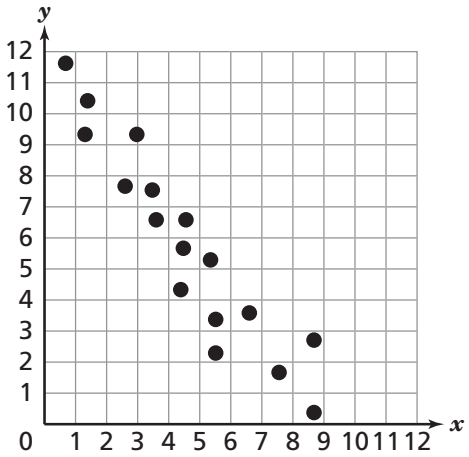
C



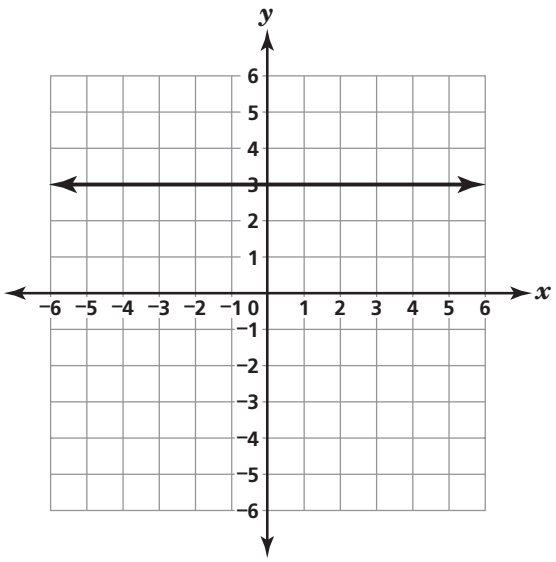
B



D



18 What appears to be the *y*-value of the *y*-intercept of this graphed linear function?



F 3

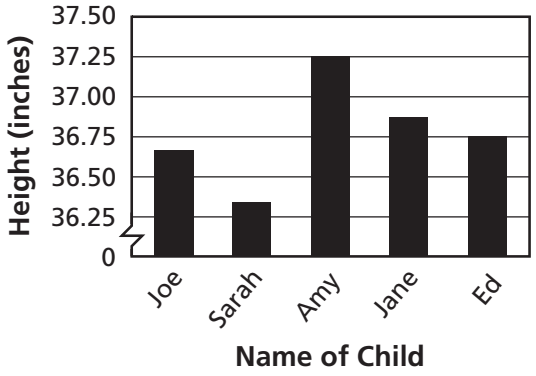
G 0

H $\frac{1}{3}$

J -3

Go On ▶

19 The heights of five 3-year-old children are shown in this graph.



A student claimed that Amy is much taller than the other four children. Which statement best explains why this claim is misleading?

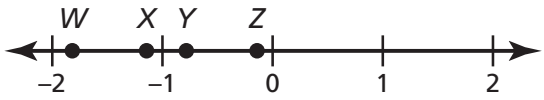
A There is no comparison to the children's heights the previous year.

B The heights are recorded in inches and not feet.

C The weights of the children are not given.

D The scale of the vertical axis is very small.

20 Which point on the number line is closest to the location of −1.2?



F *W*

G *X*

H *Y*

J *Z*

21 Alfonso compared the price of tiles at four different stores. Which store sells the tile at the lowest price per tile?

A Store W sells 100 tiles for $140.

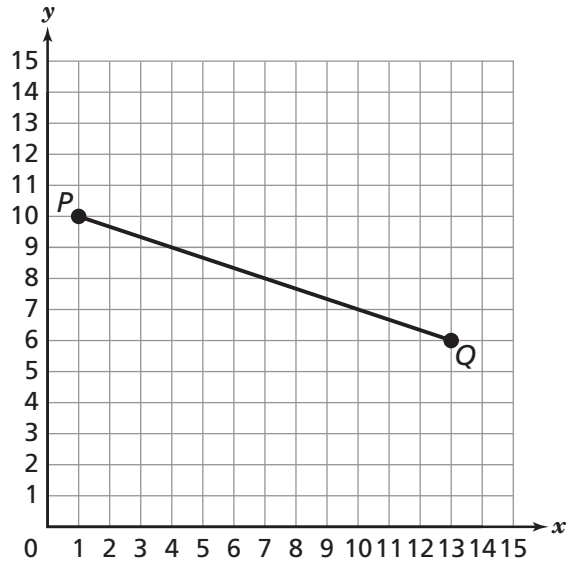
B Store X sells 130 tiles for $221.

C Store Y sells 170 tiles for $255.

D Store Z sells 180 tiles for $288.

Go On ▶

22 Which is closest to the straight-line distance between Points *P* and *Q* on the grid below?



$a^2 + b^2 = c^2$

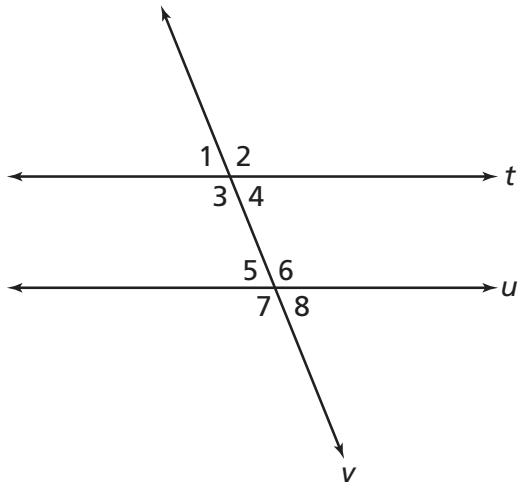
F 8 units

G 11 units

H 13 units

J 16 units

23 Parallel Lines *t* and *u* when cut by Transversal *v* form eight angles, as shown in the diagram below.



If the measure of Angle 2 is 112°, what is the measure of ∠5?

A 68°

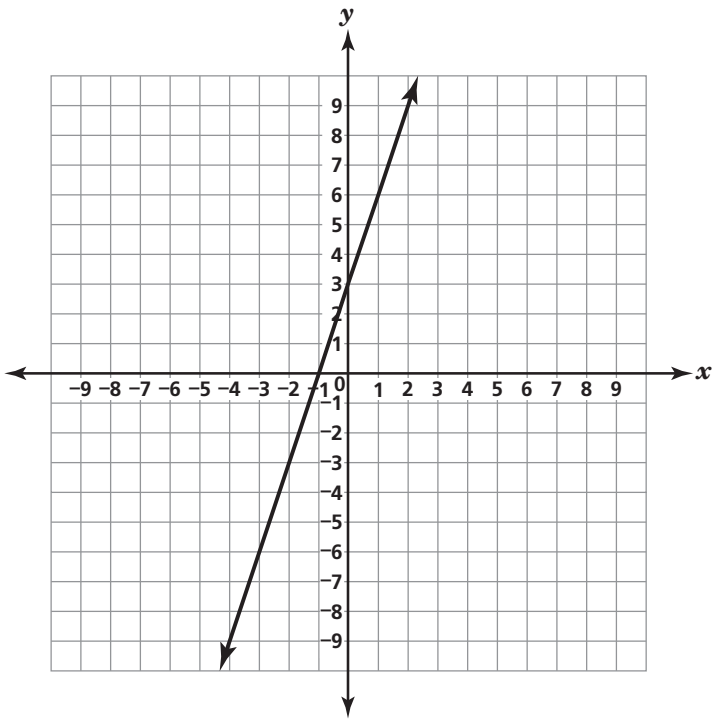
B 72°

C 112°

D 248°

Go On ▶

24 Which equation best represents the line graphed on the grid below?



F $y = 3x$

G $y = x - 3$

H $y = x + 3$

J $y = 3x + 3$

25 What is the value of $\frac{(8.4 \times 10^{36})}{3 \times 10^{9}}$?

A 2.8×10^{4}

B 5.4×10^{4}

C 2.8×10^{27}

D 5.4×10^{27}

26 What is the slope of the line that passes through the points $(6, 13)$ and $(10, 21)$?

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

F 2

G 4

H 6

J 8

27 In 2008, the world's population was estimated to be 6.705×10^9 people. The table below shows the approximate populations of two continents the same year.

Populations of Continents

Continent	Approximate Population
Asia	4.052×10^9
Europe	7.36×10^8

Which is closest to the number of people who lived on continents other than Asia or Europe?

A 1.917×10^9

B 2.653×10^9

C 3.397×10^9

D 4.707×10^9

Go On ▶

28 Henry is practicing for a swim meet. Four of his practice results are shown in the table.

Henry's Results

Distance (in meters)	Time (in seconds)
50	56
100	130
200	184
400	345

$$\text{distance} = \text{rate} \times \text{time}$$

For which distance did Henry swim the fastest?

F 50 meters

G 100 meters

H 200 meters

J 400 meters

STOP

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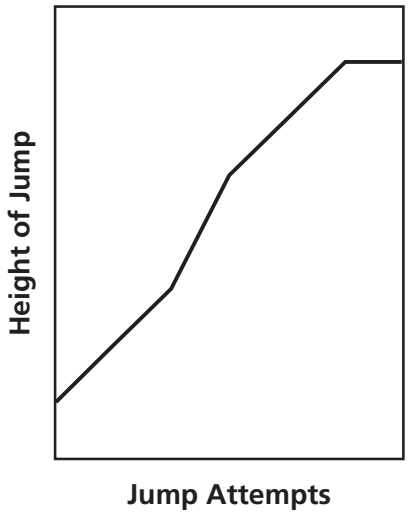
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Part 2

29 Jamal is on the high-jump team at his school. The graph below shows the height of each jump attempt he made at a competition.



Based on the graph, which statement best describes the heights of Jamal's jumps?

A The heights of Jamal's jumps decreased, then stayed constant.

B The heights of Jamal's jumps increased, then stayed constant.

C The heights of Jamal's jumps stayed constant, then decreased.

D The heights of Jamal's jumps stayed constant, then increased.

30 An equation is given below.

$$4x + 2y^3 = 5 + y$$

Which term identifies this equation as nonlinear?

F $4x$

G $2y^3$

H 5

J y

31 Which expression can be used to find the product of (5.8×10^{34}) and (4.7×10^{15})?

A $(5.8 + 4.7) \times 10^{(34 \times 15)}$

B $(5.8 + 4.7) \times 10^{(34 + 15)}$

C $(5.8 \times 4.7) \times 10^{(34 \times 15)}$

D $(5.8 \times 4.7) \times 10^{(34 + 15)}$

Go On ▶

32 Look at this list of values.

$$\left[-1,\ \sqrt{8},\ \frac{3}{8},\ -0.212\right]$$

Which statement about these values is true?

F Only -1 is irrational.

G Only -0.212 is rational.

H $\sqrt{8}$ and $\frac{3}{8}$ are irrational.

J -1, $\frac{3}{8}$ and -0.212 are rational.

33 What is the slope of the line represented by this equation?

$$4x + 2y = 6$$

A -4

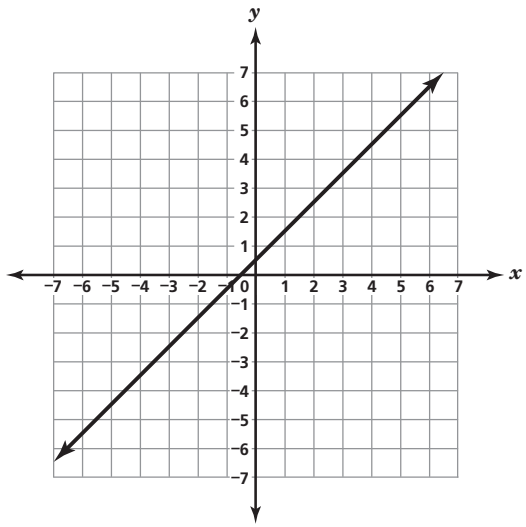
B -2

C 3

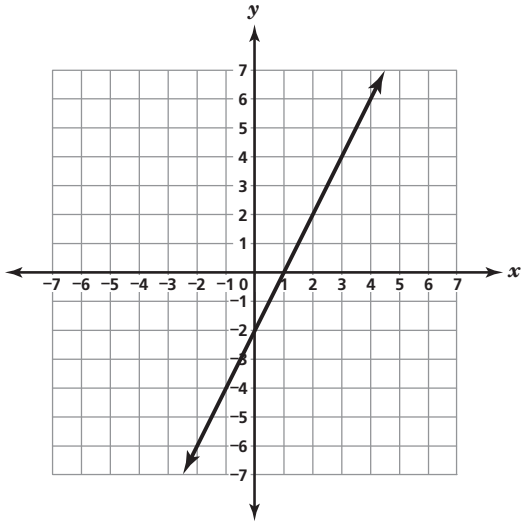
D 4

34 Which graph represents a linear equation that appears to have a *y*-intercept of $\left(0, \frac{1}{2}\right)$?

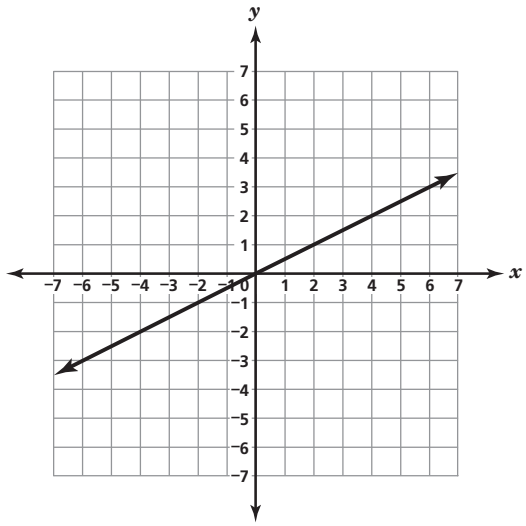
F



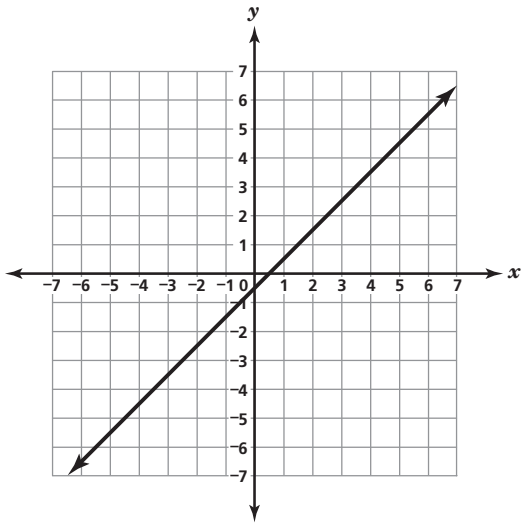
H



G

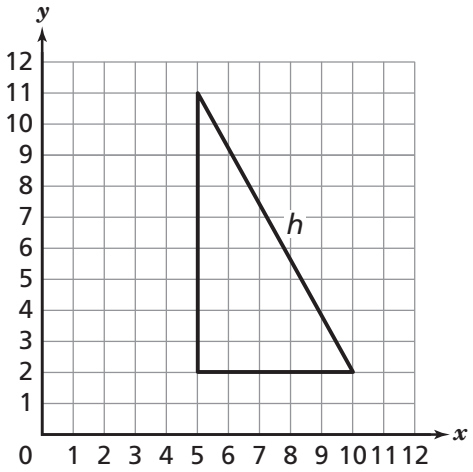


J



Go On ▶

35 The triangle on the grid represents a section of Miesha's backyard.



$$a^2 + b^2 = c^2$$

Which is closest to the length of side h in this triangle?

A 14.0 units

B 10.3 units

C 9.3 units

D 7.5 units

36 **Given:** $\begin{cases} f(x) = 2.4 + 0.4x \\ g(x) = 0.28x - 1.2 \end{cases}$

What is the solution to $f(x) = g(x)$?

F -30

G -10

H 3.75

J 11.25

37 If $2x - 6y = 32$ and $3x + 5y = 6$, then which ordered pair represents the solution for x and y?

A $(-3, 3)$

B $(7, -3)$

C $(25, 3)$

D $(-3, -7)$

38 The table below shows the masses of some of the planets in our solar system.

Mass of Planets

Planet	Mass (in kilograms)
Earth	7.3483×10^{22}
Jupiter	1.8987×10^{27}
Uranus	8.6849×10^{25}
Neptune	1.0244×10^{26}

Which list of planets is in order from the least mass to the greatest mass?

F Neptune, Jupiter, Earth, Uranus

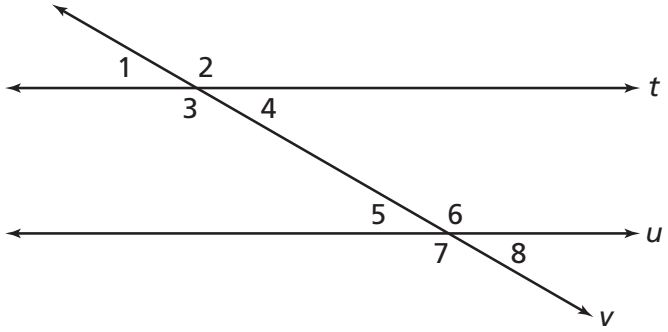
G Jupiter, Neptune, Uranus, Earth

H Earth, Uranus, Neptune, Jupiter

J Uranus, Earth, Jupiter, Neptune

Go On ▶

39 Parallel Lines *t* and *u* are cut by Transversal *v*, forming eight angles, as shown below.



The measure of $\angle 1 = 48°$. What is the measure of $\angle 7$?

A 42°

B 48°

C 132°

D 228°

40 The distance from the planet Venus to the sun is about 1.08×10^8 kilometers. Light travels at a rate of 3×10^5 kilometers per second. How much time, in seconds, does it take for light to travel from the sun to Venus?

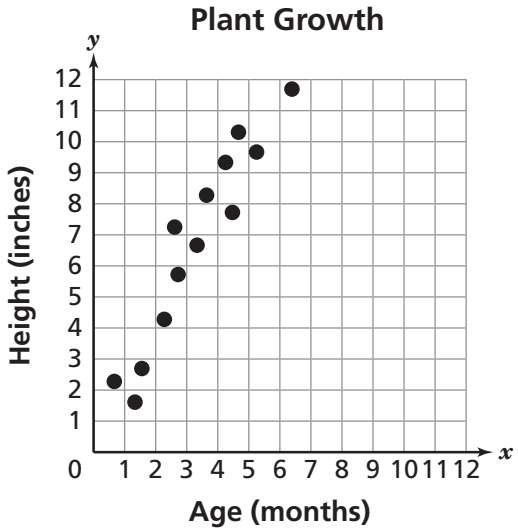
F 0.36

G 2.78

H 360

J 2,778

41 A group of students each measured the growth of a group of plants at different ages. The results are shown in the scatterplot below.



Which conclusion about the growth rate of the group of plants is best supported by the data?

A The plants grew about 2 inches per month.

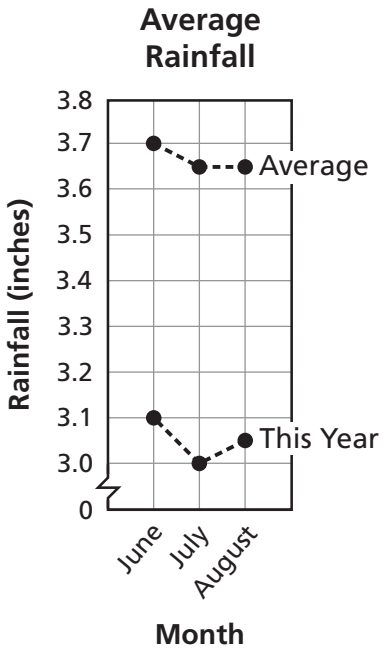
B The plants grew about 3 inches per month.

C The plants grew about 4 inches per month.

D The plants grew about 6 inches per month.

Go On ▶

42 The graph below was included in a newspaper article about the average rainfall in a city.



The article states that the three months shown in the graph indicate a significant drop in rainfall this year compared to previous years. How is the information in the graph misleading?

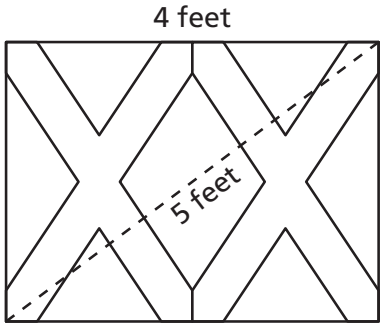
F The vertical axis intervals are very small.

G The scale on the vertical axis is not constant.

H The comparison was not made with other cities.

J More than three months should have been used.

43 A student designed a rectangular flag for a school project, as shown below. The diagonal distance is 5 ft.



$a^2 + b^2 = c^2$

If the length of the flag is 4 ft, what is the width?

A 9 feet

B 6 feet

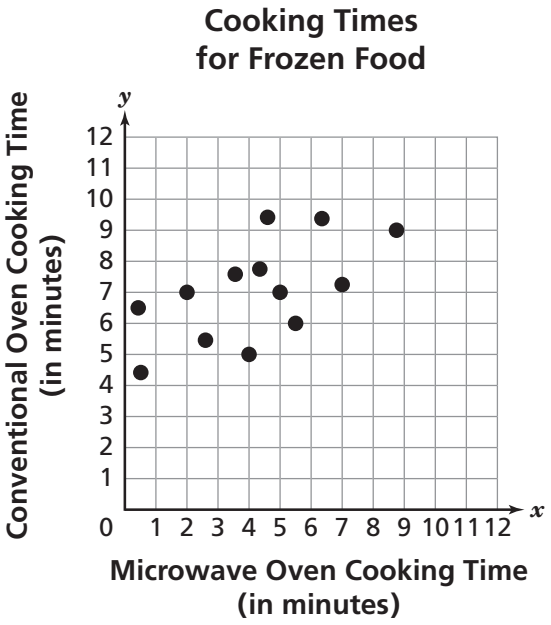
C 4 feet

D 3 feet

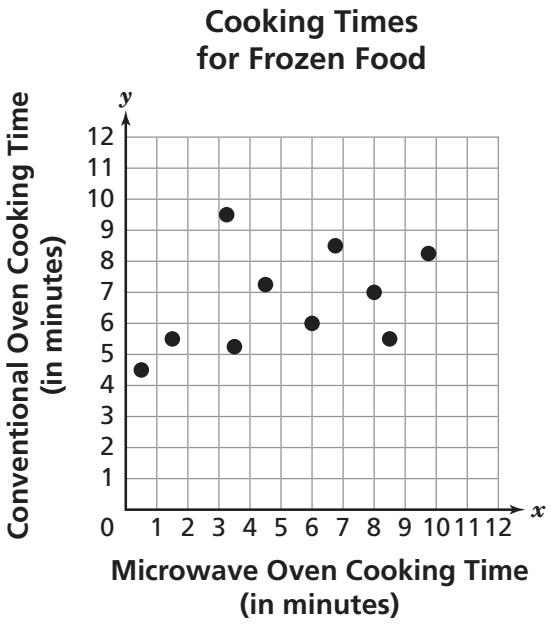
Go On ▶

44 A food manufacturer compared the cooking times for different frozen foods in a microwave oven (x) to the cooking times in a conventional oven (y). A line of best fit for the data collected is $y = 0.5x + 5$. Which scatterplot best represents this set of data?

F



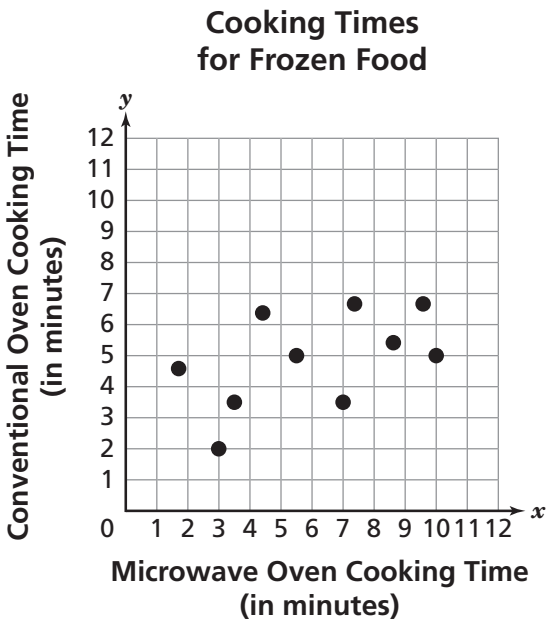
H



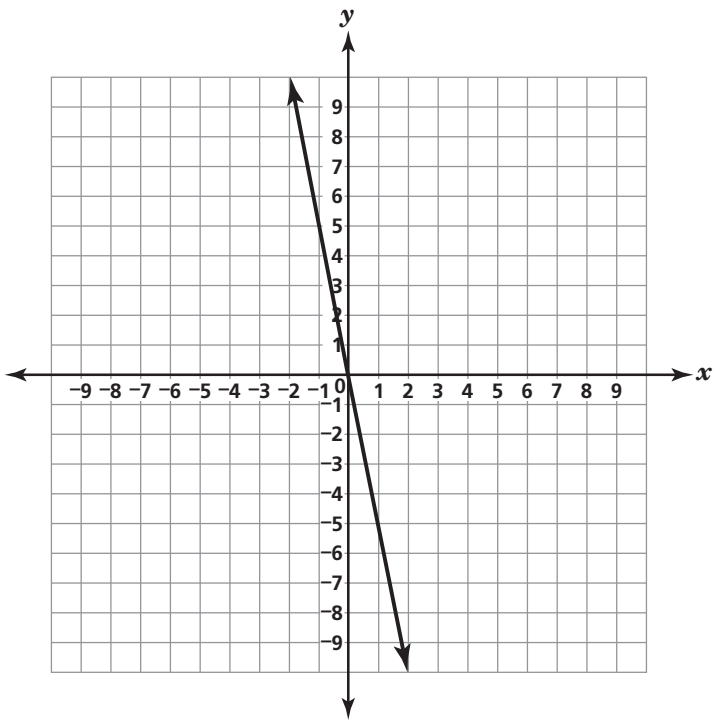
G



J



45 The graph below shows the linear function $y = -5x$.



If the value of x is 2, what is the value of y in this function?

A 10

B $\frac{2}{5}$

C $-\frac{2}{5}$

D -10

Go On ▶

46 Javier will sort the four equations shown by classifying them as linear or nonlinear.

$y = 1$ $\quad x + y = 3$ $\quad y = 2 - x^3$ $\quad x = 6$

Which shows the correct way Javier should sort the above equations?

F

Linear	Nonlinear
$x = 6$	$y = 1$ $y = 2 - x^3$ $x + y = 3$

G

Linear	Nonlinear
$y = 1$ $x = 6$	$x + y = 3$ $y = 2 - x^3$

H

Linear	Nonlinear
$y = 1$ $y = 2 - x^3$ $x = 6$	$x + y = 3$

J

Linear	Nonlinear
$y = 1$ $x + y = 3$ $x = 6$	$y = 2 - x^3$

47 Coach Jenson will order soccer uniforms from one of the stores listed below.

- Store A sells 15 uniforms for a total of $449.85.
- Store B sells 10 uniforms for a total of $300.00.
- Store C sells uniforms for $32.00 per uniform.
- Store D sells 2 uniforms for a total of $58.00.

Which store has the lowest price per uniform?

A Store A

B Store B

C Store C

D Store D

48 Matthew measured a right triangle with a hypotenuse 10 centimeters (cm) long and one leg 6 centimeters long.

$$a^2 + b^2 = c^2$$

What is the length of the other leg of the triangle Matthew measured?

F 4 cm

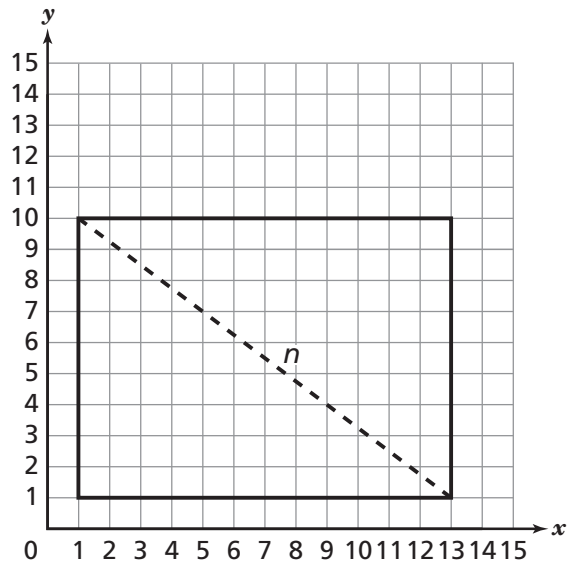
G 8 cm

H 12 cm

J 16 cm

Go On ▶

49 The rectangle on the grid below represents the dimensions of a kitchen floor.



$$a^2 + b^2 = c^2$$

What is the distance, n, across the kitchen floor?

A 21 units

B 15 units

C 12 units

D 8 units

50 What is the value of b in the solution to this system of linear equations?

$$2a - 4b = 4$$
$$3a + 3b = -21$$

F -9

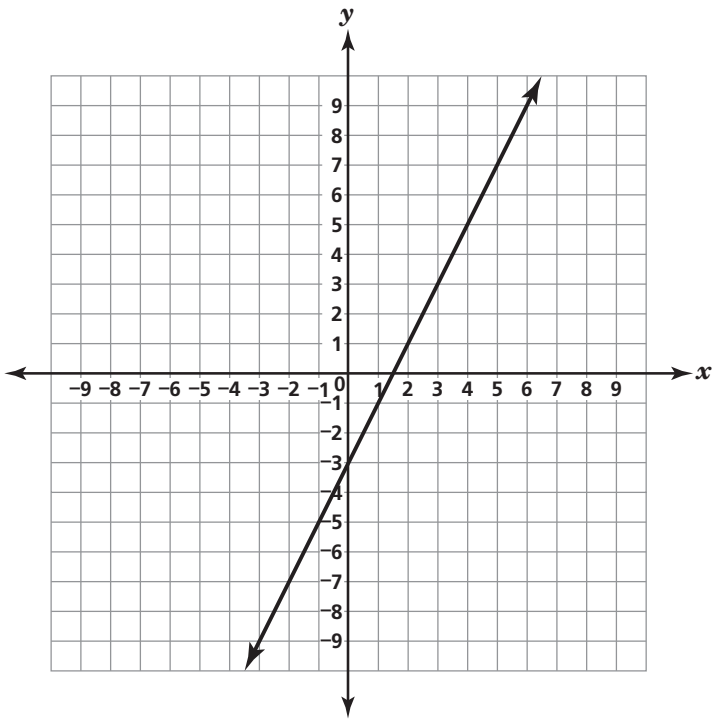
G -6

H -4

J -3

Go On ▶

51 The graph of a linear function is shown below.



Which linear equation is best represented by this graph?

A $y = 2x - 3$

B $y = 3x - 2$

C $y = -2x + 3$

D $y = -3x + 2$

52 The table below shows information Miguel recorded.

Hypotenuse of a Right Triangle

Right Triangle	Hypotenuse Measure
P	$\sqrt{\frac{25}{16}}$
R	$\sqrt{20}$
S	$\sqrt{25}$
T	$\sqrt{169}$

Which triangle has a hypotenuse with a length that is an irrational number?

F Triangle *P*

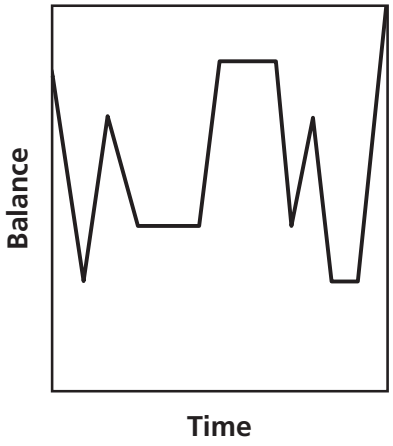
G Triangle *R*

H Triangle *S*

J Triangle *T*

Go On ▶

53 The graph below shows the balance of Joey's bank account over time.



Based on the graph, which statement about Joey's bank account balance is true?

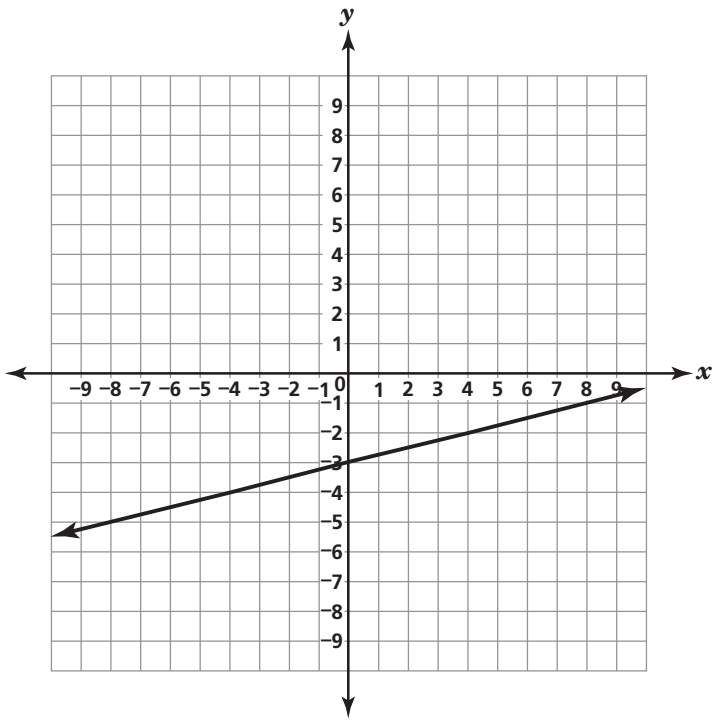
A The balance in Joey's account was highest at the end of this time period.

B The balance in Joey's account was lowest in the middle of this time period.

C The balance in Joey's account was constant throughout this time period.

D The balance in Joey's account increased steadily over this time period.

54 Which value appears to be the slope of the line graphed below?



F 4

G $\frac{1}{4}$

H $-\frac{1}{4}$

J -4

Go On ▶

55 A rocket plane traveled at approximately 18,783.3 meters per second.

distance = rate × time

At that rate, which is closest to the number of seconds it would take the rocket plane to travel 21,000 meters?

A 0.69

B 0.89

C 1.12

D 1.81

STOP

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Science



Part 1

1 **A student observes actions that occurred in four different eggs. Which action describes only a chemical change?**

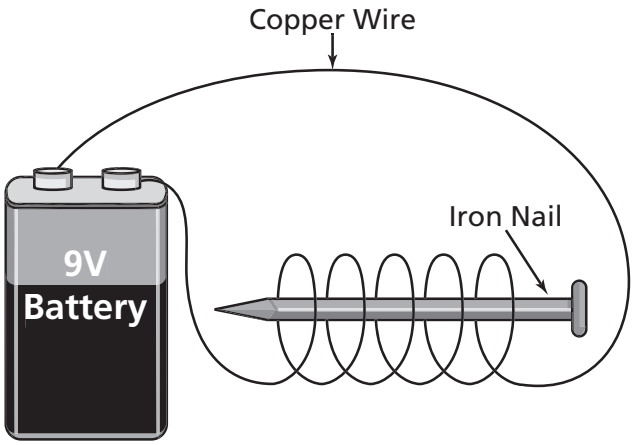
A a cut up egg

B a stirred egg

C a rotting egg

D a dropped egg

2 **The parts of an electromagnet are shown below.**



The strength of the magnet will be increased by

F using more nails.

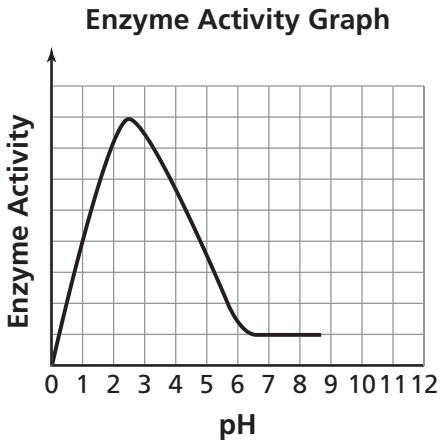
G adding a switch.

H making more loops with the wire.

J placing the battery closer to the nail.

Go On ▶

3 The activity of an enzyme at different pH levels is shown in the graph.



Which table best represents the data in the graph?

A

Enzyme Activity

Activity Level	pH Level
Highest	Strong acid, 2.5
Lowest	Weak acid, 6.4

C

Enzyme Activity

Activity Level	pH Level
Highest	Strong acid, 2.0
Lowest	Weak acid, 6.0

B

Enzyme Activity

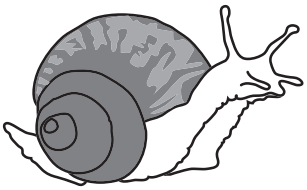
Activity Level	pH Level
Highest	Strong acid, 1.0
Lowest	Weak acid, 5.0

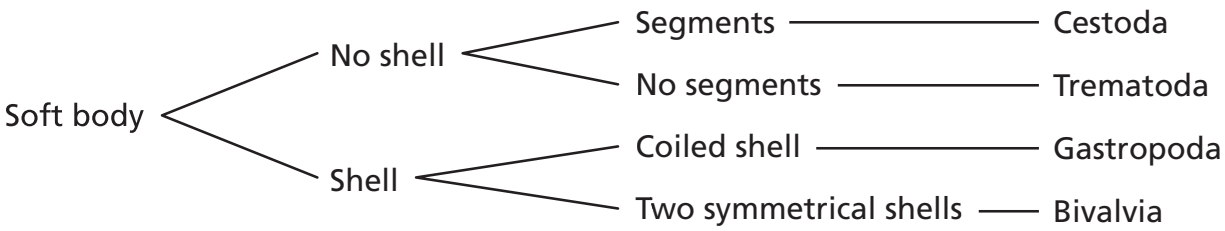
D

Enzyme Activity

Activity Level	pH Level
Highest	Strong acid, 3.5
Lowest	Weak acid, 6.9

4 **A classification key for an organism is shown below.**





To what class does the organism belong?

F Cestoda

G Gastropoda

H Trematoda

J Bivalvia

5 **The clearing of rain forests for agricultural use has led to a decrease in biodiversity in many areas. One potential consequence of deforestation is**

A an increase in the amount of atmospheric oxygen.

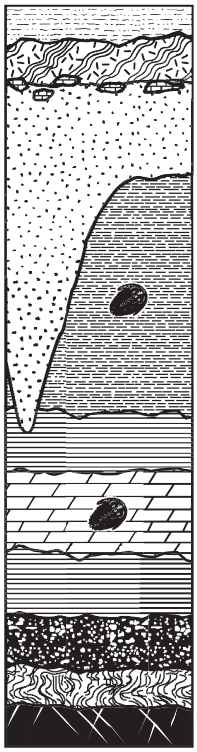
B the loss of plants with potential medicinal uses.

C a decrease in soil erosion.

D improved habitat for wildlife.

Go On ▶

6 **Two fossils that appear to be from the same type of organism are found in two different layers of rock. The layers of rock are shown below.**



Which can be determined from the location of the fossils?

F the prey of the organisms

G the predators of the organism

H the cause of death for each organism

J the relative age of each organism

7 **The table shows the percentage of individuals in a population of insects that is resistant to certain types of insecticides.**

Insecticide Resistant Insect Populations

Population	Insecticide 1	Insecticide 2	Insecticide 3
1	12.8%	48.5%	1.8%
2	52.5%	2%	9.3%
3	28.6%	9.2%	34.8%
4	0%	0%	10.1%
5	2.8%	66.6%	3.5%
6	3.6%	78.5%	48.2%

Which two populations would be most affected by a widespread use of Insecticide 2 ?

A 2 and 4

B 1 and 6

C 3 and 5

D 4 and 6

Go On ▶

8 **A student applies heat to a solid substance. Which indicates that a chemical change occurred?**

F The substance becomes a liquid but solidifies when cooled.

G The substance changes color and stays that color when cooled.

H The substance goes from liquid to gas very quickly.

J The substance expands but stays the same color.

9 **Which option contains only compounds?**

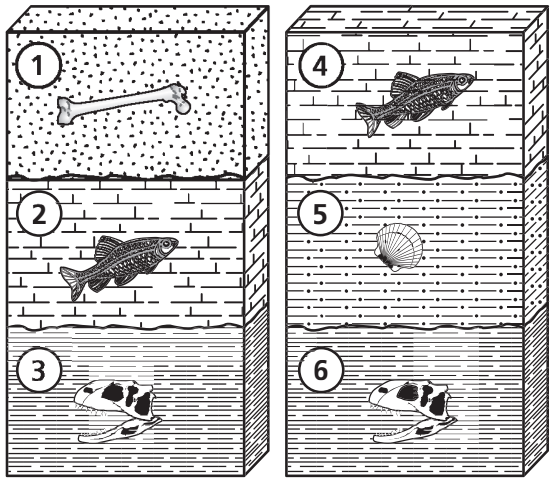
A H_2O, H_2O_2, H_3O, CO_2

B Na, NaCl, Pb, $C_6H_{12}O_6$

C NH_3, KNO_3, Hg, Ne

D Au, Ni, Cu, Fe

10 **Compare the fossil layers shown below.**



Which organisms are most likely to be the same approximate age?

F 1 and 3

G 3 and 5

H 2 and 4

J 5 and 6

11 **The Arctic environment has temperatures that range between −22°C and 6°C with snow covering some of the area. Which adaptation would most likely help a population of organisms survive this environment?**

A long necks and tall legs

B large shell and leathery skin

C light colored fur and layers of blubber

D brightly colored feathers and webbed feet

Go On ▶

12 **The table below shows the average rainfall amounts and number of grazing animals in an area over a 30-year period.**

Rainfall Data

	Millimeters of Rain	Number of Grazing Animals
1975	780	1500
1980	525	2000
1985	600	1500
1990	575	2500
1995	300	1500
2000	850	1000
2005	300	1500

Which is the best conclusion based on the data?

F The number of grazing animals increases approximately every 5 years.

G The number of grazing animals supported by rainfall cannot exceed 2000.

H The number of grazing animals is not affected by the amount of rainfall.

J The number of grazing animals increases after years of increased rainfall.

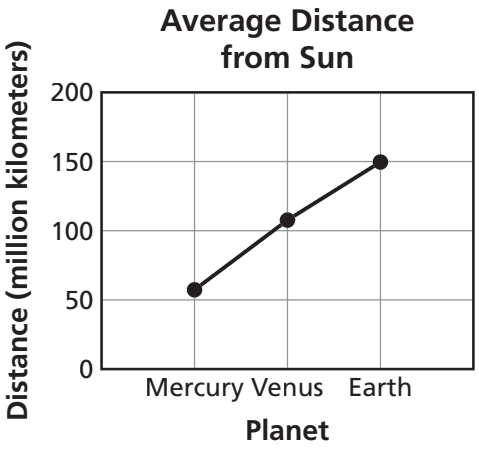
13 The table shows the average distance from the sun to the planets Mercury, Venus, and Earth.

Average Distance from Sun

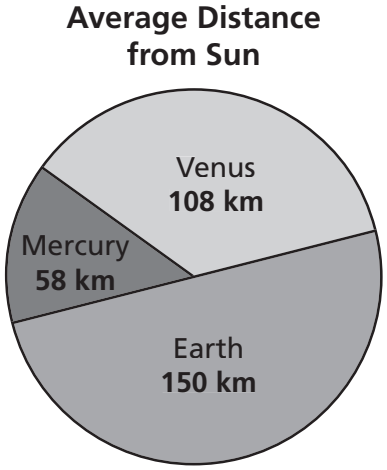
Planet	Millions of Kilometers (km)
Mercury	58
Venus	108
Earth	150

Which graph best compares the distances from the sun for these three planets?

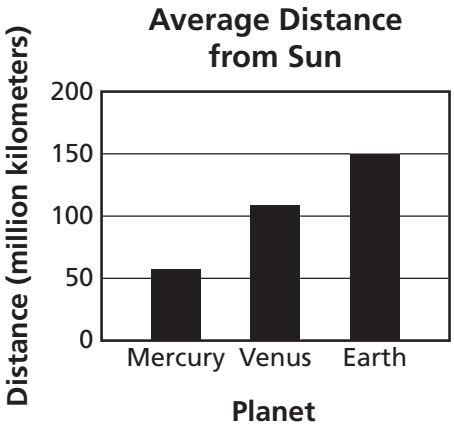
A



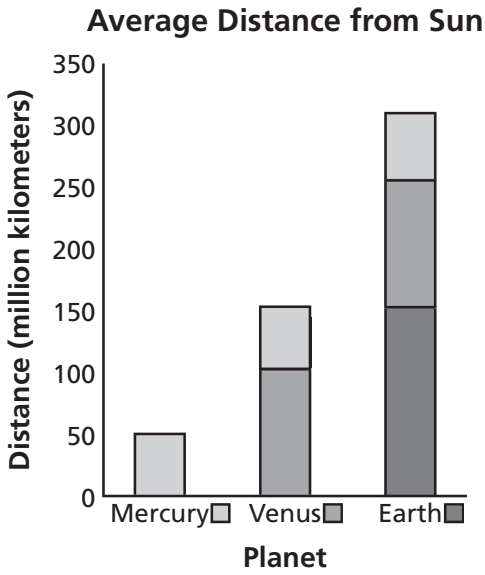
C



B



D



Go On ▶

14 **An engineering company is testing a new weather-forecasting program. Which procedure would best verify that the program is making accurate predictions?**

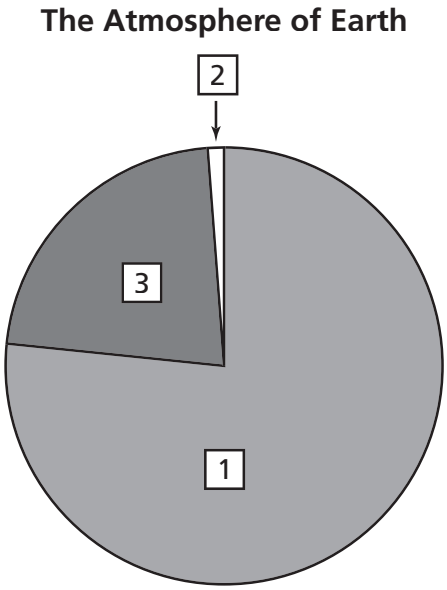
F comparing the predictions of the program to the actual weather

G comparing the predictions of the program to other predictions

H using the program to verify events not related to weather

J using the program to verify past weather-related events

15 **The following graph represents the percentages of gases that make up the atmosphere of Earth.**



Which gas is represented in the portion labeled 1 on the graph?

A argon

B hydrogen

C nitrogen

D oxygen

16 **A company is designing a dam with a floodgate to keep houses safe during the rainy season. The company is reviewing several possible designs that have worked in the past and is trying to develop a plan for implementing one design. Which is the next step in this process?**

F pick several dams to use in a consumer survey

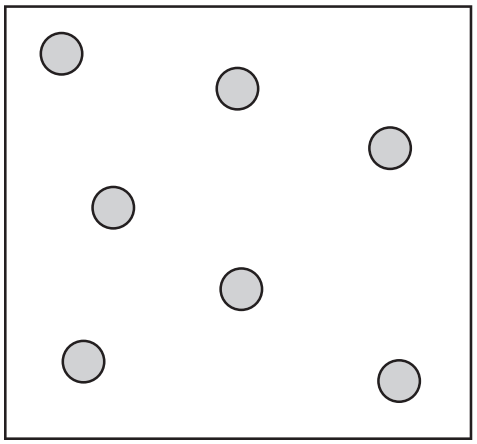
G test each dam model during a different flood season

H analyze the dam designs and pick one based on local needs

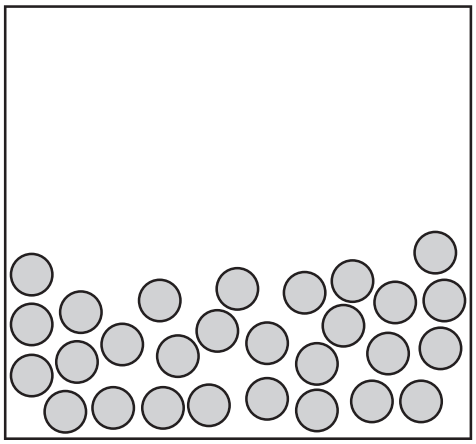
J redesign the past dams based on what the company feels will work best

17 **Which diagram best shows the type of particle arrangement associated with a gas?**

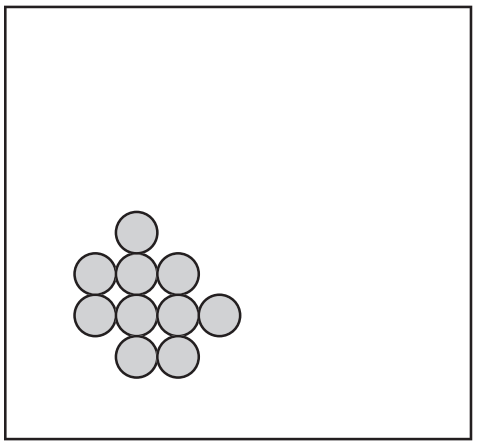
A



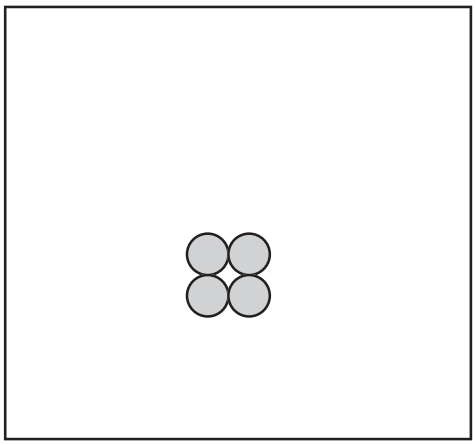
C



B



D



Go On ▶

18 **The equation for density is shown below.**

$$\text{Density} = \frac{\text{mass}}{\text{volume}}$$

$$D = \frac{m}{v}$$

Which block has the greatest density?

F



Mass = 9 grams
Volume = 9 cubic centimeters

H



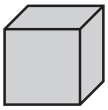
Mass = 11 grams
Volume = 4 cubic centimeters

G



Mass = 10 grams
Volume = 12 cubic centimeters

J



Mass = 12 grams
Volume = 15 cubic centimeters

19 **Which statement best describes the difference between a mixture and a compound?**

A Compounds are pure elements.

B Compounds contain elements bonded together.

C Compounds can be easily separated into distinct parts.

D Compounds have multiple boiling points.

20 **A student is trying to determine the density of a cube using the formula shown below.**

$$\text{Density} = \frac{\text{mass}}{\text{volume}}$$

$$D = \frac{m}{v}$$

What is the density of the cube if it has a mass of 2 grams and a volume of 1 cubic centimeter?

F 3.0 grams/cubic centimeter

G 2.0 grams/cubic centimeter

H 1.0 gram/cubic centimeter

J 0.5 gram/cubic centimeter

21 **The main biofuel on the market today is ethanol, a fuel made from corn. Which type of bioengineered product is ethanol?**

A adaptive

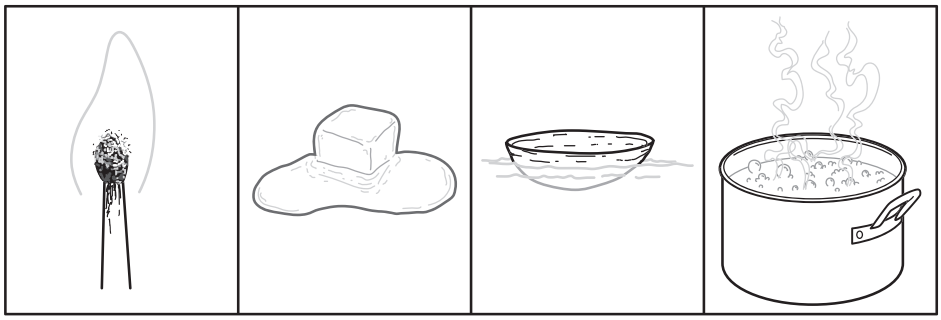
B assistive

C resistant

D manipulated

Go On ▶

22 **Four changes are shown below.**



Which of these represents a chemical change?

F A match is lit, creating a yellow-orange flame.

G A small piece of ice melts, changing from a solid to a liquid.

H A ball of clay sinks in water, and floats when reshaped.

J A pot of water is heated to boiling, and evaporation occurs.

23 **The periodic table of elements is shown below.**

H																	He
Li	Be											B	C	N	O	F	Ne
Na	Mg											Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	Ac	Unq	Unp	Unh	Uns	Uno	Une	Unn								

Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

Which statement best describes the reactivity of the shaded elements nitrogen (N), oxygen (O), and fluorine (F)?

A The nonmetals increase in reactivity from right to left in the same period.

B Oxygen is the most reactive of all the elements listed.

C The nonmetals decrease in reactivity from right to left in the same period.

D Fluorine is the least reactive of all the shaded elements.

24 **A chemical equation is shown below.**

$$C_6H_{12}O_6 + 6O_2 \longrightarrow 6CO_2 + 6H_2O$$

What are the products of the reaction?

F H_2O and O_2

G $C_6H_{12}O_6$ and CO_2

H CO_2 and H_2O

J O_2 and $C_6H_{12}O_6$

Go On ▶

25 **The procedure below is designed to test how water temperature affects the rate at which sugar dissolves.**

- **Measure 150 milliliters of water into each beaker.**
- **Heat water to three different temperatures.**
- **Put 5 grams of sugar into each of the beakers at the same time.**
- **Stir and record the time it takes for the sugar to completely dissolve.**

Which additional step will <u>most</u> improve the investigation?

A Use 200 milliliters of water in each beaker.

B Record the initial and final temperatures of the water.

C Stir at different rates for each beaker.

D Record the times when sugar is half dissolved.

26 **The table below shows researchers' data from an investigation designed to determine which sponge shape absorbs the greatest volume of water.**

Sponge Table

Sponge Shape	Mass of Wet Sponge
Round	5.50 grams
Square	5.70 grams
Irregular	6.00 grams
Oval	5.53 grams

Based on the data, the researchers stated that the irregular-shaped sponge absorbed the greatest volume of water. Researchers plan to market the irregular-shaped sponge as "super absorbent." What is wrong with the researchers' interpretation of the data?

F The researchers should have tested the sponges in different types of liquids.

G The researchers should have tested more types of sponges.

H The researchers did not record the dry mass or volume of each sponge.

J The researchers did not freeze each sponge before massing it.

Go On ▶

27 **An iron block had an initial mass of 100 grams. As the block rusted, its mass increased. Which best explains why the mass increased?**

A Oxygen combines with iron when rust is formed.

B Rust grows as it absorbs energy from the block.

C Water is absorbed as rust forms on the iron block.

D Rust releases heat and makes the iron expand.

28 **Which procedure best represents the law of conservation of mass?**

F evaporating salt water leaves 5 grams of salt

G burning 2 kilograms of wood leaves 0.4 kilogram of ash

H using filter paper to separate 2 grams of solid from 10 grams of water

J combining 2 grams of copper and 4 grams of sulfur to produce 6 grams of copper sulfate

29 **An unknown substance will be classified as an acid if the substance**

A has a pH of 3.0.

B is slippery to the touch.

C turns red litmus paper blue.

D releases hydroxide ions in water.

30 **Which is best used with a bar magnet to produce an electric current?**

F metal coins

G silver pins

H paper clips

J wire coil

31 **A student is to determine how much salt will dissolve in 50 milliliters of water. Which tool is best for measuring the volume of water to be used?**

A 100-milliliter graduated cylinder

B thermometer

C spring scale

D 25-milliliter beaker

32 **The equation below represents a chemical reaction that releases energy.**

$$2Na + 2H_2O \longrightarrow 2NaOH + H_2 + \text{energy}$$

Which part of the equation is a reactant?

F 2NaOH

G H_2

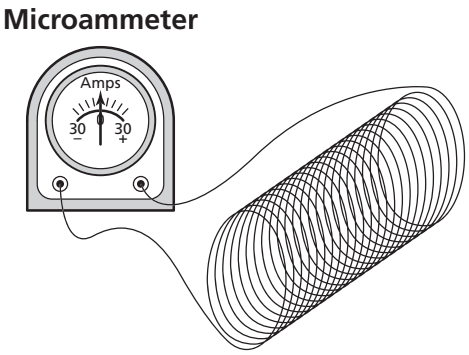
H $2H_2O$

J energy

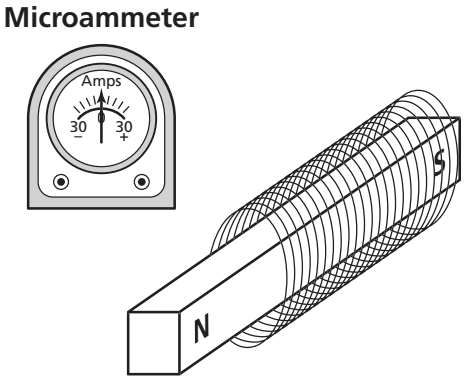
Go On ▶

33 **Which diagram shows an apparatus that is correctly set up to produce and measure electricity?**

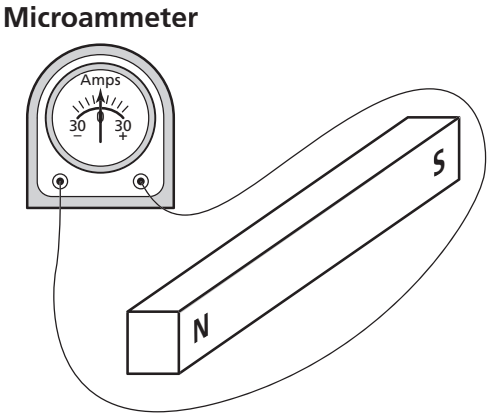
A



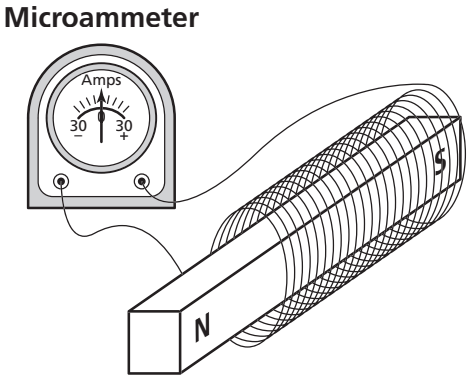
C



B



D



34 **The construction of an electromagnet would be best completed by introducing a current into loops of wire wrapped around**

F a sandstone rock.

G a glass square.

H a plastic rod.

J an iron nail.

35 **A factory is producing a new machine designed to reduce the amount of air pollution in houses. The machine was produced and sold to the public. After several months, reports show the machine is not working correctly. Which of these most likely caused this outcome?**

A The proper cost analysis was not performed.

B The prototype was not tested before use by the public.

C The designers did not test other types of machines.

D The manufacturing of the machine was done over several months.

STOP

Part 2

36 **A chemical equation is shown below.**

$$2Zn + 2HCl \longrightarrow 2ZnCl + H_2 + heat$$

The element zinc (Zn) can best be described as a

F compound.

G mixture.

H gas.

J reactant.

37 **In order to prolong the shelf life of fruits and vegetables, companies expose some types of fruits and vegetables to X-rays in order to kill bacteria. Which best describes irradiated fruits and vegetables?**

A adaptive products

B assistive products

C synthetic products

D natural products

38 **A student asks why the ashes from a fire have a much lower mass than the wood that was burned. Which is the correct answer to the student's question?**

F Atoms in the wood are destroyed.

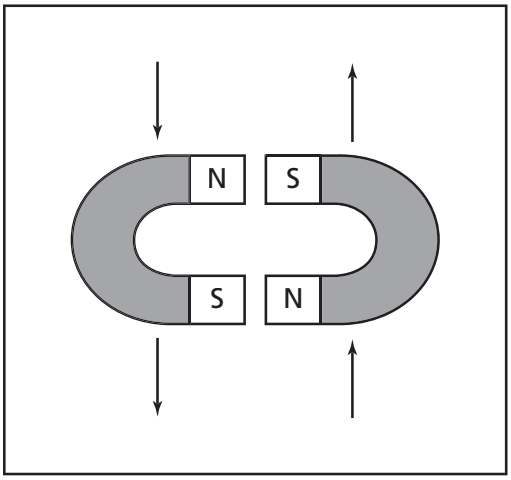
G Gases are released into the air.

H Water inside the wood solidifies.

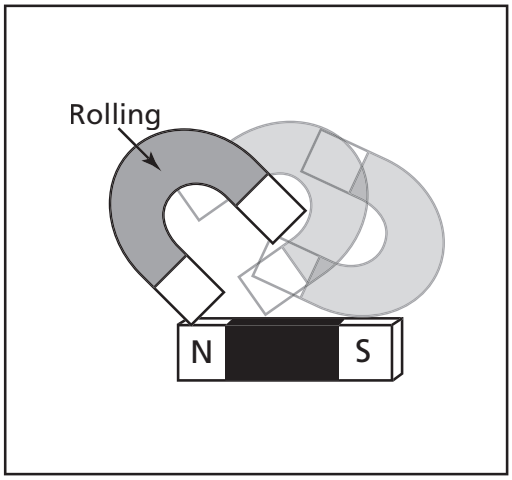
J Heat causes molecules to lose density.

39 **Which diagram represents a magnet creating an electric current?**

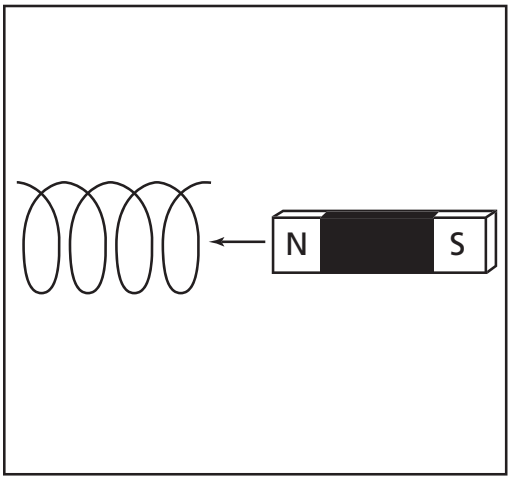
A



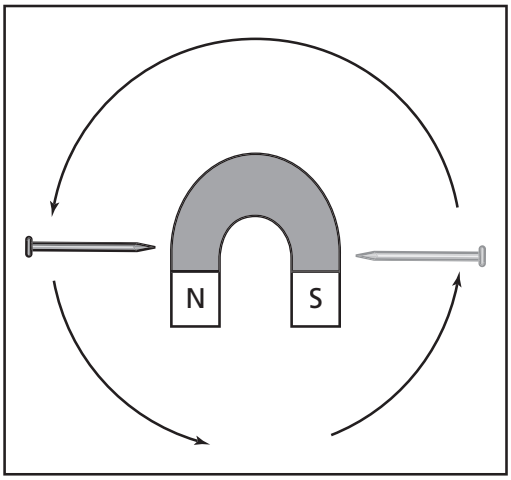
C



B



D



Go On ▶

40 **The sun is much larger than the moon. Which of these best explains why the moon, despite its smaller size, has a greater effect on ocean tides than the sun does?**

F The moon is much closer to Earth.

G The moon produces less light than the sun.

H The moon and Earth have the same composition.

J The moon has a lower surface temperature.

41 **Which two items are best to use to determine the combined volume of three small rocks?**

A electric scale and ruler

B graduated cylinder and water

C hot plate and beaker

D meter stick and eye dropper

42 **Which properties most likely indicate that a substance is a base?**

F releases hydrogen gas and reacts with metals

G turns red litmus blue and conducts an electric current

H turns blue litmus red and conducts an electric current

J has a pH below seven and corrodes a nail

43 **Wire coils spinning between two magnets will produce**

A cold.

B electricity.

C steam.

D chemicals.

44 **A scientist wants to study what happens when carbon dioxide (CO_2) reacts with hydrogen (H_2). The scientist discovers that this reaction produces methane (CH_4) and water (H_2O). Which equation correctly represents this reaction?**

F $CO_2 + H_2 \longrightarrow CH_4 + H_2O$

G $CO_2 + 4H_2 \longrightarrow CH_4 + H_2O$

H $CO_2 + H_2 \longrightarrow CH_4 + 2H_2O$

J $CO_2 + 4H_2 \longrightarrow CH_4 + 2H_2O$

45 **The table provides information about different worms.**

Worm Characteristics

Type of Worm	Segmented	Bilateral Symmetry	Sexual Reproduction	Body Cavity	Example
Segmented worms	Yes	Yes	Yes	Yes	Earthworms and leeches
Flatworms	No	Yes	Yes	No	Planaria and tapeworms
Roundworms	No	Yes	Yes	Modified	Hookworms and *Ascaris*

Which is an example of a nonsegmented worm with no body cavity?

A Earthworms

B leeches

C *Ascaris*

D tapeworms

Go On ▶

46 **A chart listing the density of four metals is shown below.**

Metal Densities Chart

Metal	Density (grams/cm^3)
Aluminum	2.70
Iron	7.87
Nickel	8.91
Silver	10.49

$$\text{Density} = \frac{\text{mass}}{\text{volume}}$$

$$D = \frac{m}{v}$$

A student determines that a metal has a mass of 810.0 grams and a volume of 90.0 cubic centimeters. Using the formula above, this unknown metal is most likely

F aluminum.

G iron.

H nickel.

J silver.

47 **A student recorded the speed of several blue cars versus several red cars over the course of 1 day. The average speed of red cars was 70 mph, while the average speed of blue cars was 68 mph. The student concludes that red paint makes cars go faster. Which statement identifies an error in the student's conclusion?**

A The conclusion was made based on two types of cars.

B The observation was made on several highways.

C The observation shows information for several times of day.

D The conclusion claims that there is a cause and effect without evidence.

48 **A student coils a copper wire around a bar magnet. Which action will cause the device to generate electricity?**

F The student connects the copper wire to a light bulb.

G The student insulates the copper wire with plastic.

H The student uses a horseshoe magnet instead of a bar magnet.

J The student moves the bar magnet through the copper wire coils.

49 **Which keeps Earth in its orbit?**

A the rotation of Earth

B the gravity of the sun

C the revolution of the moon

D the gravity of the moon

50 **A nuclear power plant has recently been built to generate electricity for a town located near several small lakes. Which is not a benefit of this nuclear power plant being built?**

F The cost of the electricity will decrease.

G The loss of habitat for local wildlife.

H The heating of homes will be easier.

J The nuclear power plant will provide jobs.

Go On ▶

51 **A student wants to test how the concentration of phosphorus in a fertilizer affects plant growth. In designing this experiment the independent variable would most likely be the**

A amount of phosphorus used per plant.

B height each plant grows after given fertilizer.

C type of each plant used.

D type of phosphorus used.

52 **A student designs an experiment to test the acidity of the water in several ponds near an industrial area. Which tool would best help a student obtain accurate data?**

F oxygen probe

G metric ruler

H pH indicator

J heat sensor

53 **A student observes a tree with small needle-like leaves that stay green year round. Which conclusion can the student draw from the shape of the leaves?**

A The leaves of the tree do not perform photosynthesis.

B The leaves of the tree have an illness that stunts their growth.

C The leaves of the tree are nonfunctional.

D The leaves of the tree are intended to reduce water loss.

54 **A student investigated how the mass of a plastic disk affected its motion. The student pushed five similar plastic disks, each with a different mass, across a wooden floor. The student recorded the distance each disk traveled. The investigation was repeated five times. The student concluded there was no relationship between mass and distance traveled. Which of these best describes an error in the investigation?**

F The student performed too few trials.

G The student should have used disks that were the same mass.

H The student should have pushed the disks across different surfaces.

J The student failed to control the amount of force applied.

55 **Which statement best describes what the planet Saturn, a lizard, and a steaming kettle have in common?**

A All are made of atoms.

B All are multicellular organisms.

C All are at the same internal temperature.

D All produce their own energy without help.

56 **A student observes that a gas is formed when chemical Y is added to chemical Z in the lab. The student's observation of a new product being formed is the common outcome of all**

F physical changes.

G chemical changes.

H mass changes.

J phase changes.

Go On ▶

57 **Which substance is classified as an element?**

A NaCl

B CO

C H_2O

D Li

58 **A combination of salt and sugar grains is best classified as a mixture because**

F the grains taste different from one another.

G both the salt and sugar grains are in the same state of matter.

H no new chemical bonds are formed between the salt and sugar grains.

J a new product is formed when the salt and sugar grains are combined.

59 **Which elements make up most of the atmosphere of Earth?**

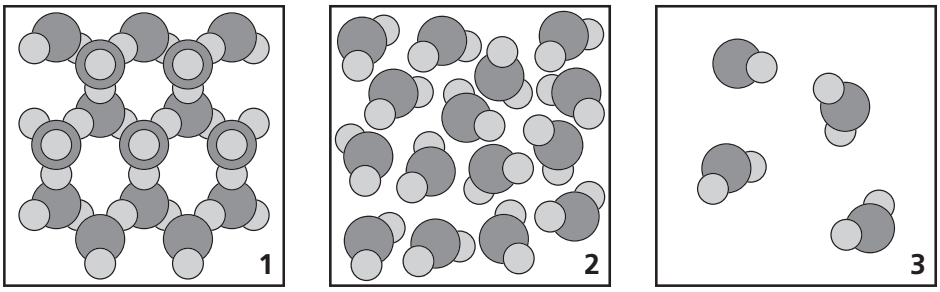
A oxygen and nitrogen

B nitrogen and helium

C water vapor and helium

D oxygen and water vapor

60 **Diagrams of molecular arrangements are shown below.**



The molecular arrangement of a solid is best represented in

F diagram 3.

G diagram 1.

H diagrams 1 and 2.

J diagrams 2 and 3.

61 **A 5-gram sample of water occupies 5 milliliters of space in a beaker.**

$$\text{Density} = \frac{\text{mass}}{\text{volume}}$$

$$D = \frac{m}{v}$$

Using the above formula, what is the density of the water sample?

A 1 gram/milliliter

B 5 grams/milliliter

C 10 grams/milliliter

D 25 grams/milliliter

Go On ▶

62 **Which statement best describes a physical change?**

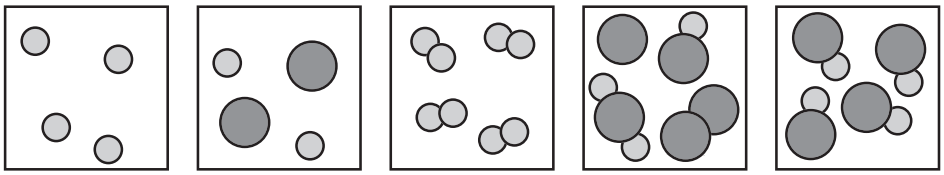
F A process separates water into hydrogen gas and oxygen gas.

G An iron nail exposed to the atmosphere forms rust.

H Burning carbon releases the gas carbon dioxide.

J Salt added to a cup of water makes salt water.

63 **Five diagrams of atomic arrangements are shown below.**



Which of these best describes all five diagrams?

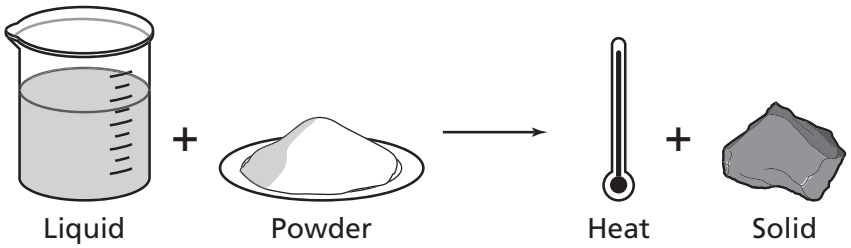
A All are compounds made of atoms.

B All have three types of atoms.

C All are composed of atoms.

D All have the same atomic symbol.

64 **A student performed a classroom investigation by mixing a purple liquid and a white powder. Diagrams of the setup and the resulting blue solid are shown below.**



The student could best classify this reaction as a

F physical change.

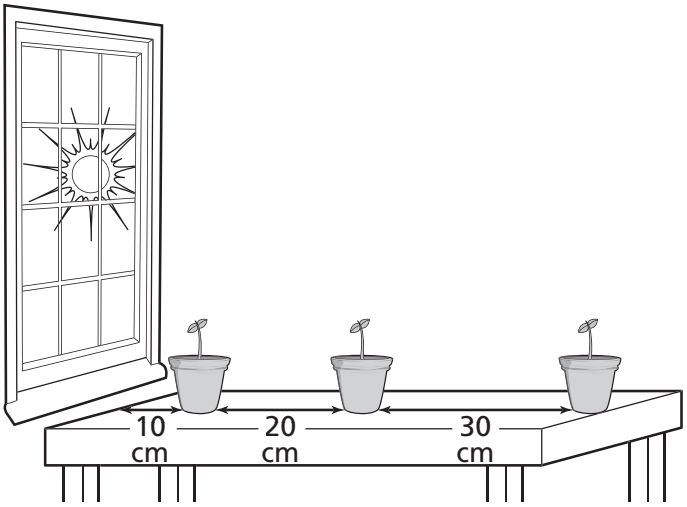
G weight change.

H mass change.

J chemical change.

Go On ▶

65 **The picture below illustrates an experiment designed to test plant growth using potted green bean sprouts placed in front of a window.**



Which of these is the independent variable in this experimental design?

A different species of plants

B different types of light sources

C the height of each plant's ceramic pot

D the distance of the plants from the light source

66 **Which of these occurs during all chemical changes?**

F new elements are formed

G temperature increases

H new bonds form between atoms

J phase changes from solid to liquid

67 **Which statement describes a possible consequence if biodiversity were to decrease in the Arctic due to the extinction of polar bears?**

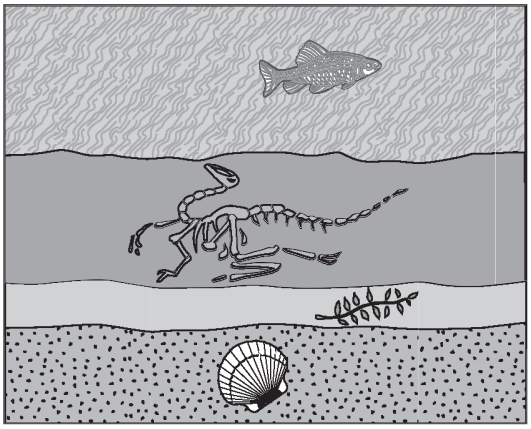
A changes in the food web, leading to a loss of food resources for native people

B an increase in the number of producers after a herbivore population boom

C a decrease in the number of herbivores due to natural predators being gone

D disturbances in weather patterns, leading to a higher average water temperature

68 **A cross section of rock layers is shown below.**



Which fossil is found in the oldest layer?

F dinosaur

G fish

H shell

J leaf

Go On ▶

69 The table below lists properties of four different pure samples.

Table of Solution Properties

Sample	Color of Blue Litmus Paper After Dipped in Solution	pH	Does Sample Conduct Electricity?
1	Red	5.2	Yes
2	Purple	7.0	No
3	Blue	9.8	Yes
4	Red	4.3	Yes

Based on the table, which sample is a base?

A Sample 1

B Sample 2

C Sample 3

D Sample 4

STOP

DO NOT

MARK

ON THIS

PAGE

DO NOT

MARK

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PAGE

Social Studies



Part 1

1 **When a school asks students to recite the Pledge of Allegiance, it is promoting**

A healthy lifestyles.

B hard work.

C free enterprise.

D active citizenship.

2 **Why was the Cumberland Gap important to the expansion of the United States?**

F It connected major cities on the Ohio and Mississippi rivers.

G It completed the trade route between Virginia and Pennsylvania.

H It provided a route for the explorers of the Louisiana Territory.

J It made crossing the Appalachian Mountains easier.

3 **The 13th, 14th, and 15th Amendments can best be seen as effects of the Civil War because they**

A granted rights to African Americans.

B increased hourly wages for all workers.

C opened up free lands in the West for settlers.

D granted women the right to vote.

Go On ▶

4 **A business owner has an agreement with a bank that allows him to borrow money based on his assets and his ability to repay in the future. This is an example of**

F tax.

G debt.

H credit.

J interest.

5 **Who has the power in democratic governments?**

A the people

B the courts

C the police

D the military

Directions Use the map below and your own knowledge to do Numbers 6 and 7.



6 **Which city shown on the map is located nearest 5°N latitude and 75°W longitude?**

F Bogota

G Caracas

H Lima

J Quito

Go On ▶

7 **In which direction would a person going from Santiago to Brasilia travel?**

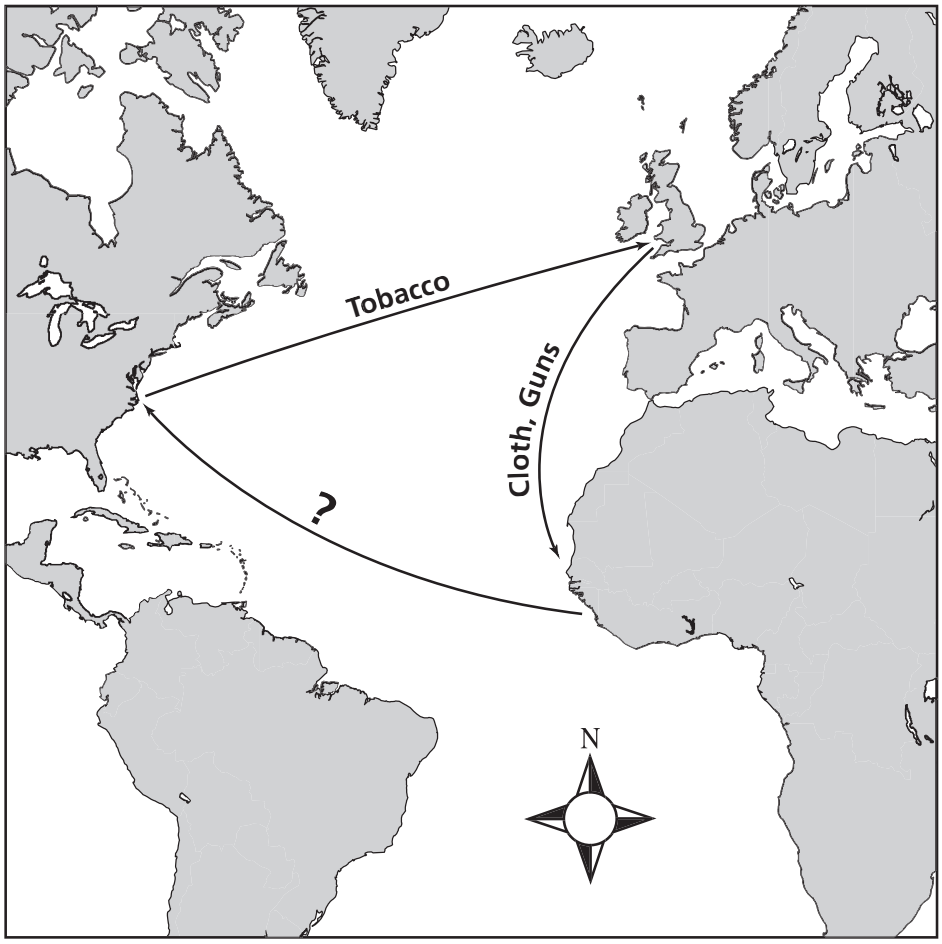
A southeast

B southwest

C northeast

D northwest

The Triangle Trade



8 **Which best replaces the question mark in the map above?**

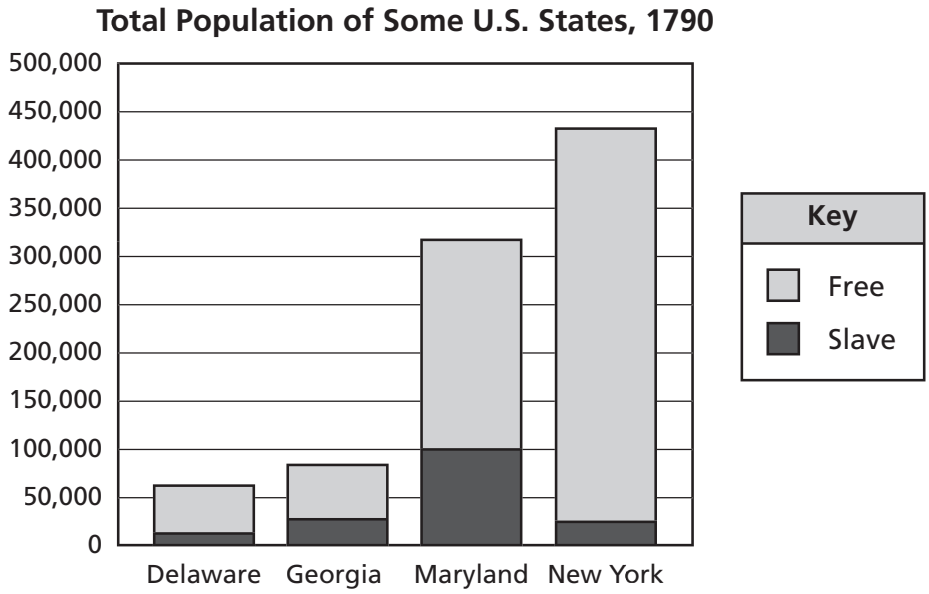
F Tea

G Livestock

H Pottery

J Slaves

Go On ▶



9 **Which state in the graph above had the smallest percentage of slaves in its total population?**

A Delaware

B Georgia

C Maryland

D New York

- working in soup kitchens
- building parks and playgrounds
- setting up neighborhood watch programs

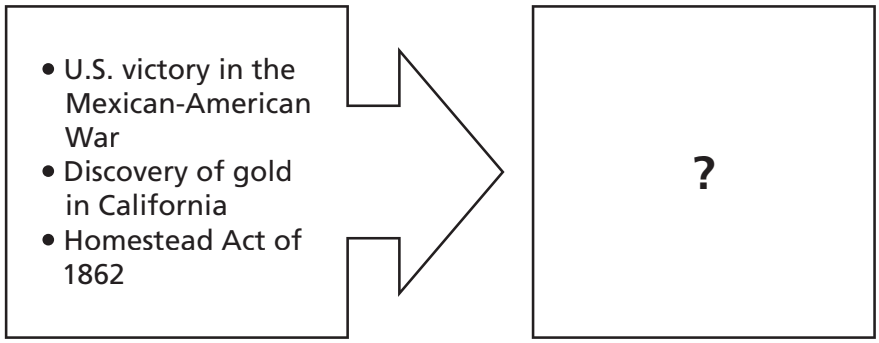
10 **The activities in the box are examples of ways to**

F raise money for the community.

G help political parties in the community.

H elect community government leaders.

J participate in meeting local needs.



11 **Which term <u>best</u> completes the diagram above?**

A Industrial growth

B Anti-immigration movement

C Westward expansion

D Abolitionist movement

<u>Puritans</u>	**<u>Quakers</u>**
• Life is a constant struggle with evil • Obedience to word of God • Public confession of faith	• Men and women equal in eyes of God • People should listen to their "inner light" to connect with God • **?**

12 **What phrase <u>best</u> completes the diagram above?**

F Obedience to the king

G Religious tolerance

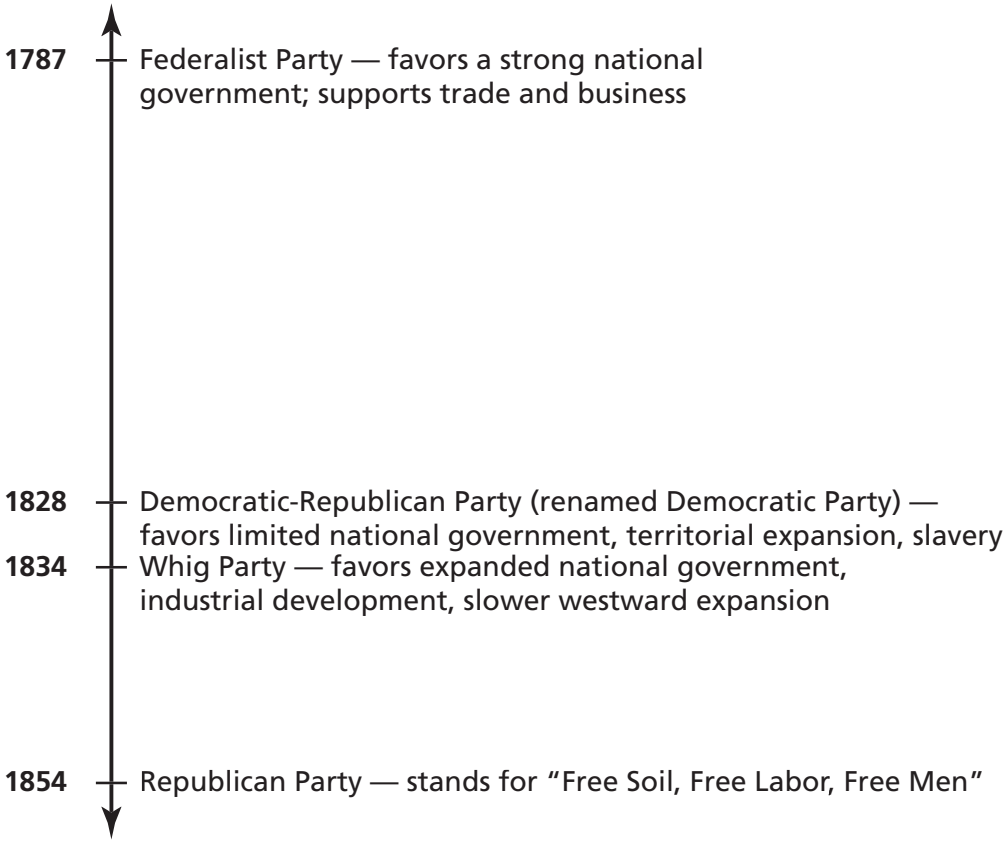
H Respect for warfare

J Belief in reincarnation

Go On ▶

Directions Use the timeline below and your own knowledge to do Number 13.

Development of Some Political Parties From 1787 to 1854



Note: Some dates are approximate

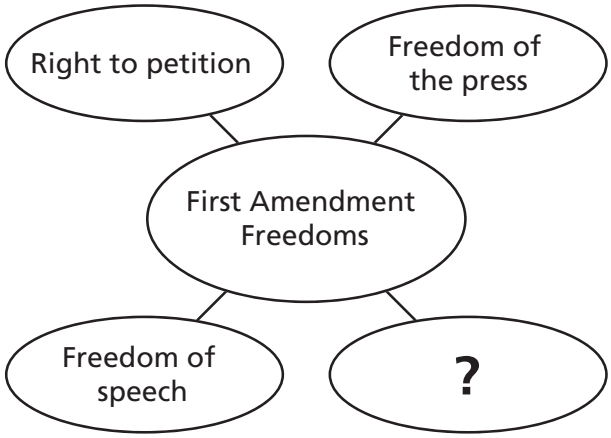
13 **Andrew Jackson was elected president in 1828. Based on the timeline, he was a member of which party?**

A Whig Party

B Free Soil Party

C Federalist Party

D Democratic Party



14 **Which of these best completes the diagram?**

F Right to legal representation

G Right to a jury trial

H Freedom of religion

J Freedom from unreasonable searches

15 **Which pair of state names demonstrates the influence of Native American groups on the cultural development of the United States?**

A New York and Georgia

B Mississippi and Missouri

C Virginia and Pennsylvania

D New Hampshire and Maine

Go On ▶

16 **Which worker in the early American colonies would best be classified as performing a service economic activity?**

F a craftsman producing furniture

G a person cooking meals

H a farmer harvesting crops

J a fisherman selling his daily catch

Factors that Contributed to ___?___

- Imposition of new taxes
- Quartering of troops
- Tyrannical government

17 **Which event best completes the title of this list?**

A the French and Indian War

B the Revolutionary War

C Westward Expansion

D the War of 1812

Machu Picchu



© Rcaucino/Dreamstime #5150011

18 **The major civilization that built the city shown above <u>most</u> likely chose the location because it was**

F shielded by forests.

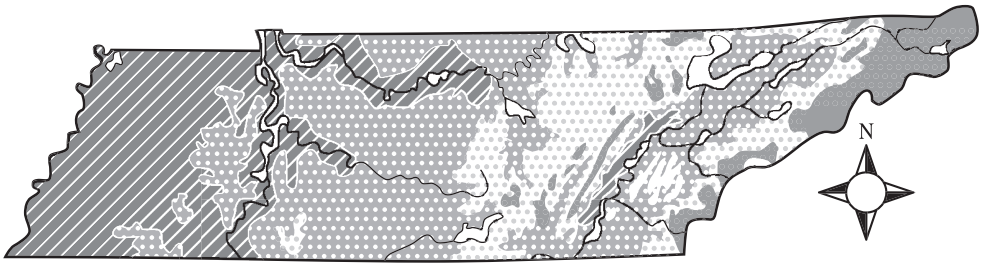
G surrounded by plains.

H accessed by rivers.

J protected by mountains.

Go On ▶

Tennessee Physical Map



KEY	
500 ft	5,000 ft
1,000 ft	10,000 ft
2,000 ft	

19 **Based on the map, the area of Tennessee near the Mississippi River is most likely**

A a mesa.

B a plain.

C a plateau.

D a mountain.

- States had different money systems
- States ignored needs of other states
- States competed in trade

20 **Which document led to the conditions listed above?**

F Articles of Confederation

G Magna Carta

H Declaration of Independence

J Mayflower Compact

21 **Which of these is a characteristic of the system of federalism?**

A the appointment of leaders for life

B the absence of a written constitution

C the separation of powers among three branches

D the division of power between state and national governments

22 **Which economic practice did European settlers introduce to North America?**

F cultivation of the soil

G private ownership of land

H barter of scarce goods

J collection of income taxes

Go On ▶

New Technological Advances in Colonial America

- Sawmills
- Gristmills
- Iron Forges

23 **The technologies listed above contributed to which aspect of Colonial American development?**

A transportation

B industrialization

C education

D exploration

A triangular deposit of sand and soil located at the mouth of a river

24 **Which geographical feature is described above?**

F marsh

G delta

H harbor

J oasis

Excerpts from 1585 Pamphlet Promoting English Colonization of America

> 1. The increase of the force of the Christians.
> 2. The possibility of . . . enlarging . . . the Queen's . . . [territory and] power . . .
> 3. An ample vent [market for] . . . the woolen clothes of England . . .
> 4. A great possibility of further discoveries . . .
>
> — Richard Hakluyt (1585)

25 **Which part of the excerpt above represents a religious-based reason for establishing an English colony?**

A 1. The increase of the force of the Christians.

B 2. The possibility of . . . enlarging . . . the Queen's . . . [territory and] power . . .

C 3. An ample vent [market for] . . . the woolen clothes of England . . .

D 4. A great possibility of further discoveries . . .

Go On ▶

> A house divided against itself cannot stand. I believe this government cannot endure, permanently, half slave and half free. I do not expect the Union to be dissolved; I do not expect the house to fall; but I do expect it will cease to be divided. It will become all one thing, or all the other.
>
> — Abraham Lincoln, 1858

26 **Which statement summarizes Abraham Lincoln's view on the issue of slavery in this speech?**

F Territories will ban slavery, but states should allow it.

G Some southern states will abolish slavery.

H Either slavery or freedom will become the law.

J Abolitionists will slowly embrace slavery.

Population of Great Plains

1700s	1850s	1890s
• Many tribes • Broadly scattered	• Fewer tribes • Declining population	• Few tribes on reservation • Small population

27 **Which historic development contributed most to the changes listed above?**

A westward migration

B introduction of sharecropping

C urban expansion

D growth of manufacturing

28 **Which of these was an effect of the *Dred Scott v. Sandford* decision by the Supreme Court in 1857?**

F Civil liberties were extended to more people.

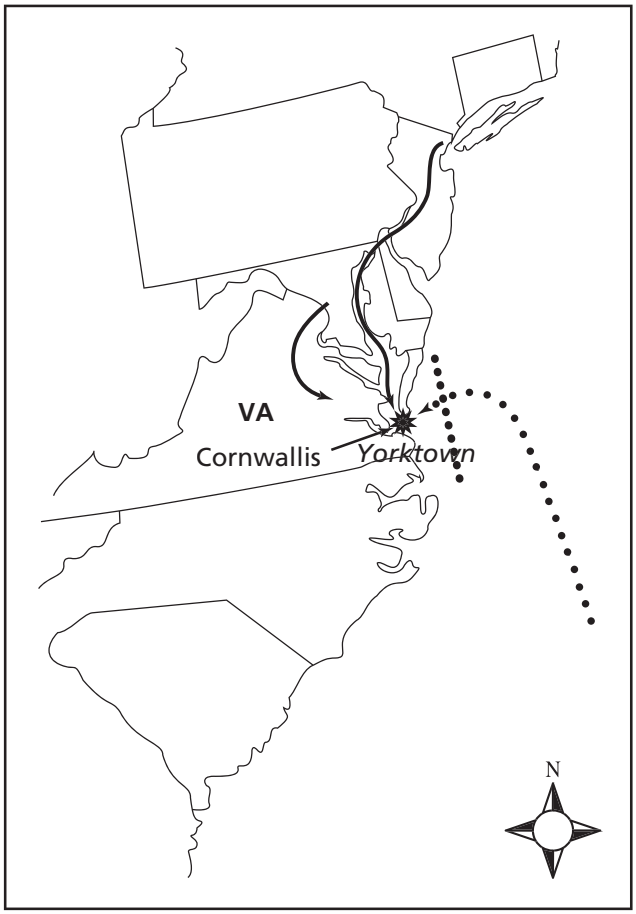
G Judicial review was established.

H Immigration decreased because of government regulations.

J African Americans were denied the rights of citizenship.

Go On ▶

Surrender at Yorktown, 1781



KEY

- Battle site
- American and French armies
- French blockade

29 **According to the map, which of these <u>best</u> explains why Cornwallis and his army were forced to surrender at Yorktown?**

A British naval forces were occupied with wars in Europe.

B Lafayette and his troops were waiting for Cornwallis in New York.

C They were trapped by American and French land and sea forces.

D Washington and Rochambeau had defeated Cornwallis in South Carolina.

30 **Which document is a secondary source about industrialization in the 1800s?**

F a journal kept by a factory worker

G an account book of factory finances

H a photograph taken inside a factory

J an encyclopedia article about a factory

31 **Eighteenth-century Virginia planters who needed workers to produce their crops relied on which labor force?**

A soldiers

B slaves

C prisoners

D artisans

32 **Which political question arose as a direct consequence of the Mexican-American War?**

F Should Texas be annexed into the Union?

G Should the Oregon Country become a U.S. territory?

H Should the United States buy the Louisiana Territory?

J Should California be admitted to the Union as a free or a slave state?

Go On ▶

Clothing: parkas, ponchos
Inventions: hammocks, toboggans
Words: moose, chipmunks, squash
Traditions: respect for nature

33 **The listings in the box above reflect the contributions to the cultural development of the United States by**

A Irish settlers.

B African slaves.

C Native Americans.

D German immigrants.

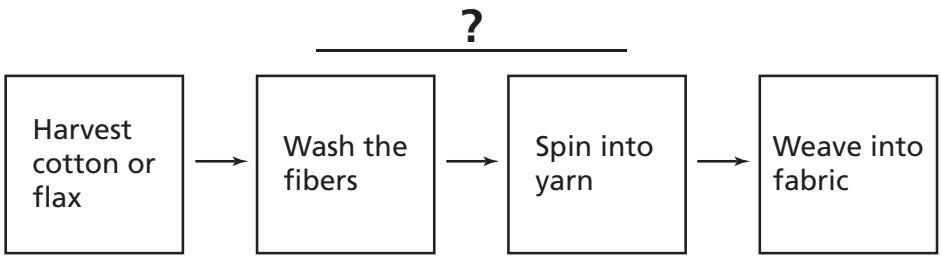
34 **Which law declared that the issue of slavery in the western territories would be decided by popular sovereignty?**

F the Missouri Compromise

G the Kansas-Nebraska Act

H the Wilmot Proviso

J the Homestead Act



35 **Which title completes the diagram above?**

A Refining Petroleum

B Making Textiles

C Mining Minerals

D Processing Lumber

STOP

Part 2

36 **An example of a primary source of information about the American Revolution is a**

F textbook.

G biography.

H diary.

J documentary.

37 **Which activity is a responsibility of American citizens?**

A visiting a national park

B purchasing a new home

C running for political office

D serving on a jury

38 **A major cause of the Civil War was the issue of**

F establishing a National Bank.

G allowing immigrants into the United States.

H state powers versus federal powers.

J taxation without representation.

39 **Which sentence is the best description of the impact of European colonization on Native Americans?**

A Native Americans lost their lands to Europeans.

B British settlers absorbed Native Americans into colonial society.

C British colonists adopted religious practices of Native Americans.

D Native Americans protected Europeans from attacks.

Go On ▶

Population of the South, 1790–1830

Year	White	Free Nonwhite	Slave
1790	1,240,454	32,523	654,121
1800	1,691,892	61,575	851,532
1810	2,118,144	97,284	1,103,700
1820	2,867,454	130,487	1,509,904
1830	3,614,600	175,074	1,983,860

Source: U.S. Census Bureau

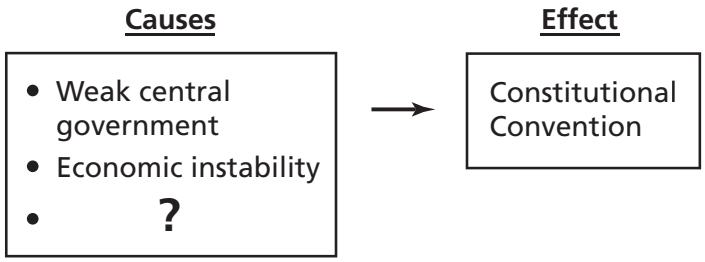
40 **Based on the table above, the South's slave population reached one million during which decade?**

F 1791 to 1800

G 1801 to 1810

H 1811 to 1820

J 1821 to 1830



41 **Which event <u>best</u> completes the diagram above?**

A Shays's Rebellion

B Ratification of the Bill of Rights

C George Washington's presidential election

D Passage of the Northwest Ordinance

Proclamation of 1763



Key
Proclamation Line of 1763

42 **According to the map, the Proclamation of 1763 prohibited settlement west of an imaginary line drawn along the**

F Ohio River.

G Mississippi River.

H Appalachian Mountains.

J Rocky Mountains.

Go On ▶

43 **Which economic activity is the best example of a subsistence economy?**

A running a bank

B working in a factory

C growing food for family use

D raising livestock to sell at a market

Transaction	Payment	Deposits/ Credits	Total
DEPOSIT		+1,000.00	1,000.00
Water Bill	–33.00		967.00
Utility Company	–87.50		879.50
Car Payment	–400.00		479.50
Phone Company	–67.98		411.52

44 **Which transaction is being made to reduce a debt on a loan?**

F Car Payment

G Phone Company

H Water Bill

J Utility Company

45 **The Supreme Court of the United States government may be considered the least democratic part of the federal government because**

A there are term limits for its members.

B its members are appointed for life.

C there are two members from each state.

D its membership is based on population.

> But we are assembled to protest against a form of government existing . . . to declare our right to be free as man is free, to be represented in the government which we are taxed to support . . .
>
> — Elizabeth Cady Stanton,
> Seneca Falls Convention speech, 1848

46 **Elizabeth Cady Stanton's speech excerpted above was intended to attract support for**

F access to public education.

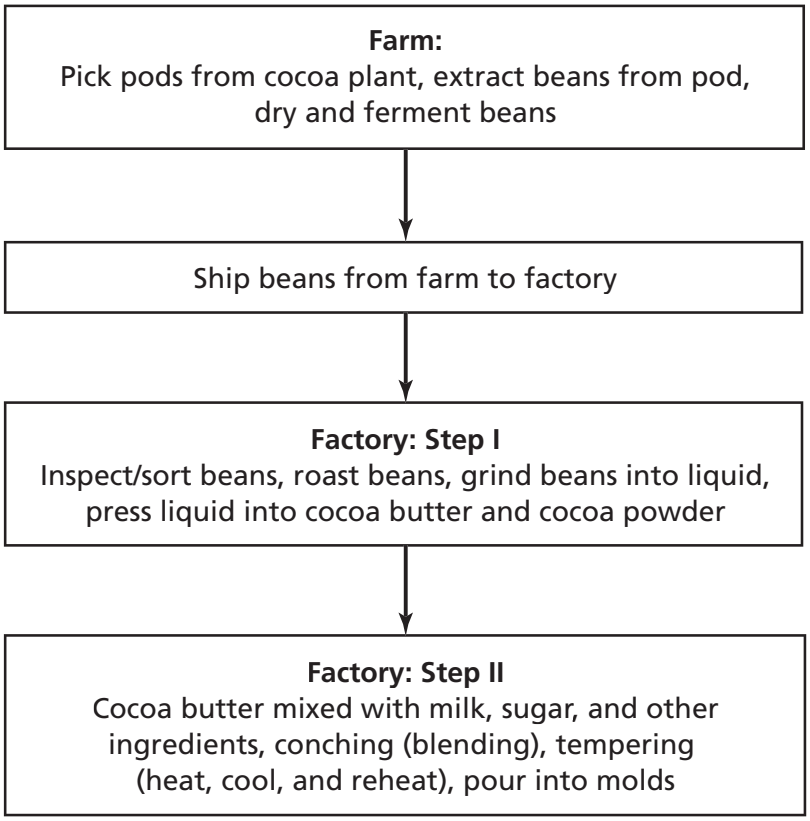
G abolition of slavery.

H women's suffrage.

J prison reform.

Go On ▶

From Cocoa Bean to Chocolate Bar



47 **Which step in making chocolate occurs before the process moves to the factory?**

A grind beans into liquid

B dry and ferment beans

C tempering

D conching

?

- Favorable geography for growing cash crops
- Large plantations dominate economy
- Need for large supply of labor

48 **What is the best title for the table above?**

F Reasons Slavery Flourished in the South

G Factors That Attracted Immigrants to the South

H Evidence That Slavery Would Be Abolished

J Reasons That Industry Was Slow to Develop in the North

49 **Which colony was founded on principles of religious tolerance?**

A Pennsylvania

B New Hampshire

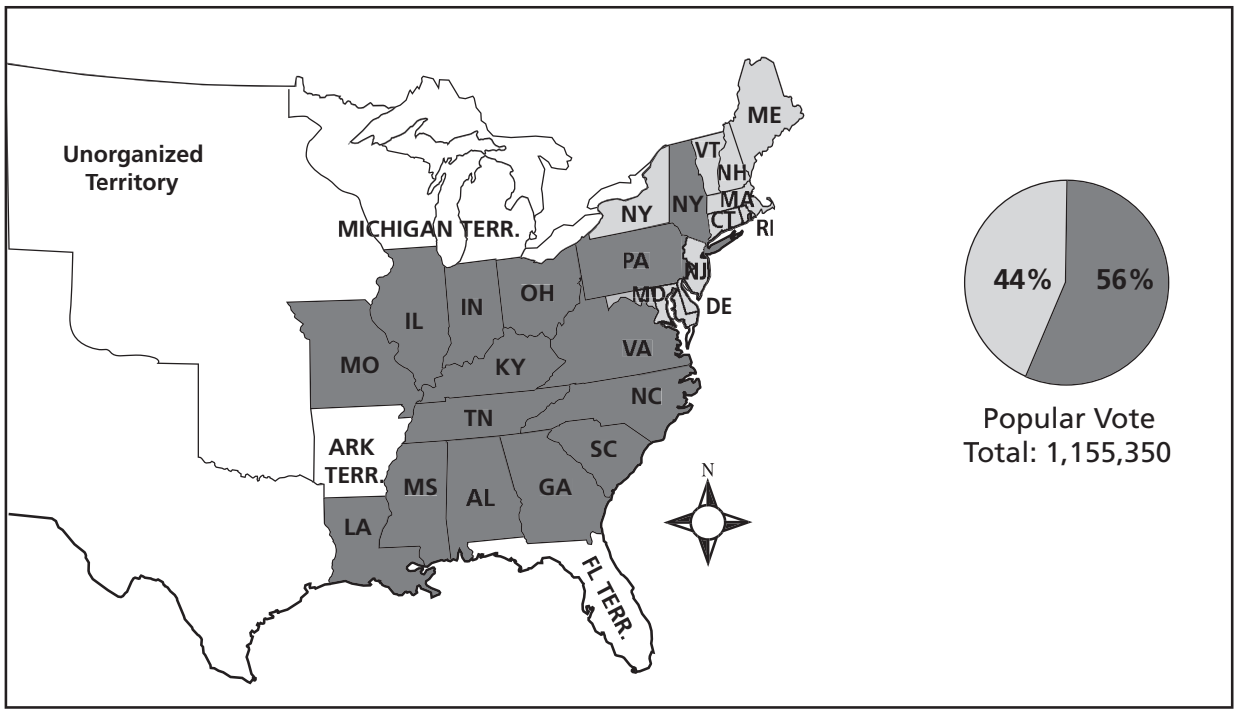
C North Carolina

D Virginia

Go On ▶

Directions Use the map below and your own knowledge to do Numbers 50 and 51.

The Election of 1828



50 According to the map, Andrew Jackson received much of his support from

F people living in the territories.

G industrialists in the Northeast.

H farmers in the South.

J voters in each of the original colonies.

51 **The total popular vote in the 1824 election was less than half of what it was in the 1828 election. Which of these was the most likely reason for the increase in the popular vote?**

A Jackson's experience in politics

B Jackson's support of the aristocracy

C increased immigration to the cities

D expanded voting rights for white males

52 **Which of these statements describes an effect of European colonization in North America by 1820?**

F formation of a diverse population of settlers

G completion of a transcontinental railroad

H establishment of a single religion

J development of a dictatorship

Go On ▶

53 **In the early 1800s, Memphis and Nashville grew faster than other areas in the state because**

A natural resources were scarce in other areas.

B few opportunities were available in other areas.

C cities were safer than the open countryside.

D locations on major rivers connected them to other markets.

54 **Which situation allows for the regulation of free speech?**

F The speech is unpopular.

G The speech poses a threat to safety.

H The speech is critical of the government.

J The speech is based on unpopular opinions.

Want Ad from the
***New York Evening Post*,**
September 4, 1830

WANTED

Cook.
They must be American,
Scotch, Swiss, or African — no Irish.

55 **Irish immigrants were excluded from this advertisement because**

A farmers out west clashed with Irish immigrants over land.

B it was illegal to hire Irish immigrants.

C anti-Irish sentiment grew with the increase in Irish immigration.

D Irish immigrants did not have the necessary skills.

56 **Which of these was directly responsible for the greatest changes to the environment in the Cumberland Gap area?**

F the clearing of the Wilderness Road

G the trails established by Native Americans

H the establishment of a national park in the area

J the presence of hunters in western regions

Go On ▶

57 **In the 1600s the French exploring Tennessee were most interested in obtaining**

A steel.

B oil.

C tea leaves.

D animal pelts.

- Agitation by War Hawks
- Impressment of American sailors
- Violation of neutral rights

58 **Which conflict resulted from events on the list above?**

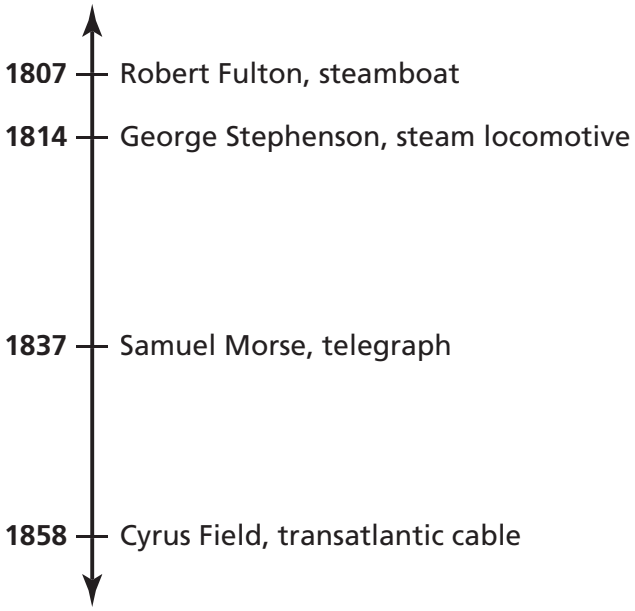
F the War of 1812

G the First Seminole War

H the Mexican-American War

J the War for Texas Independence

19th-Century Inventions



59 **Which inventor shown in the timeline above could help a New York business owner in 1865 quickly communicate information to a business partner on the West Coast?**

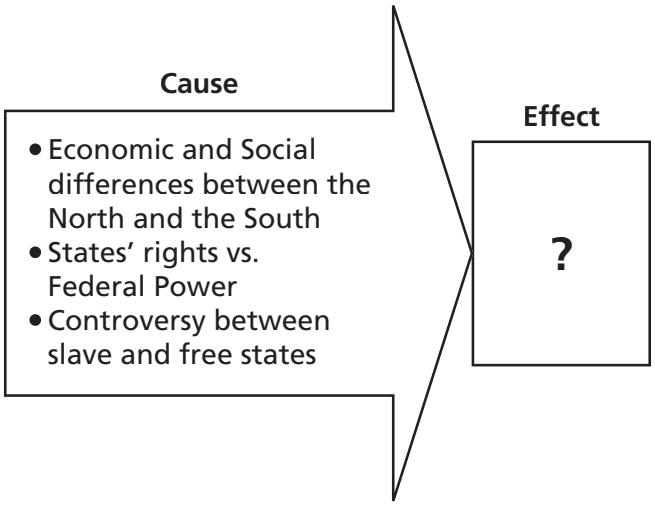
A Robert Fulton

B George Stephenson

C Samuel Morse

D Cyrus Field

Go On ▶



60 **Which conflict <u>best</u> completes the diagram above?**

F Shays's Rebellion

G The Revolutionary War

H Pontiac's Rebellion

J The Civil War

61 **Which of these political questions from the early 1800s was <u>most</u> related to westward expansion?**

A Should laws be passed to restrict immigration from some countries?

B Should the federal government pay for roads and canals?

C Should laws be passed to improve conditions for factory workers?

D Should the federal government pass a protective tariff?

62 **Which type of economy was most often found in pre-colonial Native American societies?**

F monopoly

G free competition

H traditional

J oligopoly

63 **In which conflict did Great Britain win control of Canada?**

A the French and Indian War

B the American Revolution

C the War of 1812

D the Civil War

64 **Religion is best defined as a set of**

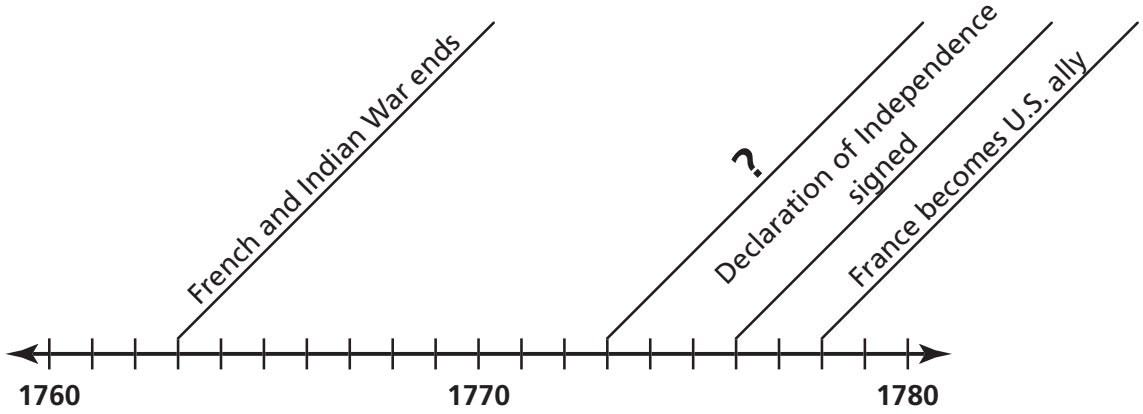
F rules and laws governing a nation.

G beliefs and practices relating to a god or gods.

H traditions passed down within a family or families.

J principles based on the teachings of political leaders.

Go On ▶



65 **Which event <u>best</u> completes the timeline above?**

A Jefferson makes Louisiana Purchase

B Pilgrims land at Plymouth

C George Washington is elected president

D Boston Tea Party takes place

Samantha has a job that pays $800 per week. Her company takes $120 from her weekly pay and sends it to the government for taxes.

66 **Which type of taxation is described in this scenario?**

F income tax

G excise tax

H property tax

J sales tax

67 **Which of these describes a major contribution of Sam Houston to United States history?**

A He explored and mapped the western United States.

B He wrote legislation forbidding the extension of slavery.

C He led the fight for Texas independence from Mexico.

D He led the colonists in Revolutionary battles against Great Britain.

68 **Which of these was the first document to outline a structure of the United States government?**

F Bill of Rights

G Declaration of Independence

H Magna Carta

J Articles of Confederation

69 **Which sentence best describes a result of the Emancipation Proclamation?**

A It damaged the economy of the South.

B It decreased the number of factories in the North.

C It created job competition in the North.

D It promoted better treatment of slaves in the South.

STOP

Reading/Language Arts
Answer Key

1	A
2	F
3	D
4	H
5	B
6	H
7	D
8	J
9	A
10	G
11	D
12	J
13	A
14	H
15	C
16	G
17	B
18	F
19	C
20	G
21	B

22	H
23	B
24	F
25	A
26	J
27	D
28	J
29	B
30	G
31	B
32	H
33	A
34	H
35	D
36	F
37	A
38	F
39	B
40	G
41	D
42	J

43	D
44	F
45	C
46	G
47	B
48	J
49	D
50	F
51	D
52	G
53	B
54	H
55	D
56	J
57	D
58	H
59	D
60	F
61	B
62	G
63	B

64	F
65	B
66	F
67	A
68	H
69	B
70	G
71	B
72	H
73	C
74	G
75	D
76	F
77	A
78	H
79	D
80	F
81	B
82	G
83	C

Mathematics
Answer Key

1	C
2	G
3	C
4	G
5	A
6	J
7	D
8	H
9	A
10	H
11	D
12	H
13	B
14	H

15	D
16	H
17	D
18	F
19	D
20	G
21	A
22	H
23	A
24	J
25	C
26	F
27	A
28	J

29	B
30	G
31	D
32	J
33	B
34	F
35	B
36	F
37	B
38	H
39	C
40	H
41	A
42	F

43	D
44	F
45	D
46	J
47	D
48	G
49	B
50	J
51	A
52	G
53	A
54	G
55	C

Science
Answer Key

1	C
2	H
3	A
4	G
5	B
6	J
7	A
8	G
9	A
10	H
11	C
12	J
13	B
14	F
15	C
16	H
17	A
18	H

19	B
20	G
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22	F
23	C
24	H
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28	J
29	A
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33	D
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36	J

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52	H
53	D
54	J

55	A
56	G
57	D
58	H
59	A
60	G
61	A
62	J
63	C
64	J
65	D
66	H
67	A
68	H
69	C

Social Studies
Answer Key

1	D
2	J
3	A
4	H
5	A
6	F
7	C
8	J
9	D
10	J
11	C
12	G
13	D
14	H
15	B
16	G
17	B
18	J

19	B
20	F
21	D
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24	G
25	A
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27	A
28	J
29	C
30	J
31	B
32	J
33	C
34	G
35	B
36	H

37	D
38	H
39	A
40	G
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42	H
43	C
44	F
45	B
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47	B
48	F
49	A
50	H
51	D
52	F
53	D
54	G

55	C
56	F
57	D
58	F
59	C
60	J
61	B
62	H
63	A
64	G
65	D
66	F
67	C
68	J
69	A

Tennessee Comprehensive Assessment Program

Achievement Test ~ Grade 8

Practice Test

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Grade 8

Reading Passages

The names of the reading passages are listed at the left.
Click the name of the passage you would like to view.

Amazing Trees

by Elaine Langlois

Big Trees

The biggest tree in the world depends on how you measure it. The tallest is a coastal redwood in California called the Stratosphere Giant, which measured, at the time of this writing, 370 feet. That's a little more than the length of a regulation NFL football field. That's 65 feet taller than the Statue of Liberty, including the base.

Coastal redwoods thrive along a thin strip of coast from southern Oregon to central California. A mild climate, rich soil, fog, and plenty of rain are some of the things that help them grow so tall. In dry summers, these redwoods create their own "rain" to nourish their roots by condensing fog into drenching showers.

When you look at a coastal redwood, you see a long trunk with rough, reddish bark and delicate green foliage on gently sloping branches. The top is often hidden in heavy fog. The Giant has plenty of competition. Nearly a hundred coastal redwoods are close in height and growing rapidly. Some days, another tree is actually taller. Scientists climb the trees with ropes and measure them, to a decimal point, with lasers.



Photo Courtesy of National Park Service Digital Image Archives

The tree with the biggest girth is a Montezuma cypress in Santa María El Tule, Mexico. Known as El Arbol (The Tree), it is 190 feet around. Beneath its great green mantle, a thousand people can find shade. Some people used to think that El Arbol was three trees grown together, but DNA testing proved them wrong.

By volume, the biggest tree—indeed, the biggest living thing—in the world is a giant sequoia named General Sherman. General Sherman weighs 1,500 tons and stands nearly 275 feet high. Its towering trunk is the color of cinnamon. Beginning at its midriff, short branches with deep-green foliage curve upward.

Old Trees

How old is the oldest tree on Earth? When it was young, the pyramids of Egypt were being built. It's a bristlecone pine, it is more than 4,600 years old, and it lives in a forest of ancient bristlecone pines high up in the White Mountains of California.

Bristlecone pines *look* like survivors. The youngest trees resemble ordinary pines, but the oldest are something else entirely. They've lost nearly all their bark and foliage. Their branches are skeleton arms. Their trunks have been twisted, scored, and polished by sand and ice crystals carried by the wind. In some, a thin strip of bark, sustaining a single branch, is all that remains of life.

For bristlecone pines, the secret to living long is making the most of hard conditions. At 10,000 feet up, in rocky, nutrient-poor soil, the trees have few competitors. The cool, dry air discourages rot. The pines grow slowly, which makes their wood dense and resistant to insects. And with few plants, there's little risk of fire.

The oldest of these trees was long thought to be Methuselah, named after a character in the Bible who lived 969 years. A scientist found another bristlecone pine that is older still. Authorities keep the identity of both trees a secret. A geography student once found a very old bristlecone pine. When the tree-borer tool he was using broke off in the trunk, he got permission to cut down the tree to get it out. The pine turned out to be nearly 4,900 years old.

Upside-Down Trees

The baobab looks like nature got it wrong: a tree yanked from the ground and stuck back in upside down, its roots in the air. Look at a baobab, and you think of a yam or carrot. Its smooth and shiny bark sets it apart. So does the assortment of shapes it comes in—a whale, a hippo, a teapot, a bottle, a factory chimney. "Think of a homely



Photo Courtesy of clipart.com

shape," says Thomas Pakenham, the author of two books on remarkable trees, "and you can find a Malagasy baobab to match it." *Malagasy* means Madagascar. This island off the coast of Africa is home to six of the eight species of baobab. The other two are found on the African continent and in Australia.

Baobabs are put to all the usual uses of trees—and others that aren't so common. Many groups of Africans think the trees are the homes of their ancestors' spirits. Baobabs can be huge, and the oldest ones are hollow. In the hot, dry places where they live, these trees make for welcome shelters. Baobabs have served as houses, storerooms, restaurants, prisons, a shop, and even a garage for buses. A passing elephant might chomp a baobab if it's thirsty. Elephants have been known to consume an entire tree.

In Madagascar, some of the tallest baobabs flank a dirt road, rising like Martian telephone poles on either side. The "Avenue of the Baobabs" wasn't planted that way. It's likely the remains of a forest. The site is now a tourist attraction, providing some safety for this rare and endangered species, which is losing out in the battle for farmland.

"These are amazing" begins a poem by John Ashbery called "Some Trees." There are close to 10,000 species of trees on Earth. There's something amazing about every one.

Did You Know That...

- Trees save **energy**, conserve **water**, and clean the **air**.
- The **air** beneath a tree can be 25 degrees cooler than the air above a driveway.
- The **roots** of a tree can be several times longer than its height.
- Trees add a new **ring**, or layer of wood, each year. By counting the rings, you can tell the tree's age. The rings also yield important clues about past climate.
- **Strangler trees**, like the rata, grow from seeds left by birds on the branches of other trees. The roots grow down and eventually may cover and kill the host.
- Even the needles of a **bristlecone pine** live a long time—30 to 40 years.
- Ninety-six percent of the nation's old-growth **coastal redwoods** have been logged.
- What could hurt a tree hundreds of feet tall? You! The roots of **coastal redwoods** and **giant sequoias** do not go deep. Strong winds can topple them, and they grow in groves for protection. Thousands of tourists, treading on the roots, can damage them. If you visit, step with care!
- Why does a tiny island contain three-fourths of all **baobab** species? For the answer, many scientists look back 200 million years. Africa and Australia were part of a super-continent called Gondwanaland. The different species of baobab grew in different regions and went with them when the continent divided.
- Trees are natural reservoirs. The trunk of the **baobab** tree can store more than 30,000 gallons of water.

Excerpt from “Brown Wolf”

by Jack London

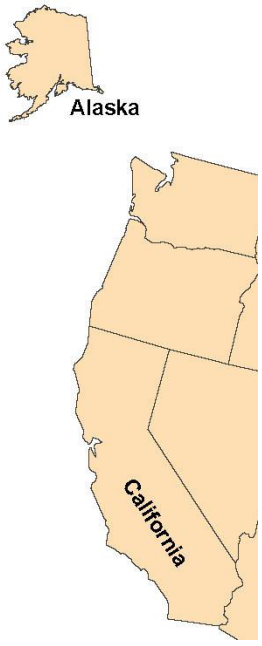
"But you are not going to take him away with you?" Madge asked tremulously.

The man nodded.

"Back into that awful Klondike[1] world of suffering?"

He nodded and added: "Oh, it ain't so bad as all that. Look at me. Pretty healthy specimen, ain't I?"

"But the dogs! The terrible hardship, the heart-breaking toil, the starvation, the frost! Oh, I've read about it and I know."



"I nearly ate him once, over on Little Fish River," Miller volunteered grimly. "If I hadn't got a moose that day was all that saved 'm."

"I'd have died first!" Madge cried.

"Things is different down here", Miller explained. "You don't have to eat dogs. You think different just about the time you're all in. You've never ben all in, so you don't know anything about it."

"That's the very point," she argued warmly. "Dogs are not eaten in California. Why not leave him here? He is happy. He'll never want for food - you know that. He'll never suffer from cold and hardship. Here all is softness and gentleness. Neither the human nor nature is savage. He will never know a whip-lash again. And as for the weather - why, it never snows here."

"But it's all-fired hot in summer, beggin' your pardon," Skiff Miller laughed.

"But you do not answer," Madge continued passionately. "What have you to offer him in that northland life?"

"Grub, when I've got it, and that's most of the time," came the answer.

---

[1] **Klondike:** a region of Yukon Territory in Canada, just east of Alaska, where gold was discovered in 1896



"And the rest of the time?"

"No grub."

"And the work?"

"Yes, plenty of work," Miller blurted out impatiently. "Work without end, an' famine, an' frost, an all the rest of the miseries - that's what he'll get when he comes with me. But he likes it. He is used to it. He knows that life. He was born to it an' brought up to it. An' you don't know anything about it. You don't know what you're talking about. That's where the dog belongs, and that's where he'll be happiest."

"The dog doesn't go," Walt announced in a determined voice. "So there is no need of further discussion."

"What's that?" Skiff Miller demanded, his brows lowering and an obstinate[2] flush of blood reddening his forehead.

"I said the dog doesn't go, and that settles it. I don't believe he's your dog. You may have seen him sometime. You may even sometime have driven him for his owner. But his obeying the ordinary driving commands of the Alaskan trail is no demonstration that he is yours. Any dog in Alaska would obey you as he obeyed. Besides, he is undoubtedly a valuable dog, as dogs go in Alaska, and that is sufficient explanation of your desire to get possession of him. Anyway, you've got to prove property."

Skiff Miller, cool and collected, the obstinate flush a trifle deeper on his forehead, his huge muscles bulging under the black cloth of his coat, carefully looked the poet up and down as though measuring the strength of his slenderness.

The Klondiker's face took on a contemptuous[3] expression as he said finally, "I reckon there's nothin' in sight to prevent me takin' the dog right here an' now."

Walt's face reddened, and the striking-muscles of his arms and shoulders seemed to stiffen and grow tense. His wife fluttered apprehensively into the breach.

---

[2]**obstinate:** stubborn; firm

[3]**contemptuous:** feeling or expressing disrespect

"Maybe Mr. Miller is right", she said. "I am afraid that he is. Wolf does seem to know him, and certainly he answers to the name of 'Brown.' He made friends with him instantly, and you know that's something he never did with anybody before. Besides, look at the way he barked. He was just bursting with joy. Joy over what? Without doubt at finding Mr. Miller."

Walt's striking-muscles relaxed, and his shoulders seemed to droop with hopelessness.

"I guess you're right, Madge," he said. "Wolf isn't Wolf, but Brown, and he must belong to Mr. Miller."

"Perhaps Mr. Miller will sell him," she suggested. "We can buy him."

Skiff Miller shook his head, no longer belligerent[4], but kindly, quick to be generous in response to generousness.

"I had five dogs," he said, casting about for the easiest way to temper his refusal. "He was the leader. They was the crack team of Alaska. Nothin' could touch 'em. In 1898 I refused five thousand dollars for the bunch. Dogs was high, then, anyway; but that wasn't what made the fancy price. It was the team itself. Brown was the best in the team. That winter I refused twelve hundred for 'm. I didn't sell 'm then, an' I ain't a-sellin' 'm now. Besides, I think a mighty lot of that dog. I've ben lookin' for 'm for three years. It made me fair sick when I found he'd ben stole - not the value of him, but the - well, I liked 'm like hell, that's all, beggin' your pardon. I couldn't believe my eyes when I seen 'm just now. I thought I was dreamin'. It was too good to be true. Why, I was his wet-nurse. I put 'm to bed, snug every night. His mother died, and I brought 'm up on condensed milk at two dollars a can when I couldn't afford it in my own coffee. He never knew any mother but me. He used to suck my finger regular, the darn little cuss - that finger right there!"

And Skiff Miller, too overwrought for speech, held up a fore finger for them to see.

"That very finger," he managed to articulate, as though it somehow clinched the proof of ownership and the bond of affection.

He was still gazing at his extended finger when Madge began to speak.

"But the dog," she said. "You haven't considered the dog."

---

[4]**belligerent:** ready to fight

Skiff Miller looked puzzled.

"Have you thought about him?" she asked.



"Don't know what you're drivin' at," was the response.

"Maybe the dog has some choice in the matter," Madge went on. "Maybe he has his likes and desires. You have not considered him. You give him no choice. It has never entered your mind that possibly he might prefer California to Alaska. You consider only what you like. You do with him as you would with a sack of potatoes or a bale of hay."

This was a new way of looking at it, and Miller was visibly impressed as he debated it in his mind. Madge took advantage of his indecision.

"If you really love him, what would be happiness to him would be your happiness also," she urged.

Skiff Miller continued to debate with himself, and Madge stole a glance of exultation to her husband, who looked back warm approval.

"What do you think?" the Klondiker suddenly demanded.

It was her turn to be puzzled. "What do you mean?" she asked.

"D'ye think he'd sooner stay in California?"

She nodded her head with positiveness. "I am sure of it."

Skiff Miller again debated with himself, though this time aloud, at the same time running his gaze in a judicial way over the mooted animal.

“Brown Wolf,” by Jack London, 1907

Castles

by Elaine Langlois

People often think of castles as the fairy-tale homes of kings and queens. But the first castles were really high-tech weapons of war. From the 6th to the 14th centuries, in Asia, the Middle East, and Europe, powerful rulers and lords built mighty castles to show their power, subdue their enemies, and defend the lands they conquered.

Some of the best examples of castles can be found in Wales. From 1277 to 1305, King Edward I built or rebuilt 17 great castles to secure his hold on the country and bring it firmly under English rule. The king placed his castles on supply routes and in other strategic locations. He almost always built a town close by and sent English people to live there. They could get land, work that was often scarce at home, and opportunities to advance in society. One of a castle's most important functions was to defend the town.

A castle's strength began with carefully choosing where to build it. The first requirement was plenty of fresh water. The second was to take full advantage of the natural surroundings. Since King Edward's forces controlled the sea, for example, placing a castle so that it bordered the sea meant that he did not have to worry about attacks on that side. It also meant that he could send fresh troops and supplies when they were needed.



Photo Courtesy of Elaine Langlois

Caernarfon Castle

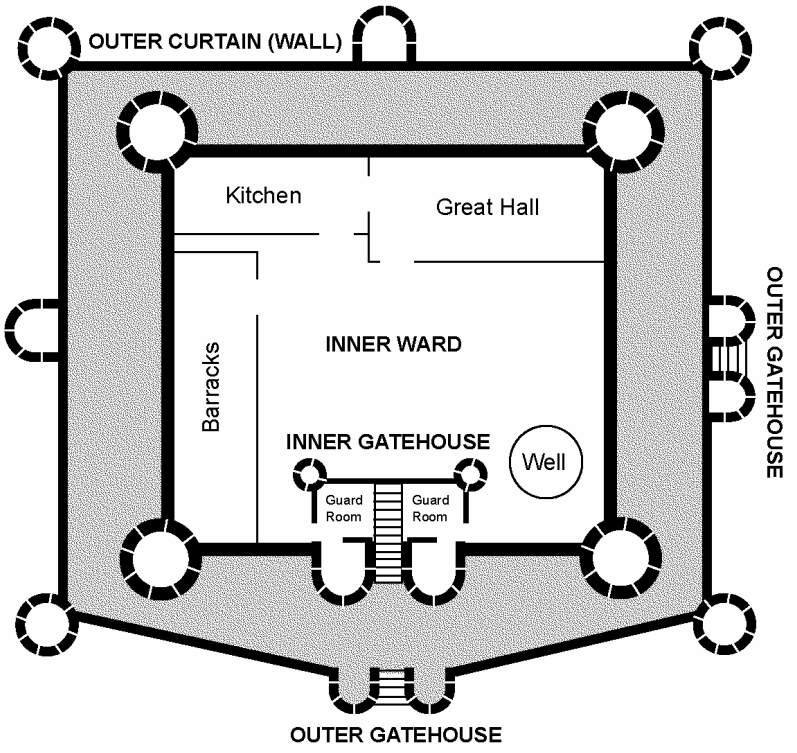
These castles consisted of two walls, one inside the other, enclosing open spaces. At intervals along both walls were towers, placed to command a view of different parts of the castle and the surrounding countryside, and to enable archers to cover particular parts of the walls and opposite towers.

In the towers of the inner wall, the most protected part of the castle, lived the lord or king and his family. Here you would also find the chapel, apartments, and dungeon. Along the inner wall stood the kitchen, the great hall where people ate, the barracks, and other structures.

A castle's first line of defense was often a deep ditch or moat, spanned by a drawbridge. It slowed the enemy's approach and offered some protection against two popular weapons. The first was the *siege tower*, a tall wooden structure, level at the top with a castle's wall. The tower was rolled up to the castle, a ramp was lowered, and the attackers simply stepped across the wall to fight. The second was *sappers*, soldiers whose job was to tunnel under a wall to collapse it. Castles had very thick walls to help prevent this from happening. The walls of Beaumaris Castle, for example, are 15 ½ feet thick.

A castle had few entrances, and they were carefully protected. A *gatehouse* consisted of a drawbridge and a pair of towers flanking a passage through the wall. The doorway was barred by a massive wooden door and a heavy wooden grille reinforced with iron called a *portcullis*. For further protection, a thick piece of timber called a *drawbar* could be set across the back of the door and secured in holes in the walls.

Gatehouses often had several doors and portcullises. The King's Gate at Caernarfon Castle, which was never completed, would have had five doors and six portcullises. The walls on either side of the passage contained *arrow loops*, narrow vertical slits for archers. The arrow loops were V-shaped to give the defender a wide field of fire.



For attackers unfortunate enough to be trapped between doors or portcullises, soldiers in a room above could shoot arrows or drop burning straw, tar, or stones through *murder holes* cut in the floor for that purpose. A wall projecting out over the entrance called a *machicolation* served the same function.

The entrances to the two walls were sometimes staggered, so that an enemy getting through the outer wall would have to run some distance across the space it enclosed while under fire.



Photo Courtesy of Elaine Langlois

Conwy Castle

The outer and inner walls had the same defenses. The square-cut stone at the top of a castle wall, which looks like teeth, is a familiar sight. The walls were made this way so that soldiers could defend the castle from behind them. The high parts were *merlons*, each containing an arrow loop with a *putlog hole* below. An archer could shoot from behind a merlon without exposing himself to enemy fire. The low parts, called *embrasures*, served as openings through which soldiers could drop missiles on the enemy. The soldiers stood on stone walkways called *wall walks* that connected the wall and towers.

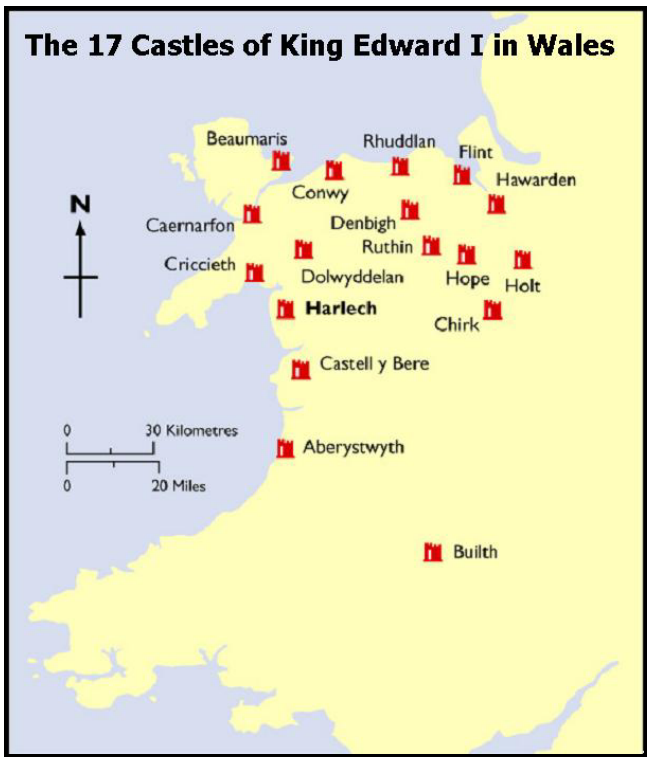
Each merlon was topped with three vertical spikes called *finials*. When an assault was expected, the castle's defenders built wooden platforms called *hoardings* that projected out from the walls, supported by the finials and beams thrust through the putlog holes. The hoardings enabled archers and other soldiers to aim at attackers at the base of the walls with greater accuracy.

For castles like Conwy that protected towns, a wall was built that attached to the castle and enclosed the town completely. This wall had most of the same defenses as the castle walls. Its wall walk was sometimes connected with wooden bridges at the back of each tower. If enemy soldiers gained access to part of the wall, the bridges could be taken out at either side, causing them to lose valuable time retracing their steps, finding a staircase down, and finding another staircase up, all while under fire from the defenders.

The castle's towers were designed to be held against enemies even if every other part of the castle were taken. The outer doors were made of thick wood. The spiral staircase built along the inner wall sometimes ran all the way to the top without connecting to the apartments where the king or lord and other nobles might be hiding. The only way to get to these apartments was to find a hidden staircase.

The staircase climbed clockwise so a defender could retreat up the stairs while fighting with his sword in his right hand. The attacker's stroke would be blocked by the staircase's central pillar. According to a tour guide at Conwy Castle, every eighth tower in a castle was built counterclockwise, for the use of left-handed soldiers. The guide said that one in eight English people at that time was left-handed.

By the end of the 15th century, new weapons such as cannons signaled the end of castles. By that time, King Edward's purpose had been accomplished. His castles played a big part in conquering Wales, but even more so did the towns they defended. As the king had planned, Welsh people moved into the towns, seeking safety and opportunities for work. Over time, they became loyal subjects. Opposition gradually disappeared, as did the age of castles.



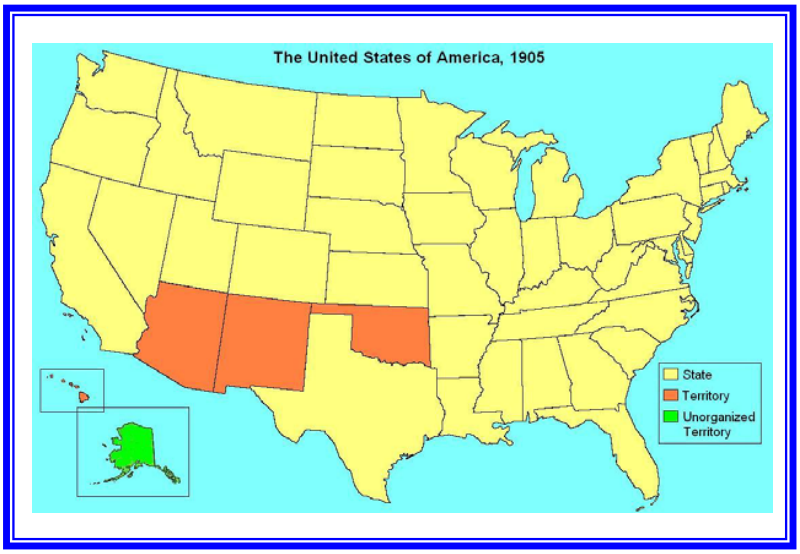
Inaugural Address of Theodore Roosevelt

March 4, 1905



1 My fellow-citizens, no people on earth have more cause to be thankful than ours. This is said reverently[1], in no spirit of boastfulness in our own strength, but with gratitude to the Giver of Good who has blessed us with the conditions which have enabled us to achieve so large a measure of well-being and of happiness. To us as a people it has been granted to lay the foundations of our national life in a new continent. We are the heirs of the ages. Yet we have had to pay few of the penalties which in old countries are exacted by the dead hand of a bygone civilization. We have not been obliged to fight for our existence against any alien race. Yet our life has called for the vigor and effort without which the manlier and hardier virtues wither away.

2 Under such conditions it would be our own fault if we failed. The success which we have had in the past, the success which we confidently believe the future will bring, should cause in us no feeling of vainglory[2]. Rather [it should cause] a deep and abiding realization of all which life has offered us. [It should effect] a full acknowledgment of the responsibility which is ours, and a fixed determination to show that under a free government a mighty people can thrive best, alike as regards the things of the body and the things of the soul.

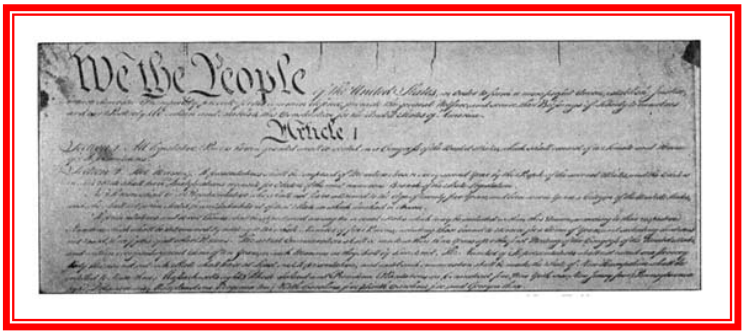


[1] **reverently:** respectfully; adoringly
[2] **vainglory:** ego; pride; vanity

3 Much has been given us, and much will rightfully be expected from us. We have duties to others and duties to ourselves; and we can shirk neither. We have become a great nation, forced by the fact of its greatness into relations with the other nations of the earth. We must behave as beseems a people with such responsibilities. Toward all other nations, large and small, our attitude must be one of cordial and sincere friendship.

4 We must show not only in our words, but in our deeds, that we are earnestly desirous of securing their good will by acting toward them in a spirit of just and generous recognition of all their rights. But justice and generosity in a nation, as in an individual, count most when shown not by the weak but by the strong. While ever careful to refrain from wrongdoing others, we must be no less insistent that we are not wronged ourselves. We wish peace, but we wish the peace of justice, the peace of righteousness. We wish it because we think it is right and not because we are afraid. No weak nation that acts manfully and justly should ever have cause to fear us. No strong power should ever be able to single us out as a subject for insolent[3] aggression.[4]

5 Our relations with the other powers of the world are important. But still more important are our relations among ourselves. Such growth in wealth, in population, and in power as this nation has seen during the century and a quarter of its national life is inevitably[5] accompanied by a like growth in the problems which are ever before every nation that rises to greatness. Power invariably[6] means both responsibility and danger.



6 Our forefathers faced certain perils which we have outgrown. We now face other perils, the very existence of which it was impossible that they should foresee. Modern life is both complex and intense. The tremendous changes wrought by the extraordinary industrial development of the last half century are felt in every fiber of our social and political being. Never before have men tried so vast and formidable[7] an experiment as that of administering the affairs of a continent under the forms of a Democratic republic. The conditions which have told for our marvelous material

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[3] **insolent:** rude, disrespectful, or bold in manner or speech; arrogant
[4] **aggression:** the act of beginning ill-will or invasion
[5] **inevitably:** impossible to keep from happening
[6] **invariably:** constant; unchanging
[7] **formidable:** fearful

well-being, which have developed to a very high degree our energy, self-reliance, and individual initiative, have also brought the care and anxiety inseparable from the accumulation of great wealth in industrial centers.

7 Upon the success of our experiment much depends, not only as regards our own welfare, but as regards the welfare of mankind. If we fail, the cause of free self-government throughout the world will rock to its foundations. Therefore, our responsibility is heavy, to ourselves, to the world as it is today, and to the generations yet unborn. There is no good reason why we should fear the future. But there is every reason why we should face it seriously, neither hiding from ourselves the gravity of the problems before us nor fearing to approach these problems with the unbending, unflinching purpose to solve them aright.



Emancipation Proclamation

8 Yet, after all, though the problems are new, though the tasks set before us differ from the tasks set before our fathers who founded and preserved this Republic, the spirit in which these tasks must be undertaken and these problems faced, if our duty is to be well done, remains essentially unchanged. We know that self-government is difficult. We know that no people needs such high traits of character as that people which seeks to govern its affairs aright through the freely expressed will of the freemen who compose it. But we have faith that we shall not prove false to the memories of the men of the mighty past. They did their work, they left us the splendid heritage we now enjoy. We in our turn have an assured confidence that we shall be able to leave this heritage unwasted and enlarged to our children and our children's children. To do so we must show, not merely in great crises, but in the everyday affairs of life, the qualities of practical intelligence, of courage, of hardihood and endurance, and above all the power of devotion to a lofty ideal. [It was this last quality] which made great the men who founded this Republic in the days of Washington, which made great the men who preserved this Republic in the days of Abraham Lincoln.



Note: Certain punctuation, sentence breaks, and paragraph breaks in the "Inaugural Address of Theodore Roosevelt" have been modified to reflect an appropriate reading level for Grade 8.

PLAYING WITH FIRE: THE KOMODO DRAGON

by Elizabeth Knapp

DRAGON LORE

In the second century AD, Chinese traders returned from the island of Komodo in Indonesia with stories of giant lizards that breathed fire. Mapmakers, drawing the island, scrawled next to it the phrase “Here be the dragons.” Gradually, the stories spread, and the dragon was born into Eastern mythology.

Western mythology built on the legend, and the dragon became a more menacing creature. Now dragons are everywhere, from Puff the Magic Dragon of the 1960s folk song to the long-lashed dragon from the movie *Shrek*. They are the characters of legend. But like many legends, this one has a basis in fact. What about the *real* dragons?

MEET THE DRAGON



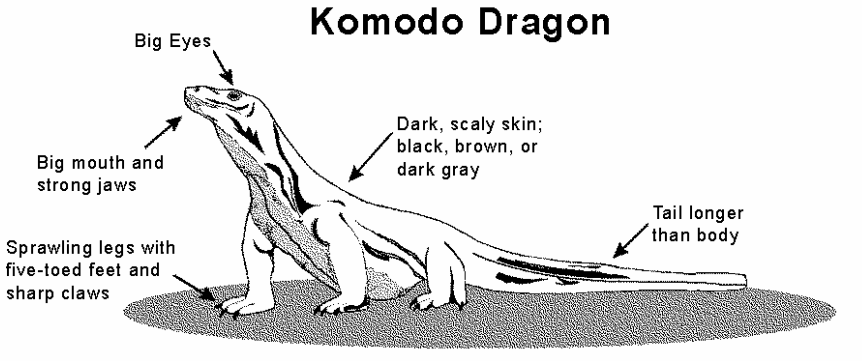
The largest lizards on Earth, Komodo dragons are also known as Komodo monitors, or *ora*, the local Indonesian name. These giant lizards live on the islands of Komodo, Rinca, Gili Motang, and Flores in southeastern Indonesia. As recently as the 1970s, Komodos also lived on the island of Padar. Except in zoos, you won’t run into a dragon anywhere but in Indonesia. In fact, their range is the smallest of any of the world’s large carnivores.

The islands inhabited by Komodos are semi-arid. They receive little rainfall during most of the year, and fires and long droughts are common. The islands’ landscape is marked by steep hills, rocky ground, and shallow soil. The environment is harsh. In these conditions, reptiles have an advantage over other animals, such as mammals, because they require less food. With small animals that can serve as prey in short supply, reptiles are better equipped to survive. As a result, the Komodo dragon sits at the top of the food chain on the islands it calls home.

KING OF THE LIZARDS

In its time, *Tyrannosaurus rex* was “King of the Lizards.” Today, the Komodo dragon holds that title. Komodo dragons are huge compared to other lizards. An average male is up to 9 feet long and can weigh as much as 550 pounds after a large meal. An average female is up to 5 feet long and can weigh 150 pounds. The Komodo has a stout body and a long, powerful tail. The dragon’s legs are short and strong. At the end of its five-toed feet are sharp talons, which it uses to run and tear apart prey.

Like other reptiles, Komodos have thick, leathery skin. They are usually a sandy brown color, with occasional dark markings or spots of red. The “fire” that the Chinese traders saw coming out of the dragons’ mouths was probably their long, yellow, forked tongues. Komodos use their tongues to taste the air for certain chemicals that tell them whether or not their next meal is near.



WHAT DO DRAGONS EAT?

Komodos eat just about any type of meat they can get their claws on. They are strictly carnivores and sometimes even cannibals, meaning they eat other Komodos. Baby dragons spend most of their youth hanging out in trees to escape older dragons. The preferred meal of adults is the Sundra deer, though they also eat wild boar, water buffalo, goats, rats, and many other animals. Although Komodos prefer fresh meat, they will eat carrion, or dead animals, if no other food is available.

While there are very few accounts of dragons actually eating humans, it has happened. The most famous incident took place in 1974, when a Swiss baron who was visiting the Indonesian islands mysteriously disappeared. After arriving on one of the islands, the baron’s group fed a goat to some Komodos on a beach. When they noticed the baron was missing a few hours later, they believed he had met a similar fate. During a search the next day, all that was discovered were the baron’s glasses and part of his camera. The body was never found.

This is in keeping with Komodos’ eating habits, since dragons consume almost every part of their prey, including the bones. Because Komodos don’t eat very often, they have to make the most of their food. In the wild, Komodos eat a large meal typically once a month. In between these feasts, they usually eat smaller animals, such as rodents.

Komodos also take advantage of their occasional big meals by eating as much as possible as quickly as they can. Like snakes, dragons have moveable joints in their skulls and lower jaws that open unusually wide. These features allow them to swallow large chunks of food very quickly. In addition, their stomachs expand easily, allowing them to eat up to 80 percent of their body weight in a single sitting.

DRAGON TEETH

Komodos have 60 small, razor-sharp teeth, with serrated edges like a knife. These teeth are designed to cut and tear at prey. While the Komodo dragon doesn't breathe fire, its mouth is deadly. After a Komodo has eaten, bits of meat get stuck in the ridges of its teeth. Over time, the meat mixes with the dragon's saliva, and deadly bacteria develop. Scientists have found about 50 species of bacteria in Komodos' saliva, at least seven of which cause fatal blood poisoning. An animal that has been bitten by a Komodo will usually die within a week. As soon as the animal dies, the Komodo detects the carcass with its keen sense of smell, and the dragons move in for the feast.

SAVE THE DRAGONS

The U.S. Fish and Wildlife Service and the Convention on the International Trade in Endangered Species have officially classified the Komodo dragon as an endangered species. Scientists estimate that fewer than 6,000 dragons exist in the wild. Humans pose the greatest threat to Komodos. In the 1970s and 1980s, the dragons were forced to abandon one island, because poachers had killed much of their prey. Other islands, such as Flores, are becoming more developed. As a result, the Komodos' habitat is shrinking.

Natural disasters also account for the decrease in the Komodo population. For example, a major volcanic eruption in 1969 wiped out much of the plant life in the region. With no plants to eat, the deer and other mammals died, which in turn affected the Komodos.

In 1915, the Sultan of Bima, a district on the island of Sumbawa, ordered the protection of the dragons. More recently, the government of Indonesia has taken additional steps to protect them, including the creation of the Komodo National Park in 1980. Each year, thousands of tourists from around the world come to see the Komodos. Scientists come, too, and their studies continue to yield new facts about these amazing creatures. Komodos are incredibly cool!



“The Land of Red Apples”



by Zitkala-Sa

There were eight in our party of bronzed children who were going East with the missionaries. Among us were three young braves, two tall girls, and we three little ones, Judewin, Thowin, and I.

We had been very impatient to start on our journey to the Red Apple Country, which, we were told, lay a little beyond the great circular horizon of the Western prairie. Under a sky of rosy apples we dreamt of roaming as freely and happily as we had chased the cloud shadows on the Dakota plains. We had anticipated much pleasure from a ride on the iron horse, but the throngs of staring palefaces[1] disturbed and troubled us.



On the train, fair women, with tottering babies on each arm, stopped their haste and scrutinized the children of absent mothers. Large men, with heavy bundles in their hands, halted near by, and riveted their glassy blue eyes upon us.

I sank deep into the corner of my seat, for I resented being watched. Directly in front of me, children who were no larger than I hung themselves upon the backs of their seats, with their bold white faces toward me. Sometimes they took their forefingers out of their mouths and pointed at my moccasined feet. Their mothers, instead of reproving such rude curiosity, looked closely at me, and attracted their children's further notice to my blanket. This embarrassed me, and kept me constantly on the verge of tears.

I sat perfectly still, with my eyes downcast, daring only now and then to shoot long glances around me. Chancing to turn to the window at my side, I was quite breathless upon seeing one familiar object. It was the telegraph pole which strode by at short paces. Very near my mother's dwelling, along the edge of a road thickly bordered with wild sunflowers, some poles like these had been planted by white men. Often I had stopped,

[1] **palefaces:** white people

on my way down the road, to hold my ear against the pole, and, hearing its low moaning, I used to wonder what the paleface had done to hurt it. Now I sat watching for each pole that glided by to be the last one.

In this way I had forgotten my uncomfortable surroundings, when I heard one of my comrades[2] call out my name. I saw the missionary standing very near, tossing candies and gums into our midst. This amused us all, and we tried to see who could catch the most of the sweetmeats. The missionary's generous distribution of candies was impressed upon my memory by a disastrous result which followed. I had caught more than my share of candies and gums, and soon after our arrival at the school I had a chance to disgrace myself, which, I am ashamed to say, I did.

Though we rode several days inside of the iron horse, I do not recall a single thing about our luncheons.

It was night when we reached the school grounds. The lights from the windows of the large buildings fell upon some of the icicled trees that stood beneath them. We were led toward an open door, where the brightness of the lights within flooded out over the heads of the excited palefaces who blocked the way. My body trembled more from fear than from the snow I trod upon.



Entering the house, I stood close against the wall. The strong glaring light in the large whitewashed room dazzled my eyes. The noisy hurrying of hard shoes upon a bare wooden floor increased the whirring in my ears. My only safety seemed to be in keeping next to the wall. As I was wondering in which direction to escape from all this confusion, two warm hands grasped me firmly, and in the same moment I was tossed high in midair. A rosy-cheeked paleface woman caught me in her arms. I was both frightened and insulted by such trifling. I stared into her eyes, wishing her to let me stand on my own feet, but she jumped me up and down with increasing enthusiasm. My mother had never made a plaything of her wee daughter. Remembering this I began to cry aloud.

They misunderstood the cause of my tears, and placed me at a white table loaded with food. There our party were united again. As I did not hush my crying, one of the older ones whispered to me, "Wait until you are alone in the night."

It was very little I could swallow besides my sobs, that evening.

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[2]**comrades:** friends

"Oh, I want my mother and my brother Dawee! I want to go to my aunt!" I pleaded; but the ears of the palefaces could not hear me.

From the table we were taken along an upward incline of wooden boxes, which I learned afterward to call a stairway. At the top was a quiet hall, dimly lighted. Many narrow beds were in one straight line down the entire length of the wall. In them lay sleeping brown faces, which peeped just out of the coverings. I was tucked into bed with one of the tall girls, because she talked to me in my mother tongue and seemed to soothe me.

I had arrived in the wonderful land of rosy skies, but I was not happy, as I had thought I should be. My long travel and the bewildering[3] sights had exhausted me. I fell asleep, heaving deep, tired sobs. My tears were left to dry themselves in streaks, because neither my aunt nor my mother was near to wipe them away.



[3]**bewildering:** confusing

“The Land of Red Apples,” by Zitkala-Sa, 1900

Martha Graham: Mother of Modern Dance

by Elizabeth Knapp



Martha Graham electrified the world with a new form of dance that came to symbolize the modern era. In Graham's world, the tightly controlled positions of classical ballet, the painful *pointe* shoes, and the stiff *tutus* were a thing of the past. Her movement was about freedom, expression, and energy. Barefoot and in flowing skirts, Graham thrilled audiences with dances filled with energy and emotion, on subjects ranging from ancient religion to modern art. Over her lifetime—nearly 70 years on the stage—Graham transformed the art of dance. So radical were her contributions that one critic joked, "If Martha Graham ever gave birth, it would be to a cube." To this day, she is known as the mother of modern dance.

Graham was born in 1894 in Pittsburgh. When she was 14, she moved with her family to Santa Barbara, California. While Graham was an athletic child, she did not discover dance until her teens. At 16, she visited the Mason Opera House in Los Angeles, where she saw the ballet dancer Ruth St. Denis. Graham was so inspired by St. Denis's performance that she decided to become a dancer herself.

Six years later, Graham enrolled in the Denishawn school in Los Angeles, which was founded by Ruth St. Denis and her husband, Ted Shawn. She worked mainly with Shawn, who helped her improve her technique. Shawn also created a dance for Graham, *Xochital*, in which she danced the role of an Aztec maiden. With her emotionally charged performance, Graham gained wide critical approval.

After eight years at Denishawn, Graham had developed into a mature and technically accomplished dancer. She was now ready to make her mark on the world.

Graham danced at the Greenwich Village Follies in New York City, where she was able to create her own dances. Yet she longed for even greater freedom. At the Eastman School of Music in Rochester, New York, she found her chance. Graham was given complete control over both her classes and the entire program. It was here that she began creating the experimental works that would mark her career.

Also at this time, Graham began to develop her own theories about dance. "I wanted to begin not with characters or ideas, but with movements," she said. "I wanted significant movement. I did not want it to be beautiful or fluid. I wanted it to be fraught with inner meaning, with excitement and surge."

Graham believed that classical ballet's concern with beauty and grace overlooked the connection between movement and the most basic human emotions. She wanted to return dance to a more emotional state, a state where all aspects of human experience are expressed. Graham's dances featured sharp and violent movements, such as jolts, trembling, and falls. In these wild and chaotic movements, Graham attempted to "chart the graph of the heart."

In 1927, Graham opened her own school, the Martha Graham School of Dance, in New York City. She also started a dance company. Like other artists in the 1930s, Graham examined social problems in her work. Many of her early pieces of this period, including *Immigrant*, *Vision of Apocalypse*, *Lamentation*, and *Revolt*, dealt with important social issues. During the Great Depression, Graham did not use sets in her dances, and most of the costumes she made herself.



After the hardships of the Great Depression lessened in 1933, Graham reinvented not only movement in dance but also set design. In *Frontier*, one of the company's early pieces about a pioneer woman, Graham worked with Japanese-American sculptor Isamu Noguchi. In Noguchi's set design, three-dimensional sculpture replaced the traditional flat backdrops that appear at the back of a stage. The effect, combined with Graham's striking movements, was bold, beautiful, and haunting. Graham also worked on sound design with Louis Horst, a close friend and important influence throughout her career.

Shortly after *Frontier*, the young ballet dancer Erick Hawkins joined the company. Hawkins and Graham appeared together in *American Document*, a piece she created for a performance at the White House in 1938. For the next ten years, Hawkins would dance in many of Graham's greatest pieces, such as *Appalachian Spring*. Throughout the late 1930s and early 1940s, Graham created pieces based on Greek myths, including *Cave of the Heart*, in which she danced the role of Medea.

In 1955, Graham presented one of her most powerful works, *Seraphic Dialogue*. In this piece, Graham told the story of Joan of Arc. Modern dance was closely related to the women's movement. Because of this, Graham felt a strong desire to portray the lives and accomplishments of both great and ordinary women. It is no wonder, then, that Graham had been invited by Eleanor Roosevelt to dance at the White House. Over the course of her career, Graham danced there for eight presidents.

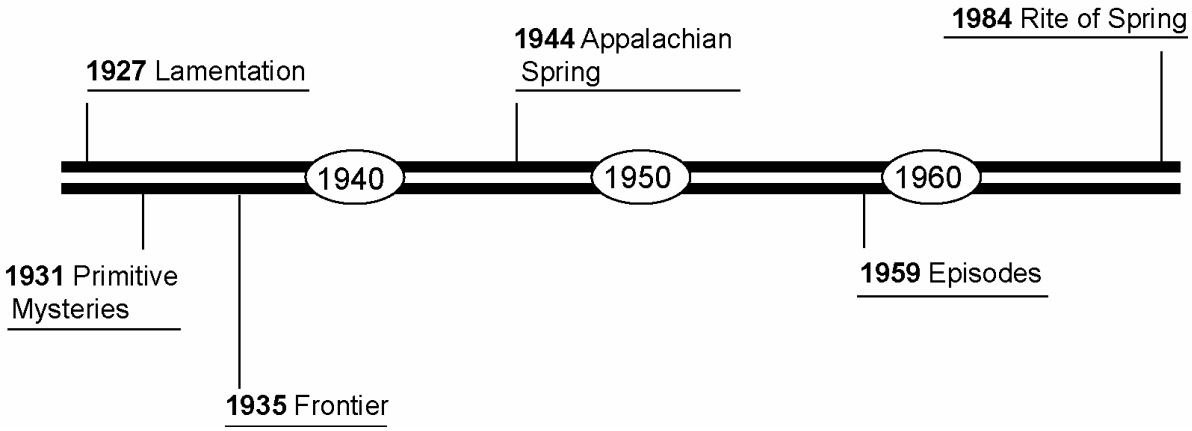
Martha Graham danced her last piece, *Cortege of Eagles*, when she was 76 years old. But a life without dance was impossible for her, and she continued to teach and create new pieces for the rest of her life. In 1991, while creating a dance called *The Eye of the Goddess* for the Olympics in Barcelona, Spain, Martha Graham died at the age of 96.



Like all great artists, Graham pushed the boundaries of her art to invent something new. Picasso had done it in painting; and Frank Lloyd Wright, in architecture. But until Martha Graham, no artist had ever challenged traditional ideas about dance.

Her style is now part of the common vocabulary of dancers everywhere, and her influence has spread far beyond the world of dance. She is one of the stars of twentieth-century art.

Martha Graham's Major Works



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Information desk staff. Provide guests with information about the museum and answer questions. (adults)

Tour guide. Give tours to school groups and other groups on request. Staff galleries, take tickets, and answer questions. (adults)

Usher. Take tickets and escort guests into and out of OMNIMAX and planetarium shows. (age 14 up)

Demonstrator. Make a volcano, clean fossils, and conduct other science experiments and activities. Help guests explore our bat cave, World War II submarine, ice cavern, and other exhibits; answer questions. (age 14 up)

Special events staff. Provide support at exhibit openings and other special events. Greet guests, give out programs, and work crowd control. (age 14 up)

Camp/class staff. Help supervise and assist with educational activities in camps, sleepovers, and classes. (age 14 up)

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- Free admission to the museum and OMNIMAX shows
- Free parking
- Discounts in the museum shop and cafeteria

Qualifications

- An interest and/or background in science
- A friendly, outgoing manner
- Good oral communication skills

No experience is necessary; the museum will provide training.

Commitment

- We ask that volunteers commit to work at least two 3.5-hour shifts per week for six months (one shift per week for youth volunteers).
- Volunteers will need to complete three to five Saturday training sessions.

If you would like to volunteer at the Mosby Science Museum, please complete an application form and mail it to Linda Watson, Volunteer Coordinator, or bring it to the museum. Applicants age 18 and under must include a letter of reference and a Parent/Guardian Permission Form with their application. If you have any questions, contact the Volunteer Services office at 555-0126, extension 24, or at volunteer@mosbysci.org. The office will call you to schedule an interview. Thank you for your interest in the Mosby Science Museum.

Youth Volunteer Application Form

Name: _____ Age: _____

Street Address: _____

City: _____ State: _____ ZIP: _____

Telephone: _____ E-mail address: _____

What school do you attend? _____

Please describe any jobs you have held, paid or unpaid. _____

_____

_____

_____

_____

_____

Please list any hobbies, skills, special interests, activities, and honors. _____

_____

_____

_____

_____

Why do you want to volunteer at the Science Museum?_____

_____

_____

_____

_____

What do you want to do at the museum? Please list the volunteer opportunities that interest you, in order of preference._____

_____

The application continues on page 3.

What hours would you like to work? Check all that apply.

June-August

Hours	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
10 a.m. to 1:30 p.m.	❒	❒	❒	❒	❒	❒	❒
1:30 p.m. to 5 p.m.	❒	❒	❒	❒	❒	❒	❒

September-May

Hours	Sat	Sun
10 a.m. to 1:30 p.m.	❒	
1:30 p.m. to 5 p.m.	❒	
11 a.m. to 2:30 p.m.		❒
2:30 p.m. to 6 p.m.		❒

If I am accepted as a volunteer at the Mosby Science Museum, I agree to follow the museum's rules and to complete three to five Saturday training sessions as needed.

_____ _____

Applicant's Signature Date

Parent/Guardian Permission Form

My child, _____, has my permission to serve as a volunteer at the Mosby Science Museum. I understand that my child will work not more than two shifts per week during the school year and that the Volunteer Coordinator will review hours with me and my child before setting them.

Parent/Guardian Information

Parent or Guardian Name: _____

Street Address: _____

City: _____ State: _____ ZIP: _____

Telephone (home): _____ Telephone (work): _____

Cell phone: _____

Medical Information

Please list any allergies, medical restrictions, or other pertinent medical information:

_____

_____

_____

Emergency Contact Information

Please provide the name of a relative or family friend not living with you.

Name: _____ Relationship to you: _____

Street Address: _____

City: _____ State: _____ ZIP: _____

Telephone (home): _____ Telephone (work): _____

Cell phone: _____

_____ _____

Parent or Guardian Signature **Date**

The Navajo Code Talkers

by Elaine Langlois

On December 7, 1941, following the Japanese attack on Pearl Harbor, the supervisor of a reservation is said to have looked out his window and seen a large group of young Navajos, all armed and carrying personal belongings. “We’re going to fight,” they told him.

Only a small number of Navajos had ever been off the reservation. Like other Native Americans, the many injustices they suffered included government schools that discouraged or forbade their children from speaking their own language. Yet that language and their patriotism gave the United States a powerful weapon that helped to win battles and saved thousands of lives.

It was Philip Johnston, a civil engineer and World War I veteran, who conceived of using a code based on the Navajo language. The son of a missionary, Johnston had grown up on a reservation and spoke Navajo well. Johnston became excited as he thought of why Navajo messages could baffle the Japanese:

- Navajo was an oral language and had never been written down.
- The Navajo nation consisted of just 50,000 people. Most of them lived on the reservation apart from the rest of the world.
- Navajo is very difficult to learn and speak.

Johnston believed that Navajos, using their own code, could carry on rapid and direct conversations over radios or phones. The Navajos would understand one another instantly without having to stop and decipher. The code would be hard to break. There was another advantage, too. The Japanese had a group of English-speaking soldiers whose job was to break into U.S. communications and issue false commands. They sometimes fooled troops into making a retreat or walking into an ambush. Sending messages only in Navajo would solve that problem.

Johnston proposed his idea to the area signal officer at Camp Elliott near San Diego. After a successful test two weeks later, the Marines recruited the first group of 29 code talkers.

The men went through the same basic training as other recruits. They also received special training in sending messages and repairing and operating radios. It was these Navajos who designed the code. The men selected 211 words that were used most often in military communications. Then they chose Navajo terms to represent those words. The code would not be written down, and the code talkers would have to work only from memory. Therefore, the men tried to choose shorter words from their general knowledge or life on the reservation.

Many of the words came from nature. For example, dive bomber became chicken hawk. A fighter plane was a hummingbird. A submarine was an iron fish. A battleship was a whale; a cruiser, a small whale. For words that would have to be spelled out, the Navajos chose a word to represent each letter of the alphabet. For example, A was Ant and Z was Zinc.

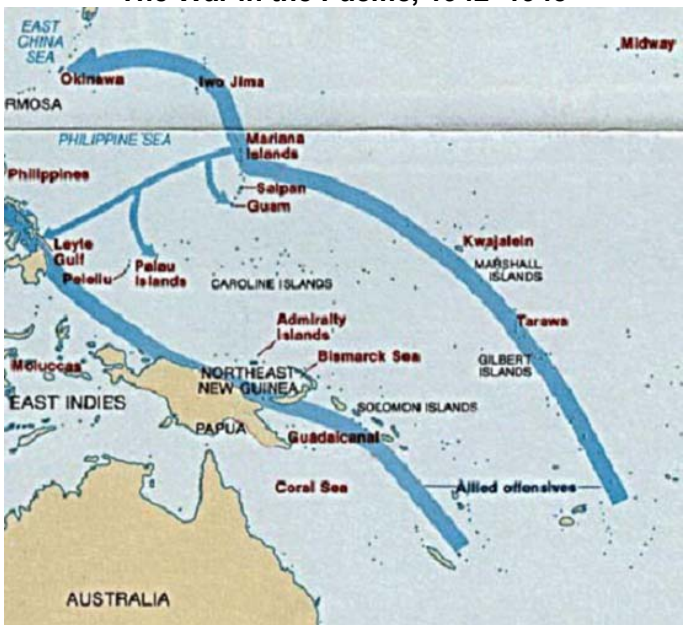
From the Navajo Code		
Word	**Navajo**	**Literal Translation**
America	NE-HE-MAH	Our mother
Artillery	BE-AL-DOH-TSO-LANI	Many big guns
Australia	CHA-YES-DESI	Rolled hat
Bull dozer	DOLA-ALTH-WHOSH	Bull sleep
Convoy	TKAL-KAH-O-NEL	Moving on water
Mortar	BE-AL-DOH-CID-DA-HI	Sitting gun
Robot bomb	A-YE-SHI-NA-TAH-IH	Egg fly
South America	SHA-DE-AH-NE-HI-MAH	South our mother
Submerge	TKAL-CLA-YI-YAH	Went under water
Tank	CHAY-DA-GAHI	Tortoise

Some 420 Navajos trained as code talkers. Most were assigned to combat units overseas. They served with all six Marine divisions in the Pacific. They also served with Marine Raider battalions and parachute units.

The code talkers entered the war as the Allies fought to gain control of the South Pacific and advance toward Japan. Allied bases were too far from Japan, even for the B-29, the Air Force's longest-range bomber. So the strategy was to capture an island along the way, establish a base there, and then move to the next island. Many of the islands were heavily defended by the Japanese. The battles to gain control of them were some of the toughest of the war.

During these assaults, the code talkers were often among the first to come ashore. Working in two-man teams, they lugged their radio set—which typically weighed about 80 pounds—to the side of a narrow trail carved through the jungle by the advancing Marines. They set up the radio's antennae and tied the generator to a tree to get it out of the sand. One man cranked the generator; the other sent and received messages. Other code talkers used walkie-talkies. Code talkers sent messages from lagoons, swamps, and foxholes.

The War in the Pacific, 1942–1945



The code talkers were used for many different situations and needs. They relayed messages to the front lines when enemy planes were spotted. They served as observers on the front lines, notifying headquarters of the size of enemy forces, their location, and where they were attacking. They relayed the huge number of rapid-fire messages that directed assaults. When U.S. troops accidentally began bombing their own forces in Saipan, a code talker sent the message that stopped the firing and saved the troops' lives. Often, the Navajos were used in tight situations where speed and accuracy were vital. They also performed the regular duties of all Marines.

Sometimes the code talkers were mistaken for Japanese and narrowly escaped being killed by their own troops. Some units assigned them bodyguards for this reason. Taking advantage of the situation, a code talker named Tom White stripped to the waist (so his uniform would not give him away), walked into two Japanese pillboxes, and took them single-handedly. Other code talkers moved through enemy lines to get information.

As the war continued, the code grew and changed. It was thought that using just one word to represent each letter of the alphabet was too risky, since codes are often broken by studying the most repeated letters in a message. So the Navajos added more words to represent each letter. The original list of 211 military terms nearly doubled.

The Navajo code talkers took part in every assault the Marines conducted in the Pacific from 1942 to 1945. These included well-known battles, such as Saipan, Tarawa, Guadalcanal, Peleliu, and Okinawa.

The battle for Iwo Jima began on February 19, 1945. The Japanese, secure in caves, pillboxes, and ravines, mounted a strong defense and cut down wave after wave of attackers. The code talkers played an important part in the conflict. In fact, according to Major Howard M. Conner, “Were it not for the Navajos, the Marines would never have taken Iwo Jima!” Conner gave this account of the code talkers’ performance:

> The entire operation was directed by Navajo code. Our corps command post was on a battleship from which orders went to the three division command posts on the beachhead, and on down to the lower echelons. I was signal officer of the Fifth Division. During the first forty-eight hours, while we were landing and consolidating our shore positions, I had six Navajo radio nets operating around the clock. In that period alone they sent and received over eight hundred messages without an error. Weeks later, when our flag was raised over Mount Suribachi, word of that event came in the Navajo code.

After the war, the Navajo code was classified as top secret until 1968. After it had been declassified and their work became known, the code talkers received many honors. In 2000, President George W. Bush presented the original 29 code talkers with Congressional Gold Medals and the code talkers after them with Congressional Silver Medals.

The Navajo code saved thousands of American lives. It played an important part in U.S. successes in many battles, including Guadalcanal, Tarawa, Saipan, Iwo Jima, and Okinawa. Some Navajo code talkers were killed performing their duties. The Japanese never broke the code.

Operation Migration

by Elaine Langlois



A clutch of long, wild calls sounds overhead, and you look up, expecting to see a flock of geese, flying in a *V* formation to their winter home. There's a *V*, all right—but at its center is an ultralight aircraft, with great white birds swept out on either side behind. It's day 1 of a 1,250-mile journey on a route the birds' ancestors last traveled more than a century ago. The man flying the plane is teaching endangered whooping cranes to migrate.

Standing nearly 5 feet, yet weighing just 11 to 16 pounds, the whooping crane is North America's tallest bird. It strides easily on stick-like legs, spanning almost a yard with every step. Its wings extend nearly 7.5 feet. Its feathers are snowy white, its wingtips black. The whooper is named for its sharp, arresting cry, which can be heard from two miles away.

Whooping cranes are found only in North America. When the first Europeans arrived, the population of whoopers was estimated at fifteen thousand. They ranged from Illinois through North Dakota and up to the Northwest Territories of Canada. They wintered along the Gulf of Mexico and nested from the northern prairies and central Alberta, Canada, to Iowa and Illinois.

As the country was settled, the cranes retreated west of the Mississippi, where a familiar set of events combined to drive them toward extinction. A principal factor was the widespread drainage of wetlands, for farming, where the whoopers nested and fed. The cranes were also shot for their feathers, which were used for women's hats. By 1870, their numbers had been reduced to fourteen hundred. By 1941–1942, just 15 birds remained.



Photo courtesy of U.S. Fish & Wildlife Service

The U.S. Fish and Wildlife Service joined with the Canadian Wildlife Service to see what could be done. With public education and protection along their migration route, the cranes began to recover. From the 15 survivors grew a flock that, as of February 2004, numbered 194.

In 1967, the whooping crane was listed as an endangered species. A team of specialists from the United States and Canada made a recovery plan. The team decided that two new flocks, with 25 nesting pairs each, were needed. They also decided the new flocks should be far from the existing flock to reduce the chance of spreading diseases.

After several failed attempts to establish a migrating flock, including using sandhill cranes as foster parents, the first new flock was established in Kissimmee Prairie, Florida. These cranes do not migrate because they were raised in captivity, and whooping cranes learn to migrate from their parents. Establishing a second flock that would migrate seemed almost impossible. That's where Operation Migration came in.

William Lishman is an ultralight pilot who dreamed of flying with birds. In 1994, Lishman and his partner, Joseph Duff, led 18 geese from Ontario, Canada, to Virginia, proving that humans can teach birds to migrate. Once such birds have been shown a migration route, they remember it for the rest of their lives. The two men formed Operation Migration, a nonprofit group that would study the use of planes in migration.

After three successful trials with non-endangered birds, the Whooping Crane Recovery Team gave Operation Migration permission to try to establish the second new flock. Necedah National Wildlife Refuge in Wisconsin was selected as its nesting grounds. The flock's winter home would be the Chassahowitzka National Wildlife Refuge in Florida.

In May and June 2001, at the Patuxent Wildlife Research Center in Maryland, 11 whooping cranes hatched to the recorded sound of an ultralight aircraft engine and the purring of an adult whooping crane. Like many birds, whooping cranes *imprint* on what they first see or hear. They recognize and trust it and may come to think of it as a parent. Dressed in bulky white costumes, the staff spoke in whispers and used a puppet crane to interact with the chicks.

When the cranes were a few days old, they were introduced to the ultralight plane. It's like a tricycle you can sit in—a small, stubby cab with a big fan behind. The pilot steers with handlebars that are attached to a 30-foot wing. The chicks were placed in a large circular pen. A costumed trainer, Dan Sprague, held a crane puppet head with a trapdoor, through which he dispensed mealworm treats. When Dan had the chicks' interest, he left the pen and began to taxi the aircraft, with the wings removed, around it. The recorded calls of adult cranes issued from a speaker. The chicks, which could not yet fly, ran around and around the pen to follow.

On July 10, the young cranes were taken to Necedah National Wildlife Refuge. Whooping cranes tend to return to nest to the place where they learned to fly, so the biologists wanted them to learn to fly at Necedah. Each morning, the birds followed the gently taxiing aircraft along a stretch of grass. A wing was added and then another. The plane began making low flights around the training site, and the birds followed. Foggy conditions and the flight ban after September 11 cut into training sessions. But the flights lengthened, and the birds grew stronger.



Photo courtesy of U.S. Fish & Wildlife Service

On October 17, three ultralight planes lifted off from Necedah with their eight young charges (two of the 11 chicks had died, and one had been injured). A safe route, with stops in deserted farms and fields, had been carefully planned. Still, weather conditions, especially strong headwinds, meant many lost or short days. The pilots also had to contend with the sound of interstates, which terrified the birds, and to guide back birds that strayed. One crane, whose pen broke open in a windstorm at night, flew into a power line and was killed. Another kept dropping out of flights. Eventually he was taken from site to site with the ground crew. There he was placed with the other birds, with the hope that he would fly back with them in the spring.

On December 3, after a 48-day journey, seven healthy whooping cranes arrived at their winter home. The following spring, the five survivors (two were killed by bobcats) made the return flight to Necedah on their own.

Operation Migration led two more groups of whooping cranes south in the fall of 2002 and 2003, for a total of 36 cranes. The project is planned to continue through 2005, when the flock should be large enough that the young cranes will learn from the adults, and the ultralights won't be needed.

Trainer Dan Sprague is often asked what the best part of the project is. In the field journal, he writes: "As I stand in the marsh among the cranes . . . All of the concerns of the day in my human life dissipate like the morning fog in the shallow eastern sun. . . . There are no thoughts about tomorrow; only here and now with the assurance of comfort in the unity of our small flock."



Did you know that …

- Whooping cranes have lived in North America for millions of years.
- Whooping cranes mate for life, although a crane will take a new mate if its mate dies, and they may "divorce" if unable to raise chicks.
- Whooper parents defend their chicks from cats, dogs, bald eagles, and even bobcats.
- Operation Migration uses "Crane-glish," crane sounds recorded by Dr. Bernard Wessling, to communicate with whoopers. Here's what the sounds mean:

  1. Attention, please! Danger!

  2. Do not land here! Keep flying!

  3. No problem.

  4. Come here. There's some food.

  5. Do not enter. This is my territory!

  6. We are a pair. We belong together and this is our territory.

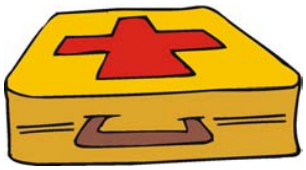
- Whooping cranes have their own individual voiceprints, by which people can track them. Like manatees and other migratory species, they are also tracked by satellite.
- During migration, whooping cranes face many dangers, including power lines and cell phone towers (the greatest threat), bad weather, and predators.
- It is illegal to capture, harm, or kill an animal that belongs to an endangered species.
- Whoopers eat both plants and small aquatic creatures. Their favorite food is blue crabs.
- William Lishman and Joseph Duff's work with geese inspired the 1996 movie *Fly Away Home* starring Jeff Daniels, and the two men worked on the movie.
- Estimates of whoopers' lifespans range from 20 to more than 50 years.
- Whooping cranes fly at about 30 miles per hour (with a tailwind, they've been clocked at 60) and can cover 200–400 miles in a day.

“Out, Out—”

by Robert Frost



The buzz-saw snarled and rattled in the yard
And made dust and dropped stove-length sticks of wood,
Sweet-scented stuff when the breeze drew across it.
And from there those that lifted eyes could count
Five mountain ranges one behind the other
Under the sunset far into Vermont.
And the saw snarled and rattled, snarled and rattled,
As it ran light, or had to bear a load.
And nothing happened: day was all but done.
Call it a day, I wish they might have said
To please the boy by giving him the half hour
That a boy counts so much when saved from work.
His sister stood beside them in her apron
To tell them “Supper.” At the word, the saw,
As if to prove saws knew what supper meant,
Leaped out at the boy's hand, or seemed to leap—
He must have given the hand. However it was,
Neither refused the meeting. But the hand!
The boy's first outcry was a rueful laugh.
As he swung toward them holding up the hand
Half in appeal, but half as if to keep
The life from spilling. Then the boy saw all—
Since he was old enough to know, big boy
Doing a man's work, though a child at heart—
He saw all spoiled. “Don't let him cut my hand off
The doctor, when he comes. Don't let him, sister!”
So. But the hand was gone already.
The doctor put him in the dark of ether.
He lay and puffed his lips out with his breath.
And then—the watcher at his pulse took fright.
No one believed. They listened at his heart.
Little—less—nothing!—and that ended it.
No more to build on there. And they, since they
Were not the one dead, turned to their affairs.



“Out, Out—,” by Robert Frost, 1920

Native American Sweat Lodges

by Elizabeth Knapp

Introduction

Have you ever been to a sauna at the gym? If so, then you have probably felt some of the benefits of the sweat bath. The sweat bath, or sauna, has been used by people around the world for many years. In countries such as Finland, Japan, and Turkey, sweat lodges have long been part of the national culture. In North America, the sweat lodge grew out of Native American culture, from a ritual known as the sweat lodge ceremony.

History

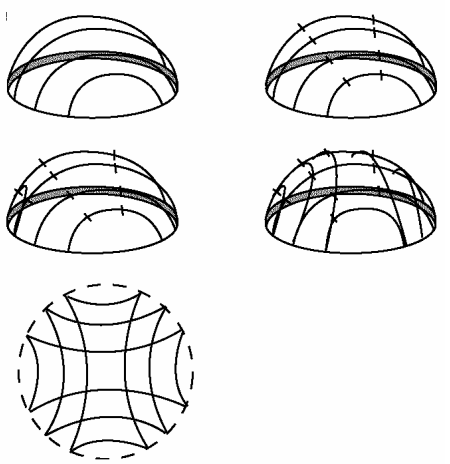
Early settlers provided some of the first descriptions of the use of sweat lodges by Native Americans. In 1643, Roger Williams of Rhode Island made this observation: "They use sweating for two ends: first to cleanse their skin; secondly to purge their bodies, which doubtless is a great means of preserving them." Like Williams, many others also saw the beneficial effects. In 1665, David DeVries of New York claimed that Native Americans who had taken a sweat bath were "entirely clean and more attractive than before."

For Native Americans, the sweat bath had other purposes besides a clean body and improved health. Sweat lodge ceremonies were performed as a way to cleanse and purify the soul and as a form of healing. Often, individuals would participate in these ceremonies before undertaking difficult tasks or challenges. In other cases, people would use the sweat lodge ceremony to purify themselves before taking part in a larger ritual, such as a Sun Dance.

Although most early settlers held a positive view of the sweat bath, many saw such Native American practices as a threat. One reason is that early settlers did not make an effort to learn about Native American culture and religion. They kept apart, believing that their way of life was superior and right. In many places, Christian missionaries and government leaders made sweat lodges illegal.

Some tribes, such as the Sioux, resisted these laws, though they were often harshly punished. Other tribes gave up the sweat lodge voluntarily. In Mexico, tribes were allowed to continue visiting the sweat lodge, as long as they did not use it for religious purposes. In areas of North America where the influence of white culture was less widespread, sweat bathing was tolerated and even accepted by the white community. Because of this attitude, tribes such as the Navajos of the Southwest and the Crows of Montana have carried the tradition of the sweat bath into the present day.

Construction and Heating



The most common way of building a sweat lodge came from the Plains Indians. These tribes built dome-shaped structures out of willow saplings, or young trees, over which they laid animal skins. The tribes of the Northeast made sweat lodges out of wood, bark, moss, and even seaweed. In California, sweat lodges were made of mud and wood. More permanent sweat lodges were built along the Northwest Coast, where tribes used wood planks to construct them.

The hot stone method, used by the Navajo and Sioux, is probably the most common way of heating sweat lodges. Stones are warmed by a fire outside and then placed in the sweat lodge's central fire pit. Water is thrown on the stones, producing steam. Another way to heat a sweat lodge is to build a fire inside. This is called the direct fire method. The Alaskan Eskimos, some Pacific Coast tribes, and the Pueblos Indians of the Southwest used this method. A third way of heating sweat lodges is through a more advanced system of heating ducts. This method is believed to be of Mayan origin.

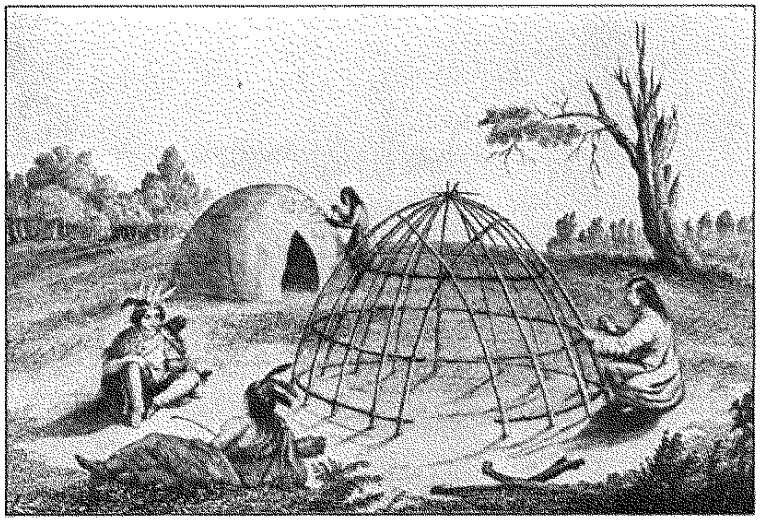
The Sweat Lodge Ceremony

Today, the sweat lodge ceremony is performed much as it was in the past. On the day of the ceremony, participants are expected not to eat. They build the sweat lodge together, remaining silent and focused on the task. Once the sweat lodge is complete, participants enter its dark and warm interior and begin the process of cleansing their bodies, minds, and spirits. In between periods of silent meditation, a spiritual leader guides participants in singing, chanting, and praying. A few hours later, they emerge from the sweat lodge, bathe in a nearby lake or river, and celebrate with a feast.

Everything about the sweat lodge ceremony is grounded in Native American spiritual beliefs. For example, the dome shape of the sweat lodge symbolizes the womb where a child lives before it is born. The lodge is often called Mother Earth's womb. The pit that holds the rocks is also symbolic. In the Plains Indian tradition, it represents the center of the universe. Throughout the building of the lodge and in the ceremony itself, participants call upon "the four directions"—North, South, East, and West. Each direction is believed to govern different areas of life. The North is associated with courage, strength, and patience. The East directs the mind and learning. The South rules the community, including family and government. And the West is the source of love, humility (being modest or humble), and holiness.

Conclusion

Despite attempts by white settlers to do away with many parts of Native American life, the sweat bath has survived as an important ritual. Like other peoples around the world, Native Americans understood and respected the physical and spiritual benefits of the practice. As Mikkel Aaland, author of *Native American Sweat Lodge,* writes: “As with any other religion or ritual, sweat baths would not have been given such cultural importance without serving mankind in practical ways.” Indeed, the sweat bath has been serving people all over the world through its purifying and healing power.



The Napoleonic Code

by Elizabeth Knapp



Napoleon Bonaparte is probably best known as the "Little Dictator," a man who rose through the ranks of the French army to become the master of Europe in the early nineteenth century. Yet he was also a key figure in the history of the legal system. In fact, Napoleon's most lasting effect on France and the world was the set of laws he created during his rule as emperor. These laws were so important that by 1960, more than 70 countries around the world had adopted them or had used them as the basis for their own laws. These countries include Iceland, Norway, Denmark, Spain, Portugal, Greece, and many Latin American countries. Even in the United States, Napoleon's influence is still felt. To this day, Louisiana's laws follow the Napoleonic Code.

The Napoleonic Code was originally drafted as the French Civil Code. With the French Revolution under way, France was on the brink of major legal reform. Before the revolution, France was a monarchy. During this time, French law was based on the whims of its kings.

Louis XIV, who named himself the "Sun King," summed up French law with his famous remark, "It is legal because I wish it." Laws were the product of each individual monarch. They were lengthy, complicated, and different from region to region. Before Napoleon, there was no single law or document to unify them.

During the French Revolution, the monarchy collapsed. Soon after, a new French state based on the ideas of liberty and reason was formed. The French Republic drew on the concepts of the Enlightenment, a movement that had been gaining steam throughout Europe and the world during the eighteenth century. Though the rise of Napoleon marked the end of the French Revolution, he was really a child of the revolution. "I am the revolution," he once said. Within his empire, Napoleon tried to spread the ideas of the French Revolution. These ideas included legal equality and religious and economic freedom.

In 1800, under Napoleon's orders, the French Council of State began to write the French Civil Code. The purpose of the code was to collect all of the French laws into a single volume that would be simple and easy to understand. At the heart of the code were three ideas from the revolution: that laws should be based on reason and common sense, that all men should be treated equally under the law, and that they should have certain freedoms. The Civil Code had several key concepts, including:

1. Legal equality for everyone.
2. No recognition of nobility or titles of birth.
3. Freedom of religion.
4. Separation of church and state.
5. Freedom to work in any occupation.
6. Protection of the family.

The Napoleonic Code was not without its flaws. Napoleon believed that women were inferior to men, and that they should not be allowed to have much influence in a society. As a result, the Napoleonic Code included laws restricting women and children. For example, under the code:

1. Women could not vote.
2. Husbands had complete control over their wives and their personal property.
3. Children and unmarried women had few rights.

Yet despite these flaws, the heart of the Napoleonic Code—reason, equality, and freedom—has survived throughout the ages. In Napoleon's lifetime, the code was adopted in many European states, including Germany, Italy, and Spain.

As a document, the code was important because it offered a unified system of law for the first time in modern history. As a set of ideas, it was even more powerful. Like the man who brought it into being, the Napoleonic Code was a revolution in itself.

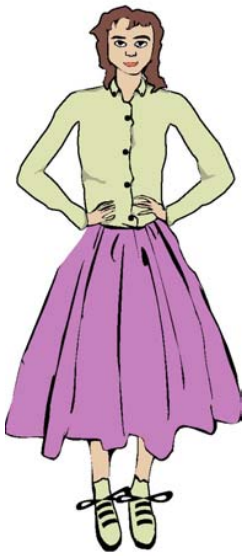
Europe, 1811

Height of Napoleon's Rule



“The Open Window”

by H. H. (Saki) Munro



"My aunt will be down presently, Mr. Nuttel," said a very self-possessed young lady of fifteen; "in the meantime you must try and put up with me."

Framton Nuttel endeavoured to say the correct something which should duly flatter the niece of the moment without unduly discounting the aunt that was to come. Privately he doubted more than ever whether these formal visits on a succession of total strangers would do much towards helping the nerve cure which he was supposed to be undergoing.

"I know how it will be," his sister had said when he was preparing to migrate to this rural retreat; "you will bury yourself down there and not speak to a living soul, and your nerves will be worse than ever from moping. I shall just give you letters of introduction to all the people I know there. Some of them, as far as I can remember, were quite nice."

Framton wondered whether Mrs. Sappleton, the lady to whom he was presenting one of the letters of introduction, came into the nice division.

"Do you know many of the people round here?" asked the niece, when she judged that they had had sufficient silent communion.

"Hardly a soul," said Framton. "My sister was staying here, at the rectory, you know, some four years ago, and she gave me letters of introduction to some of the people here."

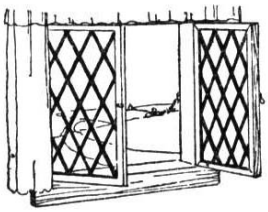
He made the last statement in a tone of distinct regret.

"Then you know practically nothing about my aunt?" pursued the self-possessed young lady.

"Only her name and address," admitted the caller. He was wondering whether Mrs. Sappleton was in the married or widowed state. An undefinable something about the room seemed to suggest masculine habitation.

"Her great tragedy happened just three years ago," said the child; "that would be since your sister's time."

"Her tragedy?" asked Framton; somehow in this restful country spot tragedies seemed out of place.



"You may wonder why we keep that window wide open on an October afternoon," said the niece, indicating a large French window that opened on to a lawn.

"It is quite warm for the time of the year," said Framton; "but has that window got anything to do with the tragedy?"

"Out through that window, three years ago to a day, her husband and her two young brothers went off for their day's shooting. They never came back. In crossing the moor to their favourite snipe-shooting ground they were all three engulfed in a treacherous piece of bog. It had been that dreadful wet summer, you know, and places that were safe in other years gave way suddenly without warning. Their bodies were never recovered. That was the dreadful part of it." Here the child's voice lost its self-possessed note and became falteringly human. "Poor aunt always thinks that they will come back some day, they and the little brown spaniel that was lost with them, and walk in at that window just as they used to do. That is why the window is kept open every evening till it is quite dusk. Poor dear aunt, she has often told me how they went out, her husband with his white waterproof coat over his arm, and Ronnie, her youngest brother, singing 'Bertie, why do you bound?' as he always did to tease her, because she said it got on her nerves. Do you know, sometimes on still, quiet evenings like this, I almost get a creepy feeling that they will all walk in through that window - "



She broke off with a little shudder. It was a relief to Framton when the aunt bustled into the room with a whirl of apologies for being late in making her appearance.

"I hope Vera has been amusing you?" she said.

"She has been very interesting," said Framton.

"I hope you don't mind the open window," said Mrs. Sappleton briskly; "my husband and brothers will be home directly from shooting, and they always come in this way. They've been out for snipe in the marshes to-day, so they'll make a fine mess over my poor carpets. So like you men-folk, isn't it?"

She rattled on cheerfully about the shooting and the scarcity of birds, and the prospects for duck in the winter. To Framton it was all purely horrible. He made a desperate but only partially successful effort to turn the talk on to a less ghastly topic; he was conscious that his hostess was giving him only a fragment of her attention, and her eyes were constantly straying past him to the open window and the lawn beyond. It was certainly an unfortunate coincidence that he should have paid his visit on this tragic anniversary.

"The doctors agree in ordering me complete rest, an absence of mental excitement, and avoidance of anything in the nature of violent physical exercise," announced Framton, who laboured under the tolerably wide-spread delusion that total strangers and chance acquaintances are hungry for the least detail of one's ailments and infirmities, their cause and cure. "On the matter of diet they are not so much in agreement," he continued.

"No?" said Mrs. Sappleton, in a voice which only replaced a yawn at the last moment. Then she suddenly brightened into alert attention - but not to what Framton was saying.

"Here they are at last!" she cried. "Just in time for tea, and don't they look as if they were muddy up to the eyes!"



Framton shivered slightly and turned towards the niece with a look intended to convey sympathetic comprehension. The child was staring out through the open window with dazed horror in her eyes. In a chill shock of nameless fear Framton swung round in his seat and looked in the same direction.

In the deepening twilight three figures were walking across the lawn towards the window; they all carried guns under their arms, and one of them was additionally burdened with a white coat hung over his shoulders. A tired brown spaniel kept close at their heels. Noiselessly they neared the house, and then a hoarse young voice chanted out of the dusk: "I said, Bertie, why do you bound?"

Framton grabbed wildly at his stick and hat; the hall-door, the gravel-drive, and the front gate were dimly-noted stages in his headlong retreat. A cyclist coming along the road had to run into the hedge to avoid an imminent collision.

"Here we are, my dear," said the bearer of the white mackintosh, coming in through the window; "fairly muddy, but most of it's dry. Who was that who bolted out as we came up?"

"A most extraordinary man, a Mr. Nuttel," said Mrs. Sappleton; "could only talk about his illnesses, and dashed off without a word of good-bye or apology when you arrived. One would think he had seen a ghost."



"I expect it was the spaniel," said the niece calmly; "he told me he had a horror of dogs. He was once hunted into a cemetery somewhere on the banks of the Ganges by a pack of pariah dogs, and had to spend the night in a newly dug grave with the creatures snarling and grinning and foaming just above him. Enough to make anyone their nerve."

Romance at short notice was her speciality.

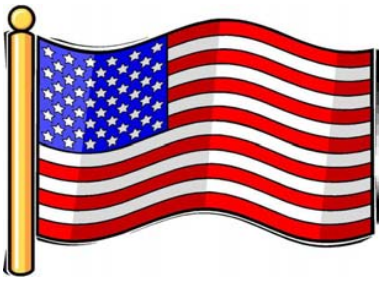
“The Open Window,” by H. H (Saki) Munro, 1911

The Promised Land

Excerpt from Chapter IX

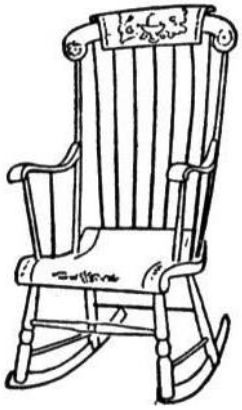
by Mary Antin

Our initiation into American ways began with the first step on the new soil. My father found occasion to instruct or correct us even on the way from the pier to Wall Street, which journey we made crowded together in a rickety cab. He told us not to lean out of the windows, not to point, and explained the word "greenhorn." We did not want to be "greenhorns," and gave the strictest attention to my father's instructions....



The first meal was an object lesson of much variety. My father produced several kinds of food, ready to eat, without any cooking, from little tin cans that had printing all over them. He attempted to introduce us to a queer, slippery kind of fruit, which he called "banana," but had to give it up for the time being. After the meal, he had better luck with a curious piece of furniture on runners, which he called "rocking-chair." There were five of us newcomers, and we found five different ways of getting into the American machine of perpetual motion, and as many ways of getting out of it. One born and bred to the use of a rocking-chair cannot imagine how ludicrous people can make themselves when attempting to use it for the first time. We laughed immoderately over our various experiments with the novelty, which was a wholesome way of letting off steam after the unusual excitement of the day.





In our flat we did not think of such a thing as storing the coal in the bathtub. There was no bathtub. So in the evening of the first day my father conducted us to the public baths. As we moved along in a little procession, I was delighted with the illumination of the streets. So many lamps, and they burned until morning, my father said, and so people did not need to carry lanterns. In America, then, everything was free, as we had heard in Russia. Light was free; the streets were as bright as a synagogue on a holy day. Music was free; we had been serenaded, to our gaping delight, by a brass band of many pieces, soon after our installation on Union Place.

Education was free. That subject my father had written about repeatedly, as comprising his chief hope for us children, the essence of American opportunity, the treasure that no thief could touch, not even misfortune or poverty. It was the one thing that he was able to promise us when he sent for us; surer, safer than bread or shelter. On our second day I was thrilled with the realization of what this freedom of education meant. A little girl from across the alley came and offered to conduct us to school. My father was out, but we five between us had a few words of English by this time.

We knew the word school. We understood. This child, who had never seen us till yesterday, who could not pronounce our names, who was not much better dressed than we, was able to offer us the freedom of the schools of Boston! No application made, no questions asked, no examinations, rulings, exclusions; no machinations, no fees. The doors stood open for every one of us. The smallest child could show us the way.

This incident impressed me more than anything I had heard in advance of the freedom of education in America. It was a concrete proof – almost the thing itself. One had to experience it to understand it.

It was a great disappointment to be told by my father that we were not to enter upon our school career at once. It was too near the end of the term, he said, and we were going to move to Crescent Beach in a week or so. We had to wait until the opening of the schools in September. What a loss of precious time – from May till September!...

The apex of my civic pride and personal contentment was reached on the bright September morning when I entered the public school. That day I must always remember, even if I live to be so old that I cannot tell my name. To most people their first day at school is a memorable occasion. In my case the importance of the day was a hundred times magnified, on account of the years I had waited, the road I had come, and the conscious ambitions I entertained.

And when the momentous day arrived, and the little sister and I stood up to be arrayed, it was Frieda herself who patted and smoothed my stiff new calico; who made me turn round and round, to see that I was perfect; who stooped to pull out a disfiguring basting-thread. If there was anything in her heart besides sisterly love and pride and good-will, as we parted that morning, it was a sense of loss and a woman's acquiescence in her fate; for we had been close friends, and now our ways would lie apart. Longing she felt, but no envy. She did not grudge me what she was denied….

The two of us stood a moment in the doorway of the tenement house on Arlington Street, that wonderful September morning when I first went to school. It was I that ran away, on winged feet of joy and expectation; it was she whose feet were bound in the treadmill of daily toil. And I was so blind that I did not see that the glory lay on her, and not on me.

Father himself conducted us to school. He would not have delegated that mission to the President of the United States. He had awaited the day with impatience equal to mine, and the visions he saw as he hurried us over the sun-flecked pavements transcended all my dreams. Almost his first act on landing on American soil, three years before, had been his application for naturalization. He had taken the remaining steps in the process with eager promptness, and at the earliest moment allowed by the law, he became a citizen of the United States. It is true that he had left home in search of bread for his hungry family, but he went blessing the necessity that drove him to America. The boasted freedom of the New World meant to him far more than the right to reside, travel, and work wherever he pleased; it meant the freedom to speak his thoughts, to throw off the shackles of superstition, to test his own fate, unhindered by political or religious tyranny.



The Promised Land, Excerpt from Chapter IX, by Mary Antin, 1912

The Undertaker's Chat

by Mark Twain

"Now that corpse," said the undertaker, patting the folded hands of deceased approvingly, "was a brick—every way you took him he was a brick. He was so real accommodating, and so modest-like and simple in his last moments. Friends wanted metallic burial-case—nothing else would do. I couldn't get it. There warn't going to be time—anybody could see that.

"Corpse said never mind, shake him up some kind of a box he could stretch out in comfortable, he warn't particular 'bout the general style of it. Said he went more on room than style, anyway in a last final container.



"Friends wanted a silver door-plate on the coffin, signifying who he was and wher' he was from. Now you know a fellow couldn't roust out such a gaily thing as that in a little country-town like this. What did corpse say?

"Corpse said, whitewash his old canoe and dob his address and general destination onto it with a blacking-brush and a stencil-plate, 'long with a verse from some likely hymn or other, and pint him for the tomb, and mark him C. O. D., and just let him flicker. He warn't distressed any more than you be—on the contrary, just as ca'm and collected as a hearse-horse; said he judged that wher' he was going to a body would find it considerable better to attract attention by a picturesque moral character than a natty burial-case with a swell door-plate on it.

"Splendid man, he was. I'd druther do for a corpse like that 'n any I've tackled in seven year. There's some satisfaction in buryin' a man like that. You feel that what you're doing is appreciated. Lord bless you, so's he got planted before he sp'iled, he was perfectly satisfied; said his relations meant well, perfectly well, but all them preparations was bound to delay the thing more or less, and he didn't wish to be kept layin' around. You never see such a clear head as what he had—and so ca'm and so cool. Jist a hunk of brains—that is what he was. Perfectly awful. It was a ripping distance from one end of that man's head to t'other. Often and over again he's had brain-fever a-raging in one place, and the rest of the pile didn't know anything about it—didn't affect it any more than an Injun Insurrection in Arizona affects the Atlantic States. Well, the relations they wanted a big funeral, but corpse said he was down on flummery—didn't want any procession—fill the hearse full of mourners, and get out a stern line and tow him behind.

He was the most down on style of any remains I ever struck. A beautiful, simpleminded creature—it was what he was, you can depend on that. He was just set on having things the way he wanted them, and he took a solid comfort in laying his little plans.

"He had me measure him and take a whole raft of directions; then he had the minister stand up behind a long box with a table—cloth over it, to represent the coffin, and read his funeral sermon, saying 'Angcore, angcore!' at the good places, and making him scratch out every bit of brag about him, and all the hifalutin; and then he made them trot out the choir, so's he could help them pick out the tunes for the occasion, and he got them to sing 'Pop Goes the Weasel,' because he'd always liked that tune when he was downhearted, and solemn music made him sad; and when they sung that with tears in their eyes (because they all loved him), and his relations grieving around, he just laid there as happy as a bug, and trying to beat time and showing all over how much he enjoyed it; and presently he got worked up and excited, and tried to join in, for, mind you, he was pretty proud of his abilities in the singing line; but the first time he opened his mouth and was just going to spread himself his breath took a walk.



"I never see a man snuffed out so sudden. Ah, it was a great loss—a powerful loss to this poor little one-horse town. Well, well, well, I hain't got time to be palavering along here—got to nail on the lid and mosey along with him; and if you'll just give me a lift we'll skeet him into the hearse and meander along. Relations bound to have it so—don't pay no attention to dying injunctions, minute a corpse's gone; but, if I had my way, if I didn't respect his last wishes and tow him behind the hearse I'll be cuss'd. I consider that whatever a corpse wants done for his comfort is little enough matter, and a man hain't got no right to deceive him or take advantage of him; and whatever a corpse trusts me to do I'm a-going to do, you know, even if it's to stuff him and paint him yaller and keep him for a keepsake—you hear me!"

He cracked his whip and went lumbering away with his ancient ruin of a hearse, and I continued my walk with a valuable lesson learned—that a healthy and wholesome cheerfulness is not necessarily impossible to any occupation. The lesson is likely to be lasting, for it will take many months to obliterate the memory of the remarks and circumstances that impressed it.



"The Undertaker's Chat," by Mark Twain, 1875

All About Tornadoes

by Elizabeth Knapp



Introduction

On June 23, 2003, the tiny town of Manchester, South Dakota, was lifted off the ground and swept away in a roar. Walls, rooftops, fences, telephones poles, and farm animals whirled around in the 200-mile-an-hour winds of a tornado, one of the worst in recent years. Half a mile wide, the tornado leveled everything in its path, leaving not a single building standing. While no deaths were reported, the Manchester tornado reawakened people to the dangers of one of Earth's most violent storms.

What Are Tornadoes?

According to the National Weather Service, a tornado is "a violently rotating column of air" that arises from a thunderstorm and touches the ground. While scientists do not yet fully understand how tornadoes work, they do know the three ingredients necessary for them to form:

- Warm, humid air near the ground
- Cooler air above
- Winds that change direction with speed and height

When these three factors are present, tornadoes are not far behind. Some may be thin and wispy and last only a few seconds. Others may be wide and powerful, roaring through the landscape for more than an hour. However, few are as devastating as the one that wiped out Manchester.

Bathtub Twisters

The best way to understand how tornadoes work is by taking a look at the water in your bathtub. When the water drains, a vortex, or whirlpool, forms. The downward flow of water into the drain creates this spiral motion. In a tornado, the same thing happens, except with air instead of water.

There is no drain in a tornado. Instead, there is a thunderstorm cloud. Within the thunderstorm cloud, a huge amount of energy gathers to create an updraft, or rising current of air, which begins to rotate. While the water in the bathtub drains down through the vortex, in a tornado, the air is sucked up into the updraft. In supercell thunderstorms, or storms that already have rotating winds, this updraft is even stronger. Tornadoes that form from supercell thunderstorms, such as the Manchester tornado, are especially dangerous.

The Nuts and Bolts of a Twister

The mechanics behind tornadoes and the whirlpool in your bathtub are the same. But tornadoes depend on certain weather conditions to form. Here is a step-by-step explanation of how a tornado forms:

1. Warm, moist air near the ground becomes trapped under cold, dry air.
2. A cap, or layer of stable air, forms between the hot air and the cold air.
3. A weather front, or movement in the upper atmosphere, disturbs the cap.
4. The warm, moist air pushes through the cap.
5. The rising warm air begins to rotate and gain speed.



Tornado Alley

About a thousand tornadoes touch down in the United States each year. Tornadoes are most common in an area of the country known as Tornado Alley. This area stretches from central Texas north through Oklahoma, Kansas, eastern Colorado, Nebraska, southeastern South Dakota, and southern Minnesota. In the spring, cool, dry air from the Rocky Mountains mixes with warm, moist air from the Gulf of Mexico. This creates an area of unstable air, which in turn causes thunderstorms to develop. According to Howard

Bluestein, professor of meteorology at the University of Oklahoma, "Conditions for the supercells that spawn tornadoes require strong vertical wind shear [changes in wind speed and direction with height] and lots of instability." In the spring and early summer, this is exactly what happens in Tornado Alley.

The Fujita Scale

Tornadoes are measured by the damage they cause, rather than by size or wind speed, as hurricanes are. Developed by Ted Fujita of the University of Chicago, the Fujita Scale ranks the damage caused by tornadoes on a scale of 0–5.

In general terms, F-0 and F-1 tornadoes are weak, F-2 and F-3 are strong, and F-4 and F-5 are violent. At one point, Fujita had even included an F-6 in his scale. However, the rating was later removed, because an F-6 tornado had never been observed. Until now, only F-5 tornadoes have been recorded. The worst tornado in history happened in 1925, when an F-5 tornado with winds of more than 300 miles per hour killed 695 people in Missouri, Illinois, and Indiana.

FUJITA SCALE	WINDS	TYPE OF DAMAGE	FREQUENCY
F0	40-72 mph	MINIMAL DAMAGE: Some damage to chimneys, TV antennas, roof shingles, trees, and windows.	29%
F1	73-112 mph	MODERATE DAMAGE: Automobiles overturned, carports destroyed, trees uprooted.	40%
F2	113-157 mph	MAJOR DAMAGE: Roofs blown off homes, sheds and outbuildings demolished, mobile homes overturned.	24%
F3	158-206 mph	SEVERE DAMAGE: Exterior walls and roofs blown off homes. Metal buildings collapsed or are severely damaged. Forests and farmland flattened.	6%
F4	207-260 mph	DEVASTATING DAMAGE: Few walls, if any, standing in well-built homes. Large steel and concrete missiles thrown far distances.	2%
F5	261-318 mph	INCREDIBLE DAMAGE: Homes leveled with all debris removed. Schools, motels, and other larger structures have considerable damage with exterior walls and roofs gone. Top stories demolished.	less than 1%

Weather Watch

While the Tri-State Tornado of 1925 took many lives, it is not likely that such a tornado would be as deadly today. With its advanced radar tracking system, the National Weather Service can predict when and where a tornado might develop. And through tornado watches and warnings, it can alert people. A tornado watch is issued when conditions are favorable for a tornado to develop. A tornado warning means that a tornado has been spotted. Today, in places like Manchester, South Dakota, few people are killed or injured by tornadoes, because they are able to take shelter before the twister hits.

Twister Safety

When a tornado watch or warning has been given, listen carefully to weather reports. Follow the advice of these reports, and seek shelter, if advised. Sometimes, a tornado develops so quickly that a warning is not possible. If a warning is issued or if threatening weather approaches, follow these steps for safety:

- In a house or building, move to the basement.
- If the house or building does not have a basement, move to an inside room or hallway on the lowest floor. Get under a heavy piece of furniture, such as a couch, desk, or bed.
- Stay away from windows.
- If you are in a car, do not try to drive away from a tornado. Instead, get out of the car immediately.
- If you are outside, lie flat in a nearby ditch or on lower ground.

The Chase Is On!

by Elizabeth Knapp

Imagine a job that takes you miles from home, through vast stretches of open land, to witness close-up one of the most violent and awe-inspiring acts of nature. Then imagine hours of driving and waiting, sitting in cars, sleeping in motels, and eating quick meals on the road. This is the life of a storm chaser, someone who tries to get close to storms—especially tornadoes—for the purpose of science or observation.

Most serious storm chasers are meteorologists, scientists who study and predict weather. While storm chasing may sound like a cool job, in the past, few people actually made a living from it. But since the 1996 movie *Twister*, that's begun to change. Now storm chasing has become an extreme sport, as well as a scientific pursuit. A number of storm-chasing tour companies have recently opened for business, and apparently, business is booming.

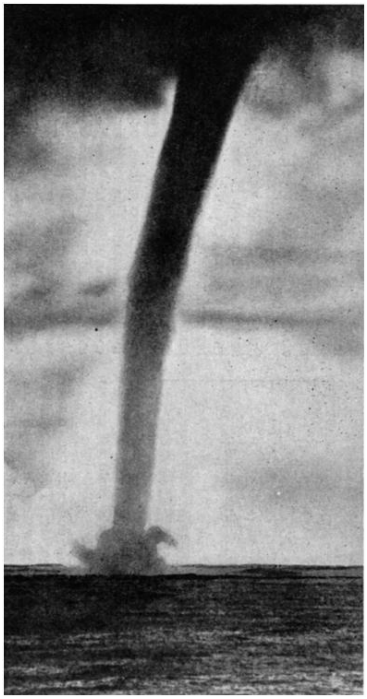
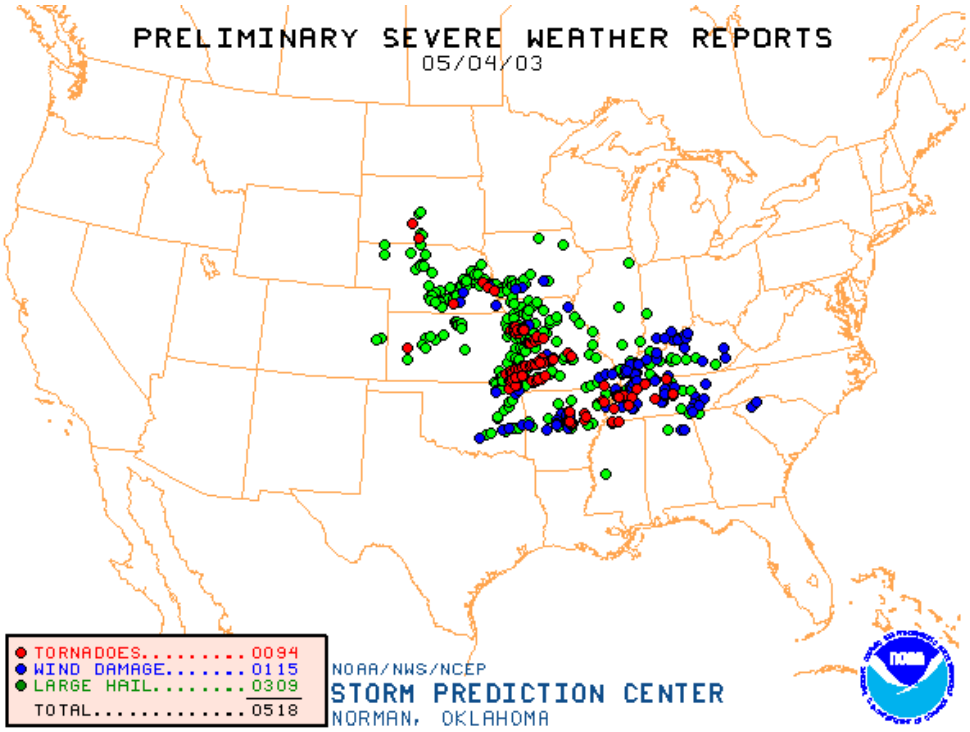


Photo Courtesy of clipart.com

David Gold is a professional storm chaser whose company, Silver Lining Tours, takes people on storm-chasing expeditions. Like other storm chasers, David is a meteorologist for whom studying the skies is a passion. His desire to know more about storms is what drives him closer to them. "The goal isn't to watch things get destroyed," he explains. "I think storms are pretty. I enjoy it. If I didn't, I wouldn't do it."

For David, business season starts at the end of April and runs until the end of June. His ten-day tours include the wide area of Tornado Alley, with frequent route changes along the way. Because driving to storms—especially through the wide open spaces of the Plains states—takes time, David and his crew need to know in advance where the best storms are likely to turn up. To make accurate predictions, he analyzes data from a variety of sources, including satellite and radar maps, charts showing wind direction and strength, and daily outlooks from the National Weather Service's Storm Prediction Center. David describes the process of creating a forecast for his tours in this way:

We start each day with a forecast made the night before. In the morning, we analyze data and see where our best chance is. I give the group a briefing, explaining our plans. We drive to the region, and I refine that forecast throughout the day. We get there early and get the latest data to narrow the area where we think the storm will be. Then we wait. If we're lucky, we get a good show.



Source: http://www.spc.noaa.gov

However, luck is not always on David's side. The chance of seeing a tornado is about 10 percent. David tries to increase these odds by relying on not only advanced weather reporting systems but also his own eyes. First, he looks for "towers," or towering cumulus clouds that mark the first stage in the formation of supercell thunderstorms. If a supercell forms, he uses his best judgment and tries to play it safe, usually by staying to the southeast of the storm.

Other veteran storm chasers sometimes take a more dangerous approach. These chasers do what is called "core punching," or driving into the core of rain and hail at a storm's center to get to the place where tornadoes might form. However, this is a very dangerous method that is not recommended by most chasers. Not only do core punchers run the risk of driving right into a tornado, but also they can be seriously injured or even killed by hail the size of baseballs.

For most chasers, like David, safety is the primary concern. Because he believes that education is the key to safety in storm chasing, David tries to educate his clients about storms and storm chasing. In talking about his responsibilities to his clients, he says:

> To me, education is as important as seeing storms. Most of the tourists are ordinary people from different walks of life who are interested in severe weather. They want to learn, so I try to make meteorology understandable to them. I give them useful information they can apply to their own lives. Most of this teaching is verbal because when you're storm chasing, handouts tend to get destroyed!

David's clients share his enthusiasm and sense of adventure. Like him, they are captivated by the beauty of the sky. And more than a few are probably in it for the excitement of the chase, even if they never actually see a tornado. But David is hoping they will. What's the best part of his job? "Helping people realize their dreams. Some people have always wanted to see tornadoes and other big storms in person, and I have helped them do that."



Who Needs Sleep?

by Elaine Langlois

We spend a third of our lives asleep, some 27 years. Yet we don't know exactly why.

Scientists are only beginning to understand why people need sleep. An obvious reason, suggested by research and our own experience, is that sleep helps our bodies recover from what we do during the day. Evidence indicates that sleep is the body's time to do general housekeeping, to clean cells and repair tissues. For example, during deep sleep, many cells produce more proteins and break fewer down. Our bodies need proteins for cell growth and to repair damage from stress, ultraviolet rays, and other sources. In children and young adults, deep sleep is the time that growth hormones are released.

We seem to need sleep for our nervous systems to function properly. With too little sleep, we're drowsy and less alert, and it's harder to concentrate. Our response time slows, and our attention strays. We can be irritable and make more mistakes. Other effects can include mood swings, reduced learning ability, and short-term memory problems. During deep sleep, activity in parts of the brain that control emotions, decision making, and interacting with others is greatly reduced. Giving these parts of the brain a rest while we sleep may help them work properly when we're awake.



Sleep also plays a role in the body's ability to fight and prevent illness. When we have a cold or the flu, for example, we're usually very tired. That may be because certain chemicals that the immune system produces when fighting an infection encourage us to sleep. Sleep may help the body conserve energy and other resources.

Finally, our bodies may use the time we sleep to organize and store our memories of the day's events. One study that supports this idea found that certain nerve-signaling patterns that occurred in rats during the day were repeated in deep sleep.

How Much Sleep Do You Need?

People used to think that teenagers didn't need as much sleep as children. But that's changed. A large body of research has proven that most teens need an average of 9 ¼ hours of sleep a night. Few of them get it. Only 15 percent of teens sleep for 8 ½ hours or more on school nights, and 26 percent sleep fewer than 6 ½ hours. Why are so many teens getting so little sleep?

One reason is that when you become a teenager, your sleep pattern changes. A hormone called melatonin, which helps people get to sleep, doesn't take effect until later at night in teens. In the evening when they might expect to feel tired, they're alert, and it's hard for them to fall asleep. Once the melatonin starts flowing, it doesn't turn off for nine hours. This helps explain why teens are sleeping on buses or feeling tired and finding it hard to concentrate in their first few classes.

But body chemistry isn't the only problem. Homework, jobs, and outside activities can keep young people up later. Caffeine cuts into sleep, too. Teens who drink coffee, soda, or other caffeinated beverages sleep 3 ½ fewer hours per week than those who don't. Certain activities, like playing computer games, surfing the Internet, and chatting online, also play a part. A TV in your bedroom cuts more than 2 hours a week from your sleep.

The Sleep Cycle

Stage	Time	Description
1	4–5%	**Light sleep.** Easily awakened. Brainwaves and muscle activity slow. Occasional muscle twitches.
2	45–55%	Breathing pattern and heart rate slow. Temperature dips slightly.
3	4–6%	**Deep sleep.** Hard to wake. Brainwaves slow.
4	12–15%	**Deep sleep.** Still hard to wake. Brainwaves still slow. Rhythmic breathing. Limited muscle activity.
5	20–25%	**REM sleep.** Rapid eye movement. Brainwaves increase to "awake" levels. Dreams. Rapid, shallow breathing. Muscles relax. Legs, arms, and muscles in face may twitch. Heart rate increases.

Source: "How Sleep Works," www.howstuffworks.com

Sleep Debt

Some people spend too much money and push themselves farther and farther into debt. Sleep debt works the same way. Your body's demand for sleep builds up when you get less than you need. If you missed some sleep during the week and then sleep an extra hour or two on Saturday, you wake feeling more rested, refreshed, and energetic. You've paid off some of your sleep debt.

Research shows that many people, including teens, routinely don't get enough sleep. One of the greatest concerns this raises is the increased risk of car accidents. According to the National Highway Traffic Safety Administration, driver fatigue is responsible for an estimated 100,000 accidents and 1,500 deaths each year. A North Carolina study found that 55 percent of crashes in which the driver falls asleep are caused by drivers age 25 or younger.

Scientists have studied the effects of insufficient sleep on adults. They think the effects in teens are similar, though more research is needed to be sure. Researchers believe that too little sleep is associated with a host of problems, including lower grades, poor school performance, negative moods, and a decreased ability to control emotions.

Starting School Later?

In response to these findings, some schools and school systems have pushed back start times for middle and high schools. In most cases, it is too soon to determine whether these changes have helped. The Minneapolis School District, which pushed back high school start times by nearly 90 minutes in 1997, completed a four-year study that showed improved attendance and a slight improvement in grades that cannot be related directly to getting more sleep. Another study that examined the impact of the change after a year yielded positive comments in a wide range of areas from small groups of parents, students, and teachers. Of 245 students and parents surveyed, 228 were pleased with the change.

You might think that changing the time school starts would be easy to do. In fact, there are lots of obstacles. In many school systems, elementary, middle, and high school students use the same buses, at staggered times. Frequently, teens start early so that younger children are not waiting for buses in the dark. Buying more buses is very expensive. Hours of school staff and bus drivers have to be changed. Later dismissal times cut into after-school activities and work. And some people think that teenagers and their parents, rather than schools, should solve sleep problems.

Getting More Sleep

- If you're one of those teens who could use more sleep, these tips from the National Sleep Foundation and other sources could help.
- Mats, music, and 20 minutes of sleep? Sounds like preschool, but the Power Nap Club is a hit in some high schools around the country.
- Don't have caffeine after noontime.
- Turn on bright lights in the morning and dim lights in the evening to send the right signals to your brain.

- Avoid activities like TV and chatting online just before bed.
- Get exercise, but not too close to bedtime.
- Take a shower or bath before bed.
- Don't go to sleep with music or TV.

Did You Know…

- Reptiles, birds, and mammals sleep. Fish, amphibians, and probably insects do not.
- Fatigue and sleepiness are factors in 1.1 million automobile crashes each year.
- Sleep disorders, sleep deprivation, and too much sleepiness in daytime cost about $15 billion in health care.
- Errors made by tired night-shift workers were partly to blame for the Exxon Valdez oil spill and the Three Mile Island and Chernobyl nuclear power plant accidents.
- One study found that medical interns working on the night shift are twice as likely as others to misinterpret hospital test records.

Excerpt from *The Narrative of William W. Brown, an American Slave*
Chapter 5

by William W. Brown



MY master had family worship, night and morning. At night the slaves were called in to attend; but in the mornings they had to be at their work, and master did all the praying. My master and mistress were great lovers of mint julep, and every morning, a pitcher-full was made, of which they all partook freely, not excepting little master William. After drinking freely all round, they would have family worship, and then breakfast. I cannot say but I loved the julep as well as any of them, and during prayer was always careful to seat myself close to the table where it stood, so as to help myself when they were all busily engaged in their devotions. By the time prayer was over, I was about as happy as any of them. A sad accident happened one morning. In helping myself, and at the same time keeping an eye on my old mistress, I accidentally let the pitcher fall upon the floor, breaking it in pieces, and spilling the contents. This was a bad affair for me; for as soon as prayer was over, I was taken and severely chastised.

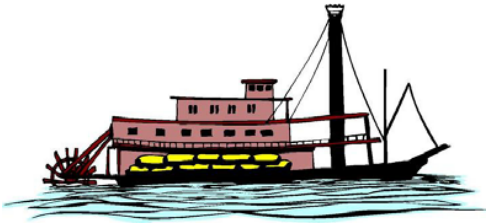


My master's family consisted of himself, his wife, and their nephew, William Moore. He was taken into the family when only a few weeks of age. His name being that of my own, mine was changed for the purpose of giving precedence to his, though I was his senior by ten or twelve years. The plantation being four miles from the city, I had to drive the family to church. I always dreaded the approach of the Sabbath; for, during service, I was obliged to stand by the horses in the hot, broiling sun, or in the rain, just as it happened.

One Sabbath, as we were driving past the house of D. D. Page, a gentleman who owned a large baking establishment, as I was sitting upon the box of the carriage, which was very much elevated, I saw Mr. Page pursuing a slave around the yard with a long whip, cutting him at every jump. The man soon escaped from the yard, and was followed by Mr. Page. They came running past us, and the slave, perceiving that he would be overtaken, stopped suddenly, and Page stumbled over him, and falling on the stone pavement, fractured one of his legs, which crippled him for life. The same gentleman, but a short time previous, tied up a woman of his, by the name of Delphia, and whipped her nearly to death; yet he was a deacon in the Baptist church, in good and regular standing. Poor Delphia! I was well acquainted with her, and called to see her while upon her sick bed; and I shall never forget her appearance. She was a member of the same church with her master.

Soon after this, I was hired out to Mr. Walker, the same man whom I have mentioned as having carried a gang of slaves down the river on the steamboat Enterprise. Seeing me in the capacity of a steward on the boat, and thinking that I would make a good hand to take care of slaves, he determined to have me for that purpose; and finding that my master would not sell me, he hired me for the term of one year.

When I learned the fact of my having been hired to a negro speculator, or a "soul driver," as they are generally called among slaves, no one can tell my emotions. Mr. Walker had offered a high price for me, as I afterwards learned, but I suppose my master was restrained from selling me by the fact that I was a near relative of his. On entering the service of Mr. Walker, I found that my opportunity of getting to a land of liberty was gone, at least for the time being. He had a gang of slaves in readiness to start for New Orleans, and in a few days we were on our journey. I am at a loss for language to express my feelings on that occasion. Although my master had told me that he had not sold me, and Mr. Walker had told me that he had not purchased me, I did not believe them; and not until I had been to New Orleans, and was on my return, did I believe that I was not sold.



There was on the boat a large room on the lower deck, in which the slaves were kept, men and women, promiscuously—all chained two and two, and a strict watch kept that they did not get loose; for cases have occurred in which slaves have got off their chains, and made their escape at landing-places, while the boats were taking in wood;—and with all our care, we lost one woman who had been taken from her husband and children, and having no desire to live without them, in the agony of her soul jumped overboard, and drowned herself. She was not chained.

It was almost impossible to keep that part of the boat clean.

On landing at Natchez, the slaves were all carried to the slave-pen, and there kept one week, during which time several of them were sold. Mr. Walker fed his slaves well. We took on board at St. Louis several hundred pounds of bacon (smoked meat) and corn-meal, and his slaves were better fed than slaves generally were in Natchez, so far as my observation extended.

At the end of a week, we left for New Orleans, the place of our final destination, which we reached in two days. Here the slaves were placed in a negro-pen, where those who wished to purchase could call and examine them. The negro-pen is a small yard, surrounded by buildings, from fifteen to twenty feet wide, with the exception of a large gate with iron bars. The slaves are kept in the buildings during the night, and turned out into the yard during the day. After the best of the stock was sold at private sale at the pen, the balance were taken to the Exchange Coffee-House Auction Rooms, kept by Isaac L. McCoy, and sold at public auction. After the sale of this lot of slaves, we left New Orleans for St. Louis.

Excerpt from *The Narrative of William W. Brown, An American Slave,* Chapter 5, by William W. Brown, 1849

Youth Volunteering:
Building Communities and Citizens

by Erin Huskey

1 Countless opportunities for young people to volunteer are available. While volunteering helps people in need, many ask what the benefits are for the volunteer. People also want to know how teenagers who are not old enough to drive can volunteer. The good news is that volunteering helps everyone involved, and there are ways around transportation problems.



2 Although there are several definitions of "volunteering," **sociologists**[1] tend to define volunteering as unpaid work to help the community. Often it is a promise to work with a **non-profit or not-for-profit agency**[2]. Some examples include the Humane Society, hospital candy striper programs, or community reading programs.

3 Several factors make people want to keep volunteering. To help volunteers want to continue with their project, they must see that their work is important and receive good directions and leadership. Also, they must enjoy their work or find it interesting. If all of these things are in place, volunteers are likely to continue with their work, grow as individuals, and volunteer in the future.

4 What personal benefits can a young person expect to gain from volunteering? First of all, volunteering gets a student involved in the community. It allows volunteers to have rewarding experiences, and it gives young people experience contributing to the community. Through such experiences, students

---

[1] **sociologist**: A scientist who studies how human societies started and developed; studies how both individuals and groups behave in society.
[2] **non-profit** or **not-for-profit agency**: An organization not run with the goal of making a profit; can be charities, hospitals, or community agencies. The agency may make a profit, but that is not the reason it exists.

can feel like they are positive and active members of their community. It can also prepare them to be involved in their communities as adults.



5 Volunteering also has positive effects on how young people think of themselves as individuals. Teenagers need experiences that make them feel valued. They also need to feel approval from others. Volunteering can give teenagers all of these positive experiences.

6 Parents should be involved so that volunteering is a positive experience for teenagers. There are several ways for parents to be a part of their children's volunteer work. One way is to teach their children as they are growing up positive ways to think about volunteering. Another way to encourage volunteering is if the parents are involved in volunteer work themselves. Last of all, parents should be aware of the details of the volunteer work and discuss their children's experiences with them.

7 People between the ages of fifteen and twenty-five do more volunteer work than any other group of people. One reason that there is a high rate of volunteering among this age group is that many schools now have a service learning requirement. In other words, schools are requiring students to do community service. This obligation is often a part of a civics or government class.

8 Some people do not consider service learning to be real volunteer work because it is required. Many times, though, it gets students to think about citizenship. Many teachers and researchers believe volunteer work is more meaningful if it is done while students are learning about how it works in our communities. Then students are more likely to understand the importance of being involved in their communities.

9 One problem for younger teenagers is transportation. When getting to and from volunteer work is a challenge, additional options exist. One alternative is to volunteer within the school system as a tutor. Students can also volunteer at the library doing many different things—from reshelving books to reading to younger children. Many other opportunities are available to young people. With

some creativity and a little research, everyone can find volunteer work to support individuals and the community.

10 Whether you are required to do volunteer work for a class or if you would like to help on your own, volunteering can help you grow and mature. Find something that interests you and talk it over with your parents. It is not too early to help in your community.

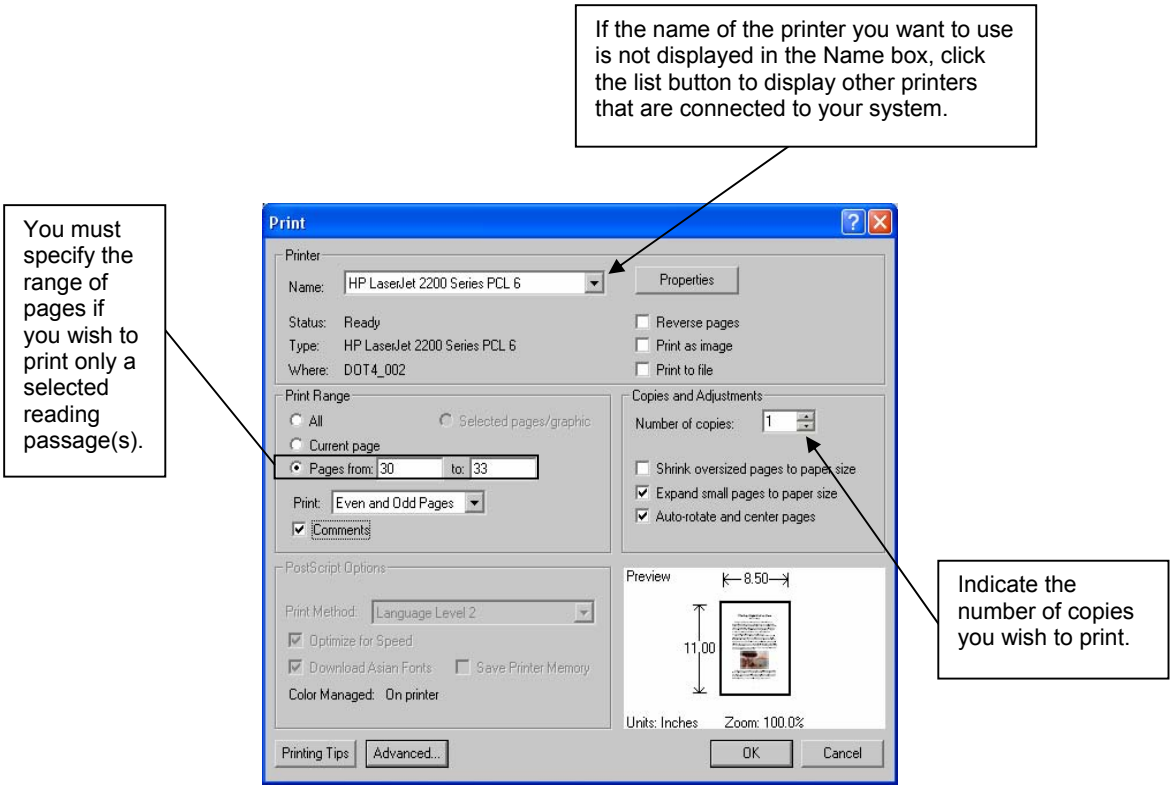
Volunteer Opportunities

- Animal Shelters
- Environmental Organizations (Sierra Club, Earth Day)
- Food Banks
- Homeless Shelters
- Libraries
- Red Cross
- Ronald McDonald House
- Senior Citizens Centers
- State Parks
- City Programs
- The Guideposts Sweater Project
- Helping Others Learn to Read
- Hospitals
- Political Campaigns
- Rest Homes
- Salvation Army
- Special Olympics
- United Way

HOW TO PRINT A READING PASSAGE

1. To display the reading passage that you wish to print, click the title of the reading passage in the navigation pane at the left.
2. As you view the pages of the reading passage, note the page numbers associated with the passage in the status bar below the passage.
3. Click the Print button  on the toolbar above the passage. The Print dialog box appears.
4. In the Print dialog box, specify the printer, the print range, and the number of copies you wish to print. Then click OK.

   Note: If you wish to print all the passages, select the *All* option in the Print Range section of the Print dialog box.



Student Name _____

Teacher Name _____

School _____

System _____





TENNESSEE

Tennessee Comprehensive Assessment Program

Achievement Test ~ Grade 8

Item Sampler

Table of Contents

Introduction 3

What is the TCAP Achievement Test? 3

What are the questions testing? 3

Who will be tested? 3

How long will the tests take? 3

How do I use the sample questions? 3

How will the tests be scored? 4

May calculators be used? 4

Which test accommodations may be used? 4

Here are some tips for preparing students for the test. 4

Reading/Language Arts 5

Mathematics 75

Science 91

Social Studies 118

Answer Key 158

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Introduction

What is the TCAP Achievement Test?

The TCAP Achievement Test is a multiple-choice test designed to measure student achievement in certain skills in four content areas: Reading/Language Arts, Mathematics, Science, and Social Studies. The sample questions in this on-line Item Sampler are representative of the item types and item formats that will be used in the actual test, including those questions with and without art.

What are the questions testing?

Questions are written to test student performance in state content standards. The State Content Standards and Performance Indicators were developed by the Tennessee Department of Education. These Standards and Performance Indicators are listed on the State Department of Education Web site at http://www.state.tn.us/education/curriculum.shtml.

Who will be tested?

All students in grades 3 through 8 will be tested.

How long will the tests take?

The length of the tests will vary, depending on the grade level. The time limits are generous and allow most students time to finish. Extended time limits only apply to students who are eligible for special or English Language Learner (ELL) accommodations.

How do I use the sample questions?

These questions provide information about the TCAP Achievement Test. The questions in the on-line Item Sampler are representative of questions that will be on the TCAP Achievement Test.

In a classroom learning session, these questions can be used to prepare students for the actual test. Item types with and without art are presented to better familiarize students with the actual test format.

An answer key for the sample questions is provided at the end of this on-line Item Sampler.

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How will the tests be scored?

The test answers will be machine scored. Results from the test provide information about how well students performed on the content being tested.

May calculators be used?

Calculators may be used on Part 1 and 2 of the Mathematics portions of the TCAP Achievement Test (grades 3–8) as per system policy.

Which test accommodations may be used?

The Achievement Test may be administered using various procedures that are used during the student's daily educational program. Certain conditions must be met for students to be eligible for special and ELL accommodations.

Here are some tips for preparing students for the test.

Remind students to:

Relax: It is normal to be somewhat anxious before the test. Remember that the score is only one of a number of measures of performance.

Listen: Listen to and read the test directions carefully.

Plan Use of Time: First, answer all the questions you are sure about. Do not spend too much time on any one question. If a question seems to take too long, skip it and return to it later if you have extra time.

Pause and Think: If you are not sure how to answer a question, carefully read it again. Rule out answer choices that you know are incorrect and then choose from those that remain.

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Reading/Language Arts



Directions **The following passage is a rough draft of a student's essay. It contains mistakes. Read the essay and answer Numbers 1 through 6.**

The Tool Belt

(1) My aunt handed me my great-grandmother's tool belt. (2) Five faded ribbons dangled from it and each ribbon had a small clip at the end that held a tool: a pair of dainty scissors, a narrow brass cylinder, a small square box, a tiny tape measure, and several threads of all colors looped around the last clip. (3) I compared it to mine, which held my hammer, screwdrivers, and tape measure.

(4) "This is a tool belt?" I asked.

(5) "It is called a *chatelaine*," my aunt replied, "and yes, it is a lady's tool belt. (6) *Chatelaine* is the French word that means 'lady of the castle.' (7) For all of her sewing projects, these are the tools your great-grandmother used."

(8) *Chatelaines* were first used in ancient Rome and were called *equipage*. (9) Women wore keys at the end of a decorative pin that was attached to a belt worn around their waists. (10) These keys unlocked small storage cabinets that contained important documents, money, spices, and other special items that the family owned.

(11) People began living in castles during medieval times. (12) During that time tradition held that a husband give his new bride *equipage* to show that he trusted her to take good care of the castle. (13) The wife not only wore keys but also added scissors, a small coin purse, a tape measure, and other items that were useful for work in a castle.

(14) In the early 1800s, the word *chatelaine* came into use women replaced keys with personal items. (15) One interesting example is a *vinaigrette*, a small container with holes drilled in it for holding sponges soaked with sweet-smelling oils. (16) Where some *chatelaines* also had miniature pens, notepads, and magnifying glasses, one *chatelaine* from this period had a miniature music box attached to it, and another had a compass. (17) Some *chatelaines* consisted of metal rings with ribbons hanging from them like my great-grandmother's, while others had been made from a variety of materials, including gold, silver, brass, wood, and leather.

(18) I smiled when I examined my great-grandmother's *chatelaine*. (19) In its cylinder were two sewing needles and a rolled up piece of paper with these words written on it: Be ever helpful.

Go On ▶

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Reporting Category: 1 Language

Performance Indicator: 0801.1.2 Identify the correct use of verbs (i.e., action/linking, regular/irregular, agreement, perfect tenses, verb phrases) within context.

1 **Read Sentence 17.**

> *Some* chatelaines *consisted of metal rings with ribbons hanging from them like my great-grandmother's, while others had been made from a variety of materials, including gold, silver, brass, wood, and leather.*

Choose the correct revision for the underlined words in the sentence.

A were made

B have been made

C were being made

D made

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Reporting Category: 1 Language

Performance Indicator: 0801.1.4 Identify the correct use of conjunctions (i.e., coordinating, correlative, subordinating) and interjections within context.

2 Read Sentence 16.

> *Where some* chatelaines *also had miniature pens, notepads, and magnifying glasses, one* chatelaine *from this period had a miniature music box attached to it, and another had a compass.*

Which word is the best replacement for the underlined word in the sentence?

F Whenever

G Because

H Since

J Although

Reporting Category: 1 Language

Performance Indicator: 0801.1.5 Identify the correct use of prepositional phrases (place correctly according to the words they modify within the sentence) within context.

3 Read Sentence 7.

> *"For all of her sewing projects, these are the tools your great-grandmother used."*

What is the best way to revise this sentence?

A "These are the tools for all of her sewing projects your great-grandmother used."

B "These are the tools your great-grandmother for all of her used sewing projects."

C "These are the tools your great-grandmother used for all of her sewing projects."

D "These are for all of her sewing projects the tools your great-grandmother used."

Go On ▶

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Reporting Category: 1 Language

Performance Indicator: 0801.1.6 Identify the correct use of commas (i.e., compound sentences, coordinating conjunctions, introductory words, appositives, interrupters) within context.

4 **Read Sentence 2.**

Five faded ribbons dangled from it and each ribbon had a small clip at the end that held a tool: a pair of dainty scissors, a narrow brass cylinder, a small square box, a tiny tape measure, and several threads of all colors looped around the last clip.

What is the best way to revise the underlined words in the sentence?

F from it, and each ribbon had a small

G from it and each ribbon had a, small

H from it, and, each ribbon had a, small

J from it and each ribbon, had a small

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Reporting Category:	**1 Language**
Performance Indicator:	**0801.1.7 Identify within context a variety of appropriate sentence-combining techniques (i.e., comma + coordinating conjunction, use of semicolon, introductory phrases or clauses).**

5 **What is the best way to combine Sentences 11 and 12?**

A During medieval times, people began living in castles, and tradition held that a husband give his new bride *equipage* to show that he trusted her to take good care of the castle.

B Tradition held that a husband give his new bride *equipage* to show that he trusted her to take good care of the castle when people began living in castles during medieval times.

C People began living in castles during medieval times, and, during that time, tradition held that a husband give his new bride *equipage* to show that he trusted her to take good care of the castle.

D When people began living in castles during medieval times, tradition held that a husband give his new bride *equipage* to show that he trusted her to take good care of the castle.

Go On ▶

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Reporting Category: 1 Language

Performance Indicator: 0801.1.8 Select the most appropriate method to correct a run-on sentence (i.e., conjunctions, semicolons, periods to join or separate elements).

6 **Read Sentence 14.**

In the early 1800s, the word chatelaine *came into use women replaced keys with personal items.*

What is the best way to write this sentence?

F In the early 1800s, the word *chatelain*e came into use, women replaced keys with personal items.

G In the early 1800s, the word *chatelaine* came into use. Women replaced keys with personal items.

H In the early 1800s, the word *chatelaine* came into use; however, women replaced keys with personal items.

J correct as is

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Directions **Darien wrote the following report. It contains mistakes. Read the report and answer Numbers 7 through 11.**

(1) When people in ancient times wanted a safe and reliable way to identify and store food, they invented seals. (2) Smearing wet clay around the lid of a basket or jar worked to keep the lid securely closed. (3) Then the basket or jar could be stored until the item was needed.

(4) This worked until people had difficulty telling which basket or jar held spring planting seeds and which one held the grain for winter meals. (5) There was another complication. (6) Once people began to store items in warehouses, they did not know which jar belonged to them and which belonged to someone else. (7) Since writing had not been invented yet, it was not an option for labeling the containers.

(8) The solution was to carve the image of the contents on a soft stone and then stamp the design in the clay before it dried. (9) An owner's special mark could also be carved on a stone and pressed into the clay next to the symbol for the contents. (10) Clay seals, and the imprints on those, were also fastened to the strings and ropes that closed sacks and bundles of food.

(11) When ancient farmers enjoyed an abundant harvest and needed a large warehouse for storage, they developed a system for keeping track of each person's stored crops. (12) They used a counter, such as a pebble or clay ball, to show how many bushels of grain they were storing. (13) When farmers came to collect the grain, the counters were taken out of a sealed and stamped container and used to determine how many bushels of grain were returned to the farmers.

(14) Seals are still used today. (15) The envelope in the mail, the plastic ring under the cap of many bottles, and the little tab of paper on new salt containers are all seals. (16) Some are labeled, while some are not. (17) They serve the same purpose now as they did in ancient times. (18) Seals mean the contents are kept safe until opened.

Go On ▶

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Reporting Category:	**1 Language**
Performance Indicator:	**0801.1.1 Identify the correct use of nouns (i.e., common/proper, singular/plural, possessives, direct/indirect objects, predicate nouns) and pronouns (i.e., reflexive, interrogative, demonstrative) within context.**

7 **Read Sentence 10.**

Clay seals, and the imprints on <u>those</u>, were also fastened to the strings and ropes that closed sacks and bundles of food.

Which pronoun <u>best</u> replaces the underlined word?

A theirs

B them

C these

D they

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Reporting Category: 1 Language

Performance Indicator: 0801.1.13 Form singular and plural possessive using apostrophes correctly.

8 Read Sentence 11.

When ancient farmers enjoyed an abundant harvest and needed a large warehouse for storage, they developed a system for keeping track of each person's stored crops.

What is the correct way to write the underlined words?

F each persons

G each persons'

H each persons's

J correct as is

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.6 Choose the supporting sentence that best fits the context and flow of ideas in a paragraph.

9 **Which sentence best ties together the ideas in Sentences 6 and 7?**

A Farmers with an abundant harvest needed a storage place.

B Containers could easily end up with the wrong person.

C The containers were often made of clay.

D Warehouses could easily become disorganized.

Go On ▶

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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.7 Identify sentences irrelevant to a paragraph's theme or flow.

10 **Which sentence from the last paragraph is unnecessary?**

F Seals are still used today.

G Some are labeled, while some are not.

H They serve the same purpose now as they did in ancient times.

J Seals mean the contents are kept safe until opened.

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.10 Select an appropriate title that reflects the topic of a written selection.

11 **What is the best title for this report?**

A The Growth of Seals

B Identifying Stored Crops

C Ancient Seal, Modern World

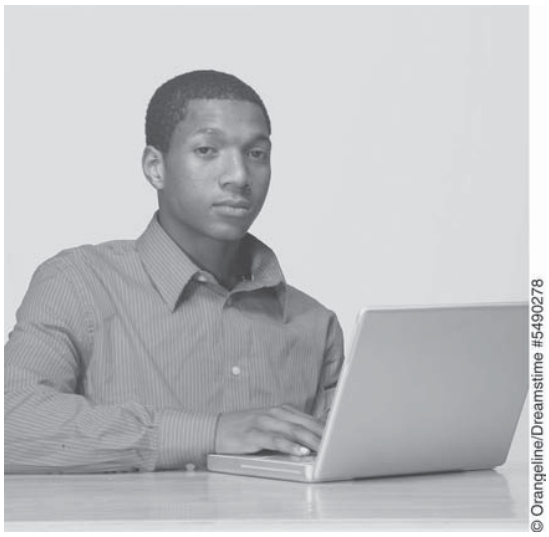
D The Complications of Ownership

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Directions **The following passage is a speech. Read it and answer Numbers 12 through 26.**

Is Online School for You?

1 Have you ever wished you didn't have to wake up early, get dressed, and go all the way to school? For 700,000 American kids, this wish comes true every day. They attend school over the Internet using ordinary home or library computers. This kind of learning has several names: online learning, distance learning, or virtual learning. Regardless of what it is called, this idea may create an impression of a lonely kid reading pages of information on a computer screen rather than from a book. It might also summon an image of another kid spending the day playing video games and typing instant messages to friends instead of learning mathematics or reading a book. Where online education is concerned, both of these scenarios are false! Online learning does not mean learning by oneself. Nor does it mean skipping work altogether. It simply means learning—differently. For some students, online school may be ideal, but for others, traditional school may better meet their needs.



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2 Online schools offer many benefits for the learner. Flexibility is the main advantage. Students can attend school wherever and whenever they desire. Homework can be turned in from anywhere the student has Internet access. Additionally, many online schools will allow students to work at their own pace. Math whizzes are typically the best online students because they can work quickly through the subject while extra allowances can be taken for subjects requiring more time.

3 Another advantage of online schooling is with the variety of courses. Most online schools teach the same basic classes like English, math, science, and history. However, some online schools offer specialized courses in subjects such as space science, French, or zoology. Traditional schools are often unable to offer these types of classes if there are not enough students or funds to support them.

Go On ▶

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4 Online schools also have different types of learning tools for kids to use. For example, many online schools have special Web sites where only students registered in online classes can watch videos, see lessons presented, or chat with teachers and other students. Imagine being able to replay the movie seen in your history class again if you needed to review it. Other online schools have live class times where students can call and talk with the teacher directly. Some of these online schools even have virtual clubs where kids can talk with each other about their hobbies.

5 Of course, there are some drawbacks of going to school online. Though there are some free online schools, most charge an admission fee. Also, the learner should be prepared to do much of their class reading and writing homework independently. Because teachers are not present to monitor progress, online students must stay very organized in order to complete the required work for each class by the end of the semester. Even though learners may work at their own pace, timelines are established to ensure students finish their coursework in a reasonable amount of time. Finally, online students may not see or talk to friends as often as they would in a traditional school setting. There are no organized extracurricular activities, and those interactions cannot be replaced by a computer, no matter how fun it is to use computers.

6 Yes, computer technology is amazing, and we use computers for chatting with our friends, listening to music, and playing games. Almost every part of our lives is affected by them, and school is no exception. Since 2006, at least 38 states either have their own online schools or made rules for students attending them. It looks like online schools are here to stay, but only you can decide if this type of learning is right for you.

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Reporting Category:	2 Vocabulary
Performance Indicator:	0801.1.17 Choose the correct meaning/usage of a multi-meaning word by replacing the word in context with an appropriate synonym or antonym.

12 **Read this sentence from Paragraph 2.**

Additionally, many online schools will allow students to work at their own pace.

Which synonym for pace matches its usage in the sentence above?

F tempo

G speed

H fluency

J step

Reporting Category:	4 Communication and Media
Performance Indicator:	0801.2.1 Identify the purpose of a speech (i.e., to inform, to describe, to explain, to persuade, to entertain).

13 **What is the purpose of this speech?**

A to persuade listeners to register at an online school

B to inform listeners about an alternative to traditional schools

C to entertain listeners with stories from an online student

D to explain why online schools are superior to traditional schools

Go On ▶

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.2 Identify the targeted audience of a speech.

14 **Who is most likely the desired audience of this speech?**

F teachers

G administrators

H students

J coaches

Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.3 Identify the thesis and main points of a speech.

15 **Which sentence from the speech is the thesis statement?**

A For some students, online school may be ideal, but for others, traditional school may better meet their needs.

B Online schools offer many benefits for the learner.

C Of course, there are some drawbacks of going to school online.

D Finally, online students may not see or talk to friends as often as they would in a traditional school setting.

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.4 Determine the most effective methods of engaging an audience during an oral presentation (e.g., making eye contact, adjusting speaking rate).

16 During the presentation of this speech, what should the speaker do to maintain the interest of the listeners?

F speak very loudly

G look down to read notes

H avoid smiling

J make eye contact with audience

Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.6 Identify and analyze the organizational structure of a speech (e.g., sequential, chronological, problem-solution, comparison-contrast, cause-effect).

17 How is the information in this speech mostly organized?

A compare and contrast

B order of importance

C chronological order

D problem and solution

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.9 Distinguish between a summary and a critique.

18 **Which statement is a critique of the speech?**

F In most online schools, learners may work at their own pace as long as their work is completed by the deadline.

G According to the speaker, some online schools have live class times and some have Web sites only for registered students.

H The speaker has already decided that the advantages of online schools far outweigh the benefits of traditional schools.

J One advantage of traditional schools is the availability of extracurricular activities to suit a variety of interests.

Reporting Category: 5 Logic

Performance Indicator: 0801.5.1 Recognize a reasonable prediction of future events of a given text.

19 **According to information in the speech, what will most likely happen to online schools in the future?**

A Only students with strong academic skills will be able to utilize online schools.

B The number of online schools and students who use them will increase.

C Online schools will be available only to students with computers in their homes.

D Extracurricular activities and social opportunities will be offered by online schools.

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Reporting Category:	5 Logic
Performance Indicator:	0801.5.5 Choose a logical word to complete an analogy, using synonyms, antonyms, homonyms, categories/subcategories, whole/part, functions, verb forms, rhymes, scrambled words, homophones.

20 **Complete this analogy based on the speech.**

Computers are to online schools as _____ are to traditional schools.

F clubs

G friends

H sports

J books

Reporting Category:	5 Logic
Performance Indicator:	0801.5.6 Identify an example of deductive or inductive reasoning in text.

21 **Which sentence from the speech provides an example of deductive reasoning?**

A Traditional schools are often unable to offer these types of classes if there are not enough students or funds to support them.

B Because teachers are not present to monitor progress, online students must stay very organized in order to complete the required work for each class by the end of the semester.

C Even though learners may work at their own pace, timelines are established to ensure students finish their coursework in a reasonable amount of time.

D Yes, computer technology is amazing, and we use computers for chatting with our friends, listening to music, and playing games.

Go On ▶

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Reporting Category: 5 Logic

Performance Indicator: 0801.5.7 Identify a false premise in text.

22 **Which sentence from the speech is a false premise?**

F This kind of learning has several names: online learning, distance learning, or virtual learning.

G Math whizzes are typically the best online students because they can work quickly through the subject while extra allowances can be taken for subjects requiring more time.

H Most online schools teach the same basic classes like English, math, science, and history.

J Other online schools have live class times where students can call and talk with the teacher directly.

Reporting Category: 5 Logic

Performance Indicator: 0801.5.8 Identify instances of bias and stereotyping in print and non-print texts.

23 **Which sentence from the speech shows a negative bias some people may have about online classes?**

A Regardless of what it is called, this idea may create an impression of a lonely kid reading pages of information on a computer screen rather than from a book.

B Students can attend school wherever and whenever they desire.

C Online schools also have different types of learning tools for kids to use.

D Some of these online schools even have virtual clubs where kids can talk with each other about their hobbies.

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Reporting Category: 5 Logic

Performance Indicator: 0801.5.9 Make inferences and draw conclusions based on evidence in text.

24 **Which of these is <u>not</u> needed to participate in online schooling?**

F membership in a virtual club

G discipline in accomplishing tasks on time

H access to a computer

J basic knowledge of operating a computer

Reporting Category: 6 Informational Text

Performance Indicator: 0801.6.1 Formulate appropriate questions before, during, and after reading.

25 **If an eighth grade student were interested in registering immediately for online school, what is the <u>first</u> question he or she would need to ask?**

A Are online schools available for middle school?

B Does online school require as much time as traditional school?

C Can a person mix online school with traditional school?

D What information is used to assign grades in online school?

Go On ▶

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Reporting Category:	**6 Informational Text**
Performance Indicator:	**0801.6.4 Interpret factual, quantitative, technical, or mathematical information presented in text features (e.g., maps, charts, graphs, time lines, tables, and diagrams).**

26 **After listening to the speech, a student made the following chart.**

• can attend classes whenever there is time • work can be done anywhere • more time devoted to challenging subjects • specialized classes available to suit interests	• can have additional costs • must be able to work independently • limited interaction with teachers and other students • no extracurricular activities

Why did the student most likely create this chart?

F to explain the benefits of attending online schools

G to convince others of the disadvantages of online schools

H to organize the pros and cons of online school

J to list the facts and opinions about online schools

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Directions **Marcus wrote the following report. It contains mistakes. Read the report and answer Numbers 27 through 34.**

The Jazz Sensation

1 The Roaring Twenties also are sometimes referred to as the Jazz Age. Like that decade, jazz is difficult to pin down. This musical style was totally unlike anything before it. It actually grew out of music that had existed for centuries. The real inspiration for jazz came primarily from the music, the feelings, and the history of black people in America.

2 In the early 1900s, the sounds of the blues, ragtime, French dance music, Spanish rhythms from the Caribbean, slave spirituals and work songs, opera, and the singing of street vendors all mingled in New Orleans, Louisiana. This atmosphere created a fertile place for jazz to grow.

3 A highly personal music form, jazz focused on individual interpretation and rhythm rather than traditional musical composition. Jazz musicians varied the beat, the rhythm, and the volume, and reshaped the music according to their feelings. This freedom to alter and experiment with the music while playing is known as improvisation. It is a main ingredient of jazz.

4 When the heyday of the jazz era in New Orleans began to fade in 1917, some out-of-work musicians headed northward to Chicago, Illinois. New York City became the obvious destination for others. The Harlem Renaissance happening there encompassed painting, literature, poetry, and education.

5 Jazz fans have been enthusiastic about their music for years, even if they are sometimes unable to agree on what jazz is or how it should sound. However, all agree that jazz is a truly American art form and that it added to the energy that pulsed through Harlem during the 1920s.

Go On ▶

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Reporting Category: 1 Language

Performance Indicator: 0801.1.7 Identify within context a variety of appropriate sentence-combining techniques (i.e., comma + coordinating conjunction, use of semicolon, introductory phrases or clauses).

27 **Read these sentences from Paragraph 1.**

This musical style was totally unlike anything before it. It actually grew out of music that had existed for centuries.

What is the best way to combine these two sentences?

A Totally unlike anything before it, this musical style actually grew out of music that had existed for centuries.

B This musical style was totally unlike anything before it, so actually it grew out of music that had existed for centuries.

C Although this musical style was totally unlike anything before it; it actually grew out of music that had existed for centuries.

D This musical style was totally unlike anything before it, insofar as it actually grew out of music that had existed for centuries.

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.2 Identify the targeted audience for a selected passage.

28 **People who would enjoy this report most likely have an interest in**

F American art in Chicago.

G New York music traditions.

H American musical influences.

J Spanish musical composition.

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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.3 Select an appropriate thesis statement for a writing sample.

29 **Which sentence from the report is the thesis statement?**

A The Roaring Twenties also are sometimes referred to as the Jazz Age.

B The real inspiration for jazz came primarily from the music, the feelings, and the history of black people in America.

C Jazz musicians varied the beat, the rhythm, and the volume, and reshaped the music according to their feelings.

D Jazz fans have been enthusiastic about their music for years, even if they are sometimes unable to agree on what jazz is or how it should sound.

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.4 Rearrange multi-paragraphed work in a logical and coherent order.

30 **Choose the <u>most</u> logical order for the paragraphs in this report.**

F 2, 1, 3, 4, 5

G 2, 3, 1, 4, 5

H 1, 3, 2, 4, 5

J 1, 3, 4, 5, 2

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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.5 Select appropriate time-order or transitional words/phrases to enhance the flow of a writing sample.

31 **Read this sentence from Paragraph 4.**

> *The Harlem Renaissance happening there encompassed painting, literature, poetry, and education.*

Which phrase belongs at the end of this sentence to assist the transition to Paragraph 5?

A because without Caribbean inspiration, these arts would be very different

B for the musicians in New Orleans continued experimenting

C and these were also significant aspects of the Harlem Renaissance

D but jazz was clearly the soundtrack to this cultural era

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.4.1 Select the most focused research topic.

32 **Which of these is the most focused research topic?**

F the decline of jazz in New Orleans in 1917

G Chicago's musical history

H the development of jazz music

J Harlem in the 1920s

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Reporting Category:	3 Writing and Research
Performance Indicator:	0801.4.4 Distinguish between primary (i.e., interviews, letters, diaries, newspapers, autobiographies, personal narratives) and secondary (i.e., reference books, periodicals, Internet, biographies, informational texts).

33 **Which of these is a primary research source?**

A a poem written by an author of the Harlem Renaissance

B a history textbook chapter about New Orleans

C an autobiography of Louis Armstrong, a jazz musician

D an article in a newspaper about a jazz performance in Chicago

Go On ▶

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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.4.5 Discern irrelevant research material from written text.

34 **Marcus wanted to learn more about the development of jazz for his report. After reading some information on a Web site, he wrote the following notes.**

1. *African rhythms were introduced to America by slaves and immigrants.*
2. *Chicago came to prominence in America as a meat-producing giant.*
3. *Jazz performers ranged from street musicians to international superstars.*
4. *Improvisation is defined as creating music with very little preparation.*

Which fact is <u>not</u> relevant to Marcus's report?

F Fact 1

G Fact 2

H Fact 3

J Fact 4

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Directions **The following passage is a rough draft. It contains mistakes. Read the passage and answer Numbers 35 through 40.**

Movie Theater Manners

1 I just returned from spending my Saturday afternoon at the movies with a small group of friends. We all agreed that the movie was excellent, but my purpose here is not to write a film review. I want to remind others that a movie theater is not someone's living room. Rather, it is a place where strangers come together to relax and quietly watch a good film.

2 My experience today, however, tells me that some moviegoers lack good manners. The most annoying problem is people talking right in the middle of the movie, but some people are noisy in other ways too. They scrunch candy wrappers, slurp sodas, and rattle popcorn bags. Even worse, all this commotion seems to happen at the exact moment the main character gives us the most important clue in the movie.

3 Some other nuisanses should also be avoided. A few people show up after the movie has started and disturb everyone else by crawling over them. Then, there are the people who cannot stay seated. They get up for more refreshments, climbing over others once again. Finally, there are the "squirmers" who cannot sit still. They ruin the movie by kicking the back of the seat or constantly fidgeting. When I'm home watching TV, I can tell my little brother to either hush up or leave the room.

4 When I pay my hard-earned baby-sitting money to see a film, I should be able to watch it in peace and quiet. To all movie theater fans, I make the following requests: be on time, be quiet, and stay seated until the movie is over. You are not in your living room watching a free movie.

Go On ▶

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Reporting Category: 1 Language

Performance Indicator: 0801.1.12 Identify correctly or incorrectly spelled words in context.

35 Read this sentence from Paragraph 3.

Some other nuisanses should also be avoided.

What is the correct way to spell the underlined word?

A nusances

B nuisances

C niusances

D nusenses

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.1 Identify the purpose for writing (i.e., to inform, to describe, to explain, to persuade, to entertain).

36 What is most likely the author's purpose for writing this passage?

F to describe the way people should behave in a movie theater

G to inform people about what to expect at the movies

H to convince moviegoers to change their behavior while at the movie theater

J to entertain readers with a description of a recent experience at a movie

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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.9 Select illustrations, explanations, anecdotes, descriptions and/or facts to support key ideas.

37 Which information, if added to the passage, would best support the author's viewpoint?

A the cost of attending a movie in a local theater

B the average rate of pay for babysitters in the author's town

C the number of movie theaters in the author's town

D the number of people attending movies on a weekly basis

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.11 Identify individual written selections as technical, narrative, persuasive, and/or descriptive in mode.

38 This passage would best be described as mainly

F narrative.

G technical.

H descriptive.

J persuasive.

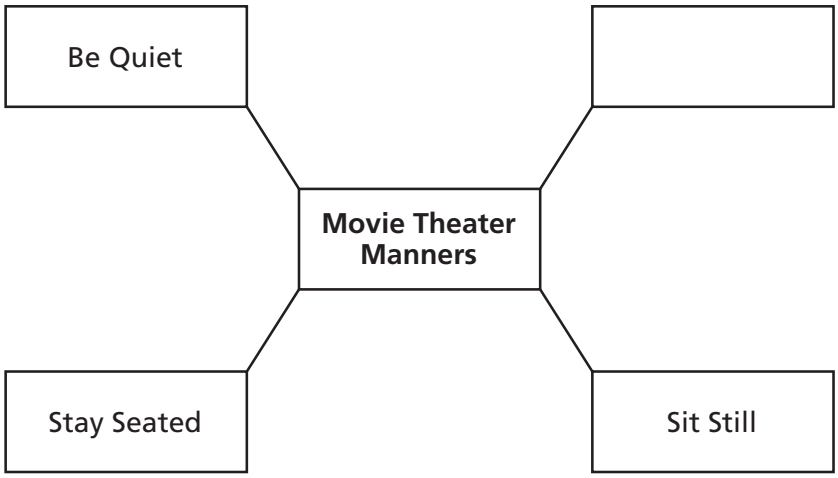
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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.12 Complete a graphic organizer (e.g., clustering, listing, mapping, webbing) with information from notes for a writing selection.

39 **Read the diagram.**



According to the passage, what information belongs in the empty cell?

A Stay at Home

B No Running

C No Popcorn

D Be on Time

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.7.1 Choose the most appropriate medium for a prescribed purpose and audience.

40 **Which medium would be the most effective for the author to use to distribute the information?**

F a letter to the editor of the local newspaper

G an e-mail to personal friends and family

H a letter to the theater owners throughout town

J a handout for moviegoers in the theater parking lot

Go On ▶

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Directions **Read the passage. Then answer Numbers 41 through 52.**

Batty About Bats

by Kathiann Kowalski

1 Don't you hate it when a mosquito buzzes around your head at night when you're trying to sleep? Bzzzzzz . . . Or when the pesky critters join your camp out, leaving your body laced with itchy lumps? Imagine what it would be like if there were millions more mosquitoes!

2 Or, worse yet, what if the insects that devour farmers' crops were multiplied by the millions?

3 Now answer this question: Do you like bats? Well, without them, those two scenarios would become reality. Whether you like them or not, we need bats. So let's discover what really neat creatures they truly are.

Flying and Feeding



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4 Bats are the only true flying mammals. Their scientific name, *chiroptera*, means "hand-winged." Thin membranes sandwich muscles and blood vessels and connect a bat's arm, palm, and finger bones to its ankles—forming wings. Because wings are crucial for flying and feeding, bats spend lots of time grooming them.

5 Flying takes lots of energy, so bats eat about half their weight in food each day. Pregnant or nursing mothers eat more—up to their full weight. What's on the menu? It depends. "Bats fill every conceivable feeding niche," says Ken Paige at the University of Illinois at Urbana. Over 200 of the 925 known species eat fruits or flower nectar. Other bat species eat mosquitoes, flies, moths, beetles, or termites. Still others feed on frogs, fish, lizards, or other animals.

6 When food gets scarce in areas outside the tropics, some bat species migrate. Others hibernate through the cold winter.

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Hanging Out


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7 Bats roost by hanging upside down. Their small size keeps all the blood from rushing to their heads. Where bats roost varies from species to species. Some choose old trees, buildings, or attics. Others build tents from leaves.

8 Other bat species haunt caves in giant colonies. The Mexican free-tailed bat in the southwestern United States forms the largest groups of mammals known anywhere, with millions of bats per cave. One research project headed by Boston University's Thomas Kunz uses advanced infrared thermal imaging and computer technology to count bat colonies. "In order to really assess the impact that bats have on any ecosystem," Kunz explains, "we have to know how many are there."

Super Sonar

9 How do bats get around in the dark? "No bats are blind," says Kunz. "They all can see." Some fruit-eating and nectar-drinking bats actually have excellent vision.

10 About 670 species—mostly those who eat mobile prey—supplement fair or poor vision with *echolocation*. "They create maps of their environment by sound," explains Dean Waters at Great Britain's University of Leeds. The bats emit high-frequency cries above the range of human hearing. Then they interpret the echoes. Echolocation is more than measuring the time for echoes to bounce back. "Bats can not only range targets, but can also classify them depending on how they 'sound,' " says Waters. He calls these variations "echo colors."

11 Bats rely on other environmental clues, too. Insects are more likely to buzz about under certain air pressure conditions. By sensing pressure changes in the middle ear, Paige says, "Bats know when they can find abundant food without expending unnecessary energy flying out to check."

Go On ▶

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Helpers in Trouble

12 "It's only myth and folklore that have promoted bad images of bats," notes Kunz. In contrast, Chinese culture prizes bats as symbols of happiness and good fortune. Ancient Egyptians hung bat images over doorways to ward off disease.

13 In truth, these night feeders really "go to bat" for the ecosystem. Uneaten insects would mean many more bug bites. Swarms of pests would destroy farmers' crops. Huge financial losses would follow, not to mention possible starvation for millions of people.

14 But bats are in danger—primarily from people. Destruction of habitat, disruption of hibernating colonies, and pesticides are just a few threats. "But it's not all gloomy," stresses Bob Benson at Bat Conservation International (BCI). One BCI project encourages companies closing mines to use bat-friendly gates. The gates keep people out but let bats in. Another program encourages pest controllers to exclude bats from homes safely, instead of killing them with toxic chemicals. These win-win situations help everyone.



15 While the BCI and others educate people, scientists study how to help bats survive in their natural habitat. "There is no point in finding out more about these fascinating creatures if we destroy them with ignorance and negligence," says Rob Houston at the University of Bristol in Great Britain. "Bats need friends!"

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Reporting Category: 2 Vocabulary

Performance Indicator: 0801.1.19 Recognize and use grade appropriate and/or content specific vocabulary.

41 **Read this sentence from Paragraph 10.**

> *About 670 species—mostly those who eat mobile prey—supplement fair or poor vision with* echolocation.

What does supplement mean in this sentence?

A ignore

B experiment with

C challenge

D improve upon

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.4.1 Select the most focused research topic.

42 **A student wants to do a report on bats. Which topic is narrow enough for a short report about bats?**

F a comparison of bat species around the world

G the history of bats from ancient times until today

H an analysis of the impact bats have on the ecosystem

J a description of how echolocation helps a bat find prey

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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.4.2 Identify levels of reliability among resources (e.g., eyewitness account, newspaper account, supermarket tabloid account, Internet source).

43 **Which of these is the most reliable resource to find information about the life cycle of the Mexican free-tailed bat?**

A an encyclopedia article about different species of bats

B a local newspaper article about removing bats from an attic

C an eyewitness account of bats swarming out of a cave

D a supermarket tabloid story about bats invading a town

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.4.3 Determine the most appropriate research source for a given research topic.

44 **What would be the most appropriate research source to use to investigate Bat Conservation International?**

F a science textbook

G a newspaper article

H an encyclopedia entry on the Internet

J the Web site for the organization

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Reporting Category: 5 Logic

Performance Indicator: 0801.5.2 Evaluate text for fact or opinion.

45 **Which sentence from the passage is an opinion?**

A So let's discover what really neat creatures they truly are.

B Flying takes lots of energy, so bats eat about half their weight in food each day.

C Their small size keeps all the blood from rushing to their heads.

D Some fruit-eating and nectar-drinking bats actually have excellent vision.

Reporting Category: 5 Logic

Performance Indicator: 0801.5.3 Analyze cause-effect relationships in text.

46 **Special gates used in mines help bats because the gates**

F discourage people from entering the mines while bats are resting.

G allow bats to access their habitat while the mines are closed.

H protect bats from injury while opening and closing.

J provide a safe place for bats to roost.

Go On ▶

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Reporting Category: 5 Logic

Performance Indicator: 0801.5.4 Identify examples of persuasive devices (i.e., bandwagon, loaded words, testimonial, name-calling, plain folks, snob appeal).

47 What persuasive device does the author use in the introduction?

A loaded words

B name-calling

C snob appeal

D testimonial

Reporting Category: 5 Logic

Performance Indicator: 0801.5.8 Identify instances of bias and stereotyping in print and non-print texts.

48 Which stereotype is suggested in the passage?

F Bats are the only mammals that really fly.

G Not enough programs are trying to protect bats.

H Some bat species feed on frogs, fish, and lizards.

J Bats are creatures that are dangerous to humans.

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Reporting Category: 6 Informational Text

Performance Indicator: 0801.6.2 Identify the main idea and supporting details in text.

49 Why does one BCI project encourage companies that close a mine to use bat-friendly gates?

A to give the bats a safe place to live

B to stop bats from attacking people

C to remove the bats from homes safely

D to keep the bats from distracting miners

Reporting Category: 6 Informational Text

Performance Indicator: 0801.6.3 Use text features to locate information and make meaning from text (e.g., headings, key words, captions, footnotes).

50 Which heading from the passage would help a reader find information about how bats use sound to locate their prey?

F Flying and Feeding

G Hanging Out

H Super Sonar

J Helpers in Trouble

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Reporting Category: 6 Informational Text

Performance Indicator: 0801.6.6 Identify the organizational structure of a text (i.e., chronological, cause-effect, comparison-contrast, sequential, problem-solution).

51 **The author organizes the section titled "Helpers in Trouble" by**

A listing the reasons for a reduction in the bat population in chronological order.

B explaining the way specialized organizations intend to educate people about bats.

C identifying current problems bats are experiencing and how they are being addressed.

D stating myths about bats and contrasting them with facts discovered through scientific research studies.

Reporting Category: 7 Literature

Performance Indicator: 0801.8.14 Identify the author's purpose for writing.

52 **What is the purpose of "Batty About Bats"?**

F to provide information about the usefulness of bats

G to persuade readers to find ways to help bats

H to describe why some people are nervous around bats

J to entertain readers with tales about bats

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Directions **Read the passage. Then answer Numbers 54, 55, and 57.**

Sammy Lee
Five-Foot Giant

by Helen Enright

Sammy Lee scrambled up the ladder and raced along the diving board with his friends in pursuit. He leaped off the board and, to his surprise and delight, turned a complete somersault.

"I could hardly believe it," he said later. "I had to go right back and do it again."

Twelve-year-old Sammy was soon hooked on diving. He began hanging around that pool in Los Angeles, teaching himself to dive. His efforts didn't go unnoticed.

Hart Crum, an outstanding local diver, offered to coach Sammy. Crum was patient and was a good teacher, and by the end of the summer Sammy had learned the basic dives of competition.

It hadn't been easy. In 1933 the public pool was usually open only to white people. Crum, who was black, and Sammy, a Korean-American, were allowed to dive only one day a week.

Crum helped Sammy develop into a standout diver. But he soon admitted that he'd taught Sammy everything he knew. He recommended that Sammy find a more experienced coach.

Sammy began to practice at the Olympic Stadium pool. One day he caught the eye of Jim Ryan, considered to be "the coach of champions." Ryan called him over.

"You interested in diving?" asked Ryan, who was a giant of a man at six feet three and 270 pounds.

"Nuts about it," said Sammy, who was very short.

"Let's see you do a swan dive," Ryan said.

Sammy tried his best and climbed out of the pool with a smile. But Ryan wasn't smiling. "That's the worst dive I ever saw," he growled.

Ryan had a reputation for being a difficult coach. He never eased up, and offered his divers few words of encouragement. But Ryan sensed that Sammy had courage and a keen mind, and he agreed to coach him.

Ryan trained Sammy to take advantage of his short stature (just under five feet two) and to minimize the effect of his broad shoulders hitting the water. Sammy's height permitted him to tuck more tightly and spin more quickly than other divers. But he also learned to slice through the water with the slightest splash.

Go On ▶

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14 Sammy began to have success in diving competitions, but he had many other interests. He played football and ran track for his high school and was voted vice-president of the student body.

15 Sammy's parents—Korean immigrants—put great value on education. They had struggled to make a living in California, and wanted their children to take advantage of the freedoms this country offered. Sammy helped out in the family's restaurant when things got busy, but most nights he sat in the kitchen and studied. He shared valedictorian honors when he graduated from high school, having earned A's in every class. In 1939 he enrolled at Occidental College in Los Angeles.

16 Under Ryan's thorough coaching, Sammy had developed into one of the country's best divers. Sammy wanted more. He wanted to be the best in the world.

17 Sammy won his first national titles in 1942, capturing the 3-meter springboard and 10-meter platform events. But he faced a decision. He wanted to become a doctor, but he knew that the educational demands of medical school would not allow much time for diving.

18 Sammy had joined the army reserves shortly after World War II began. The army offered a special training program for medical students. Sammy became a private first class, and the army paid his tuition to medical school. He quit diving.

19 But the desire to compete never left him. For a break from the demands of his studies, he occasionally found time to dive at a local pool. And after graduating from medical school, Lieutenant Sammy Lee began to work out again. He soon won the national platform-diving title.

20 "When I realized I could still go pretty well," he said, "I started pointing for the Olympics."

21 Sammy made the U.S. team for the 1948 Olympic Games in London, where he won the gold medal in the 10-meter platform event. But his diving soon took a back seat again. Now promoted to major, he was sent to Korea to serve in the U.S. Medical Corps during the Korean War.

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22 But by 1952 he was competing again, earning a spot on the U.S. team that would compete in the Olympics in Helsinki, Finland. If he won, he would become the oldest athlete ever to win an Olympic diving gold medal.

23 It was August 1, 1952—Sammy Lee's thirty-second birthday. He inhaled deeply as he stood high above the water, knowing that no one had ever won the Olympic platform-diving title twice. In the split second between the spring and the takeoff he wondered, "Why am I here? I'm a doctor now, not a diver." But the thought quickly vanished as Lee completed the dive.

24 It was perhaps the best dive he had ever done.

25 Sammy Lee had won his second Olympic championship.



26 Dr. Lee has had a long career as an ear, nose, and throat specialist. He has also remained involved with diving all his life. In addition to diving in exhibitions throughout the world, he has been a judge at the Olympics and has coached many divers, including other Olympic champions.

27 And it all began when he turned an unexpected somersault while playing follow-the-leader with his friends.

"Sammy Lee Five-Foot Giant" by Helen Enright, from *Highlights for Children*, July/Aug. 1992, copyright © 1992 by Highlights for Children, Inc., Columbus, Ohio. Used by permission.

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Reporting Category: **5 Logic**

Performance Indicator: **0801.5.2 Evaluate text for fact or opinion.**

54 **Which sentence from the passage is an opinion?**

F Sammy began to practice at the Olympic Stadium pool.

G In 1939 he enrolled at Occidental College in Los Angeles.

H It was perhaps the best dive he had ever done.

J He has also remained involved with diving all his life.

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Reporting Category: 5 Logic

Performance Indicator: 0801.5.3 Analyze cause-effect relationships in text.

55 **Sammy could spin more quickly than other divers because he**

A had very broad shoulders.

B was coached by a patient teacher.

C played other sports in high school.

D was about five feet two inches tall.

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Reporting Category: 7 Literature

Performance Indicator: 0801.8.3 Determine how a story changes if the point of view is changed.

57 **How would the passage be <u>different</u> if it were written from a third-person limited point of view?**

A Sammy would narrate the events in his life as he experiences them.

B The eventual ending of the passage would be more surprising.

C The author's opinions would be unknown to the reader.

D Only Sammy's thoughts and feelings would be shared with the reader.

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Directions Read and answer Numbers 68 through 93.

Reporting Category: 1 Language

Performance Indicator: 0801.1.3 Identify the correct use of adjectives (i.e., common/proper, comparative/superlative, adjective clauses) and adverbs (i.e., comparative/superlative) within context.

68 Read this sentence.

Although the score was not favorable, Shawanda was feeling hopefully that her team would win the game.

Which word should replace the underlined word?

F hopeful

G hopefuller

H more hopeful

J most hopefullest

Reporting Category: 1 Language

Performance Indicator: 0801.1.5 Identify the correct use of prepositional phrases (place correctly according to the words they modify within the sentence) within context.

69 Which sentence uses a prepositional phrase incorrectly?

A Tiffany went with us to visit the local senior citizen center.

B Terry struggled to see the runners as they ran into view.

C To the science museum we wanted to go for our class field trip.

D Two showings of the school play are planned to accommodate all students.

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Reporting Category:	**1 Language**
Performance Indicator:	**0801.1.7 Identify within context a variety of appropriate sentence-combining techniques (i.e., comma + coordinating conjunction, use of semicolon, introductory phrases or clauses).**

70 **Read these sentences.**

Eight-year-old Armando loved reading. He began hanging around the library, sharing books with other kids.

How should the underlined portion of these sentences best be revised to combine the sentences?

F reading, and he began

G reading, yet began

H reading, but he began

J reading so began

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Reporting Category: 1 Language

Performance Indicator: 0801.1.8 Select the most appropriate method to correct a run-on sentence (i.e., conjunctions, semicolons, periods to join or separate elements).

71 Read the run-on sentence below.

We usually enjoy the hike to the lake however, today a cloud of mosquitoes plagued us.

What is the correct way to revise the run-on sentence?

A We usually enjoy the hike to the lake, however. Today a cloud of mosquitoes plagued us.

B We usually enjoy the hike to the lake: however, today a cloud of mosquitoes plagued us.

C We usually enjoy the hike to the lake; however, today a cloud of mosquitoes plagued us.

D We usually enjoy the hike to the lake, however, today a cloud of mosquitoes plagued us.

Reporting Category: 1 Language

Performance Indicator: 0801.1.9 Identify the appropriate use of gerund and participial phrases.

72 Which sentence uses a gerund phrase correctly?

F Building a tree house in our backyard has a lot of lovely flowers and trees.

G Knowing how to use library resources is a good skill for students to have.

H Stanley, a thoughtful and caring for his friends as best he can.

J Meryl and Marilyn, going to visit their uncle for the summer as usual.

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Reporting Category: 1 Language

Performance Indicator: 0801.1.10 Identify the correct use of appositives/ appositive phrases and infinitive/ infinitive phrases within context.

73 **Which sentence uses an appositive correctly?**

A Blanca, my Labrador retriever, loves to lie in the sun and eat pecans that have fallen right off the tree.

B A person no matter how strong they are must be careful when moving heavy objects from one place to another.

C My older sister, studying chemistry in college will be home for a short break next week.

D While on vacation, my cousin Mark who is the youngest in the family, spent too much time in the sun and got a sunburn.

Reporting Category: 1 Language

Performance Indicator: 0801.1.11 Select the correct pronoun-antecedent agreement for personal pronouns within context.

74 **Which sentence uses correct pronoun-antecedent agreement?**

F Neither of the boys know their scores on the test.

G Most of us want to return in the same bus they came in.

H You and I are wearing the shirts our team leader gave us.

J Everyone should bring in their permission slips by Wednesday.

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Reporting Category: 1 Language

Performance Indicator: 0801.1.14 Recognize usage errors occurring within context (i.e., subject-verb agreement, pronoun case, double negatives, comparative/superlative forms, troublesome word pairs: {to/too/two, their/there/they're, its/it's, sit/set, lie/lay, affect/effect, may/can, leave/let, teach/learn, accept/except, capitol/capital, principle/principal, between/among, rise/raise, stationary/stationery, where/were, which/that/who})within context.

75 **Which sentence does not use the underlined word correctly?**

A "Can you explain the step again?" Sam asked.

B May you help me with my homework?

C Can you go with us next week?

D "May I go to the school fair?" Kai asked her mother.

Reporting Category: 1 Language

Performance Indicator: 0801.1.15 Select the appropriate use of underlining/italicizing with titles, specific words, numbers, letters, and figures.

76 **Which sentence is written incorrectly?**

F He kept guessing *fish* as if the correct answer would change.

G Rudyard Kipling's short story "The Man Who Would Be King" was also made into a movie.

H *To Kill a Mockingbird* is a movie based on a novel by the same name.

J The chapters that provide the best explanations are The Engineers, The River, and The Flood.

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Reporting Category: 2 Vocabulary

Performance Indicator: 0801.1.18 Recognize the effect of stressed or unstressed syllable to aid in identifying the meaning of multiple meaning words.

77 **In which sentence is the second syllable of record accented?**

A Tory ran the race in record time.

B I usually record what the speaker says.

C The doctor's office keeps a record of each patient.

D Henry holds the record for growing the largest pumpkin.

Reporting Category: 2 Vocabulary

Performance Indicator: 0801.1.20 Identify commonly used foreign words and phrases (i.e., RSVP, *déjà vu, faux pas, du jour, bon voyage, alma mater, cum laude, femme fatale, esprit de corps,* verbatim).

78 **Every ten years, members of the graduating class of 1980 gather for a reunion at Central High School because this is their**

F *alma mater.*

G *cum laude.*

H *déjà vu.*

J *esprit de corps.*

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.4 Determine the most effective methods of engaging an audience during an oral presentation (e.g., making eye contact, adjusting speaking rate).

79 **Melissa is giving a speech about her coin collection, but her audience is losing interest. Which of these is most likely the reason?**

A She tells a funny story about how she acquired one of her coins.

B She makes short pauses between the important points in her speech.

C She briefly stops speaking to show the audience some of her favorite coins.

D She keeps her eyes on her notes to make sure her main points are all covered.

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.5 Organize a series of note cards in the most effective order for an oral presentation.

80 Ted is planning a presentation on Beatrix Potter. These are some of his note cards.

1 Although widely respected throughout England for her botany work, she was denied a formal education because of her gender.	**3** Upon her death in 1943, she left 4,000 acres of land to a National Trust, and it later became part of the Lake District National Park.
2 At an early age, she began sketching her many pets: newts, ferrets, two rabbits, and even a bat.	**4** Beatrix Potter was born in South Kensington, London, on July 28, 1866.

In which order should the information on the note cards be presented?

F 2, 4, 3, 1

G 4, 2, 1, 3

H 4, 1, 2, 3

J 1, 3, 4, 2

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.7 Select the most appropriate strategies for participating productively in a team (e.g., gain the floor in orderly ways, meet or set deadlines for completing each task, come to agreement by seeking consensus or following the majority).

81 **Groups of four students are creating multimedia presentations on the American Revolution. Which group is working most efficiently?**

A Three students are surfing the Internet, and one is listing types of media to use to display their information.

B Two students are researching the American Revolution, while two are preparing the template for their presentation.

C All four students are looking at the card catalog on a computer screen to find books about the American Revolution.

D One student is getting books from the library, one is searching the Internet, one is taking notes, and one is finding pictures.

Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.7 Select the most appropriate strategies for participating productively in a team (e.g., gain the floor in orderly ways, meet or set deadlines for completing each task, come to agreement by seeking consensus or following the majority).

82 **For a team to be productive, what is the first step the team needs to take?**

F assign a role to each team member

G set deadlines for the completion of each task

H determine the purpose and goals for the team

J measure the progress of individuals and the group

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.2.8 Identify the functions and responsibilities of individuals within an organized group (i.e., reporter, recorder, information gatherer, leader, timekeeper).

83 **In an organized group, which member maintains the schedule and makes sure all work is completed by the deadline?**

A the information gatherer

B the recorder

C the reporter

D the timekeeper

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.8 Select vivid words to strengthen a description (adjective or adverb) within a writing sample or passage.

84 **Read the sentence below.**

Tyler went to the front of the room and started to speak.

What is the best way to make the sentence stronger and more vivid?

F Tyler slowly walked from the rear of the room to the front and presented his speech.

G Tyler boldly strode to the front of the crowded room and, in a confident voice, began to speak.

H Before he spoke to the whole class, Tyler had to make his way up the aisle to the front of the room.

J After Tyler went up and stood in the front of the room, he opened his mouth and started giving a long speech.

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Reporting Category: 3 Writing and Research

Performance Indicator: 0801.3.13 Select the most appropriate format for a work-related text.

85 **Cecilia has several pet-sitting jobs in her neighborhood. She wants to make sure she provides the services her clients need, so she plans to prepare a handout to give to her clients. What type of handout would be most effective?**

A a list of families who highly recommend her services

B a series of questions clients should answer correctly

C a list of services on which clients can check off their preferences

D a page with blank lines so clients can list what services they need

Reporting Category: 3 Writing and Research

Performance Indicator: 0801.4.2 Identify levels of reliability among resources (e.g., eyewitness account, newspaper account, supermarket tabloid account, Internet source).

86 **Erick wants to plant wildflowers in his backyard in Nashville. Which source would provide the most reliable instructions for him?**

F a magazine article on vegetable gardening in Tennessee

G a newspaper article on award-winning landscapes

H a seed description from a national catalog

J a book on growing native Tennessee plants

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Reporting Category: 6 Informational Text

Performance Indicator: 0801.6.5 Choose the correct order of a set of instructions.

87 **Read these steps for making a collage.**

1. *When you are satisfied with your design, glue all the pieces to the poster board.*
2. *Choose a theme.*
3. *Using the materials you have gathered, think about how to create an interesting design and then try different arrangements. Be sure to let the pieces overlap each other.*
4. *Gather materials related to your theme: poster board, glue, torn paper, small objects, photos, magazine clippings, or fabrics with a variety of large and small shapes, light and dark colors, and coarse and fine textures.*

Which is the best way to order the steps?

A 3, 2, 1, 4

B 2, 4, 3, 1

C 2, 3, 1, 4

D 4, 1, 3, 2

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.7.2 Select a visual image that best reinforces a viewpoint or enhances a presentation.

88 **Patti is presenting a report on the works of playwright William Shakespeare for her drama class. Which visual image would be best for her to use during the presentation?**

F a poster board with sketches of William Shakespeare throughout his life

G a timeline of different dramas written by William Shakespeare

H a drawing of a stage where dramas written by William Shakespeare were performed

J a chart of the process William Shakespeare used to write his dramas

Reporting Category: 4 Communication and Media

Performance Indicator: 0801.7.3 Identify the purpose of a medium (i.e., to inform, to persuade, to entertain, to describe).

89 **What is the most likely purpose of a video about pets and their funny behaviors with people?**

A to describe

B to inform

C to entertain

D to persuade

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.7.4 Draw an inference from a non-print medium.

90 Look at this photo.



What can the reader conclude about the woman in this photo?

F She is studying for an important test.

G She is interested in reading her book.

H She is spending her lunch time at the park.

J She is reading about the history of the area.

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Reporting Category: 4 Communication and Media

Performance Indicator: 0801.7.5 Choose the statement that best summarizes/communicates the message presented by a medium.

91 **Look at this photo.**



A children's dentist wants to use this photo in a magazine advertisement. What message is the dentist most likely trying to communicate with this photo?

A the best way for people to brush teeth

B the most appropriate toothbrush for people

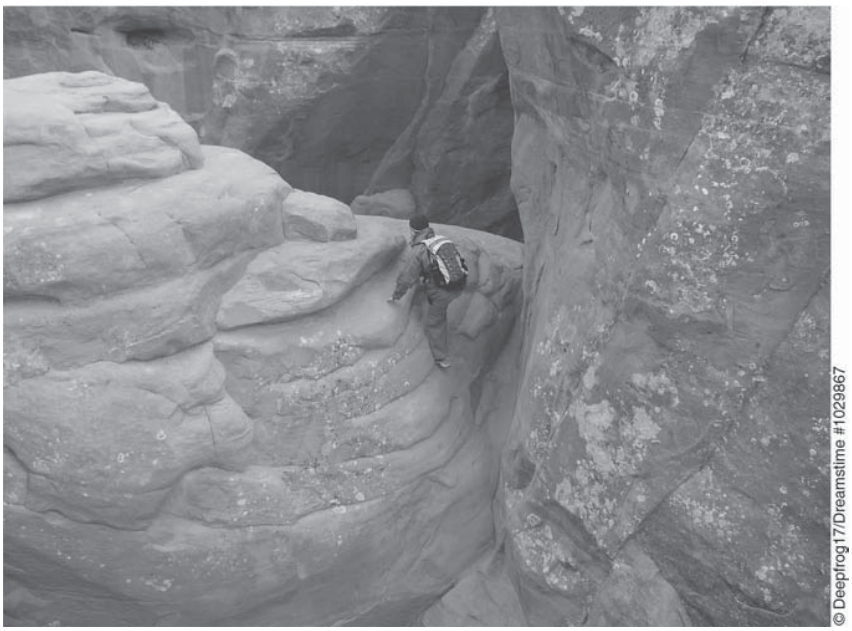
C the importance of healthy dental care at a young age

D the need for parents to encourage their children to brush their teeth

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Reporting Category:	4 Communication and Media
Performance Indicator:	0801.7.6 Select the type of conflict (e.g., person vs. person, person vs. self, person vs. environment, person vs. technology) represented in a non-print medium.

92 **Look at the photograph.**



What type of conflict is presented in this photograph?

F person vs. environment

G person vs. person

H person vs. technology

J person vs. self

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Reporting Category:	7 Literature
Performance Indicator:	0801.8.1 Demonstrate an understanding of the basic elements of plot: exposition, rising action, climax, falling action, resolution/denouement.

93 **After reading a short story, Tamika wrote the following in a report.**

> *Eduardo was finally faced with the consequences of his hasty decision. It was a moment of great suspense for the reader.*

Which plot element is Tamika describing?

A the exposition

B the falling action

C the resolution

D the climax

STOP

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Mathematics



Reporting Category: **1 Mathematical Processes**

Performance Indicator: **0806.1.1 Solve problems involving rate/time/distance (i.e., d = rt).**

1 A train traveled for $\frac{3}{4}$ hour at a speed of 80 miles per hour. It then immediately slowed to 60 miles per hour and traveled at that speed for the next $\frac{1}{4}$ hour. What is the total distance the train traveled during this hour?

A 65 miles

B 70 miles

C 75 miles

D 90 miles

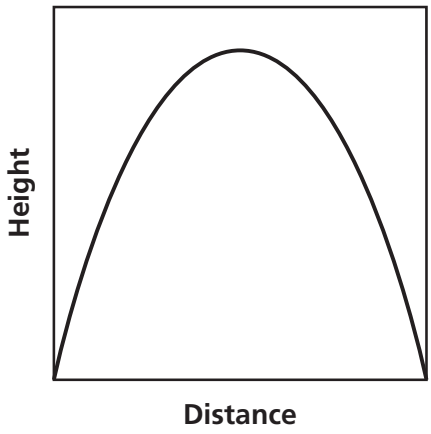
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Reporting Category: 1 Mathematical Processes

Performance Indicator: 0806.1.2 Interpret a qualitative graph representing a contextual situation.

2 William shot an arrow into the air. The graph below shows the height and distance the arrow traveled during flight.



Based on the graph, which statement about the flight of the arrow is true?

F The height of the arrow decreased and then increased.

G The height of the arrow increased and then remained constant.

H The height of the arrow increased and then decreased.

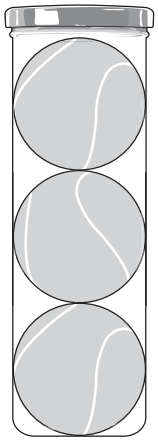
J The height of the arrow decreased and then remained constant.

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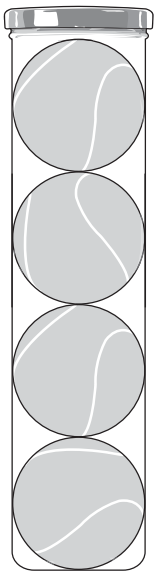
Reporting Category: 1 Mathematical Processes

Performance Indicator: 0806.1.3 Calculates rates involving cost per unit to determine the best buy.

3 Coach Smith went to a store to buy tennis balls. The following packages of tennis balls are available at this store.



3 tennis balls
$4.95



4 tennis balls
$6.00

Coach Smith needs to buy 24 tennis balls. How much money will she save by purchasing 24 tennis balls in packages with the lowest unit price compared to the highest unit price?

A $1.05

B $1.50

C $3.15

D $3.60

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Reporting Category: **2 Number and Operations**

Performance Indicator: **0806.2.1 Order and compare rational and irrational numbers and locate on the number line.**

4 Which real number is closest in value to the number represented by Point *P* on the number line?



F $\sqrt{18}$

G $\sqrt{24}$

H $\frac{23}{5}$

J 4.5999

Reporting Category: **2 Number and Operations**

Performance Indicator: **0806.2.2 Identify numbers and square roots as rational or irrational.**

5 Which number is irrational?

A 2.001678

B 1.02002000200002 . . .

C 0.245245245 . . .

D 0.2

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Reporting Category:	2 Number and Operations
Performance Indicator:	0806.2.3 Use scientific notation to compute products and quotients.

6 **Simplify:**

$$(3 \times 10^6)(2.5 \times 10^7)$$

F 5.5×10^{13}

G 7.5×10^{13}

H 5.5×10^{42}

J 7.5×10^{42}

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Reporting Category: **2 Number and Operations**

Performance Indicator: **0806.2.4 Solve real-world problems requiring scientific notation.**

7 The table below shows the number of ten-dollar bills produced at the Bureau of Engraving and Printing in 2006 and 2007.

Ten-Dollar Bills Produced

Year	Number
2006	8.512×10^8
2007	8.32×10^7

How many more ten-dollar bills were produced in 2006 than in 2007?

A 1.92×10^6

B 1.92×10^7

C 7.68×10^7

D 7.68×10^8

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Reporting Category: 3 Algebra

Performance Indicator: 0806.3.1 Find solutions to systems of two linear equations in two variables.

8 What is the solution to this system of linear equations?

$$\begin{aligned} 3x + y &= 2 \\ x - 2y &= 10 \end{aligned}$$

F $(2, -4)$

G $(-4, 2)$

H $(3, -7)$

J $(-7, 3)$

Reporting Category: 3 Algebra

Performance Indicator: 0806.3.2 Solve the linear equation $f(x) = g(x)$.

9 **Given:** $\begin{cases} f(x) = \frac{x}{2} \\ g(x) = \frac{4x - 1}{5} \end{cases}$

If $f(x) = g(x)$, what is the value of x?

A $-\frac{2}{3}$

B $-\frac{1}{3}$

C $\frac{1}{3}$

D $\frac{2}{3}$

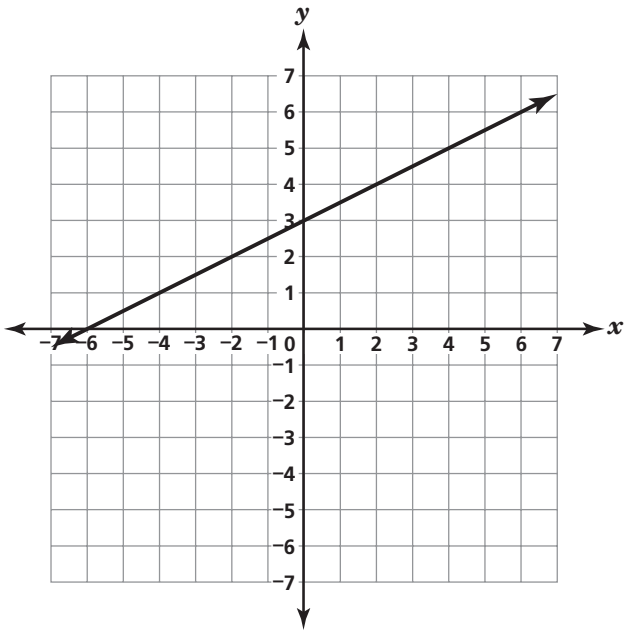
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Reporting Category: 3 Algebra

Performance Indicator: 0806.3.4 Translate between various representations of a linear function.

10 The graph of a linear function is shown below.



Which linear equation is best represented by this graph?

F $y = 3$

G $y = \frac{1}{2}x$

H $y = \frac{1}{2}x + 3$

J $y = 3x + \frac{1}{2}$

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Reporting Category: 3 Algebra

Performance Indicator: 0806.3.5 Determine the slope of a line from an equation, two given points, a table or a graph.

11 Points (15, 31) and (27, 35) are both located on $\overleftrightarrow{RS}$. What is the slope of $\overleftrightarrow{RS}$?

A $\frac{1}{2}$

B $\frac{1}{3}$

C 2

D 3

Reporting Category: 3 Algebra

Performance Indicator: 0806.3.5 Determine the slope of a line from an equation, two given points, a table or a graph.

12 What is the slope of the line represented by the equation $y = 5x + 2$?

F $\frac{1}{5}$

G $\frac{2}{5}$

H 2

J 5

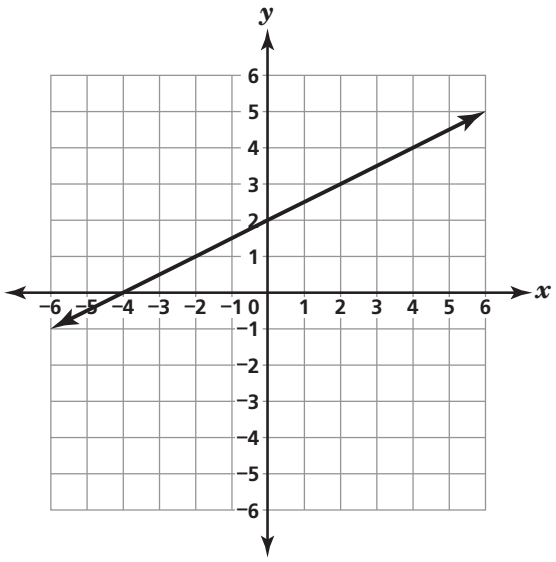
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Reporting Category: 3 Algebra

Performance Indicator: 0806.3.6 Analyze the graph of a linear function to find solutions and intercepts.

13 A line is graphed below.



Which is closest to the *y*-value of the *y*-intercept of this line?

A 2

B $\frac{1}{2}$

C 0

D −4

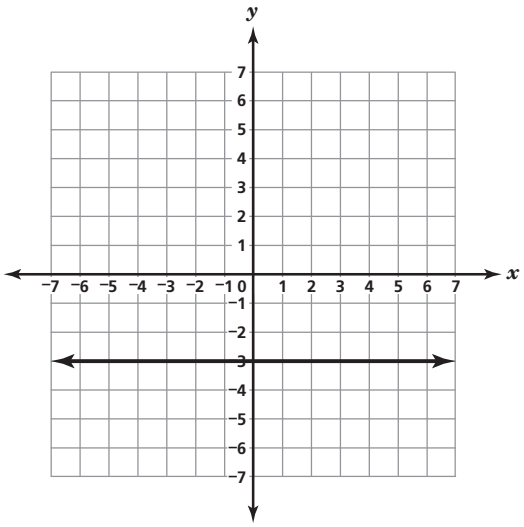
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Reporting Category: 3 Algebra

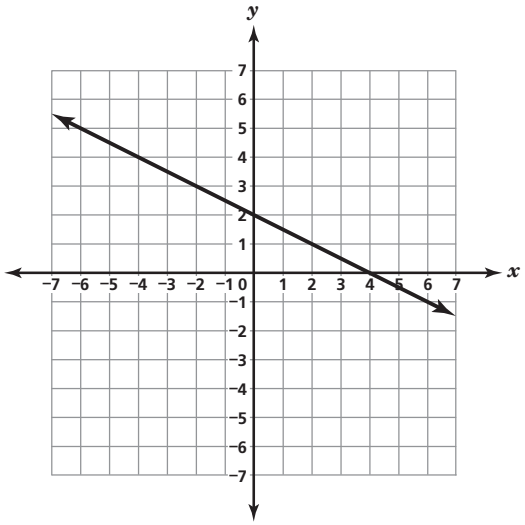
Performance Indicator: 0806.3.6 Analyze the graph of a linear function to find solutions and intercepts.

14 Which graph shows a line that appears to have a *y*-intercept with a *y*-value of 0?

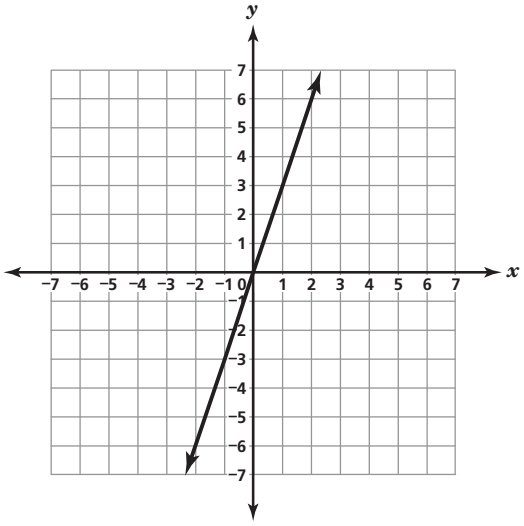
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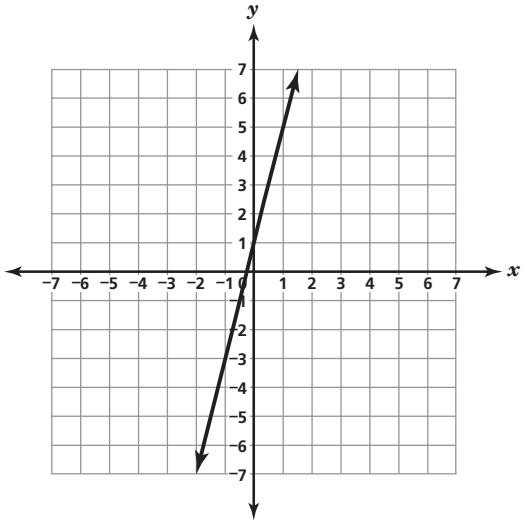
H



G



J



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Reporting Category: 3 Algebra

Performance Indicator: 0806.3.7 Identify, compare and contrast functions as linear or nonlinear.

15 Which equation represents a linear function?

A $y = x^2 - 2$

B $3x + y = 7$

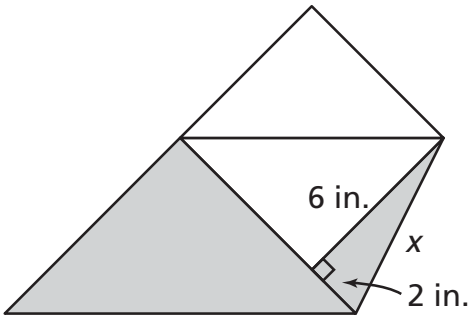
C $5 - x^4 = y + x^5$

D $y = 2x^3 + x^2 - 5x + 1$

Reporting Category: 4 Geometry and Measurement

Performance Indicator: 0806.4.1 Use the Pythagorean Theorem to solve contextual problems.

16 A teacher is showing her class how to fold a square piece of paper to create a paper cup. One of the steps is shown below.



According to the measurements, what is the length of x, in inches?

F 4

G $\sqrt{32}$

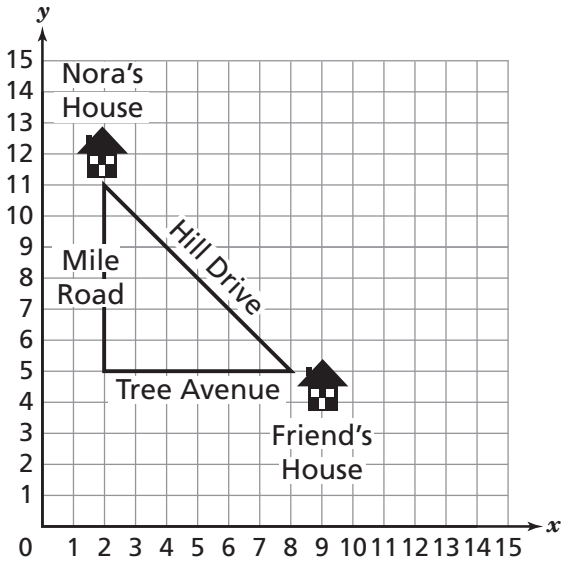
H $\sqrt{40}$

J 8

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Reporting Category:	4 Geometry and Measurement
Performance Indicator:	**0806.4.2 Apply the Pythagorean theorem to find distances between points in the coordinate plane to measure lengths and analyze polygons and polyhedra.**

17 The grid below shows a diagram of two paths from Nora's house to her friend's house.



Based on the diagram, which is the closest distance from Nora's house to her friend's house on Hill Drive?

A 8 units

B 12 units

C 18 units

D 36 units

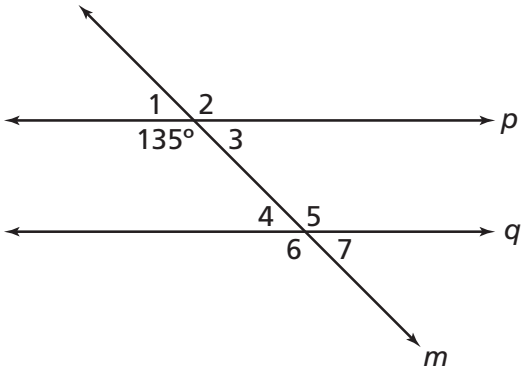
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Reporting Category: 4 Geometry and Measurement

Performance Indicator: 0806.4.3 Find measures of the angles formed by parallel lines cut by a transversal.

18 In this figure, Lines p and q are parallel and Line m is a transversal.



What is the measure of $\angle 7$?

F 45°

G 55°

H 135°

J 225°

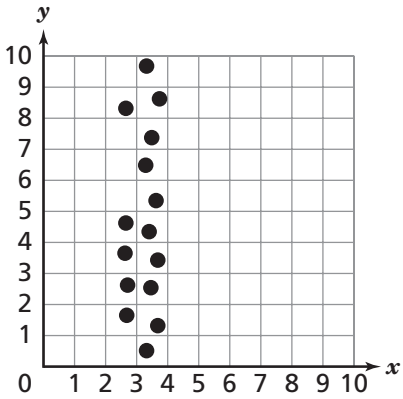
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Reporting Category: 5 Data Analysis, Statistics and Probability

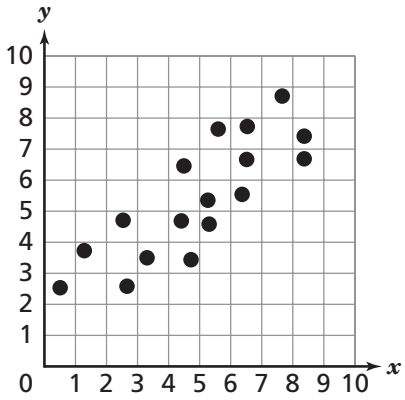
Performance Indicator: 0806.5.3 Generalize the relationship between two sets of data using scatterplots and lines of best fit.

19 Which scatterplot displays a negative relationship between the two variables?

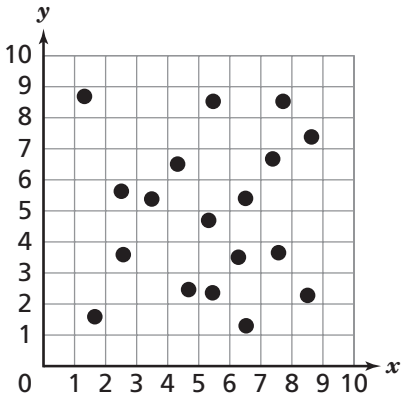
A



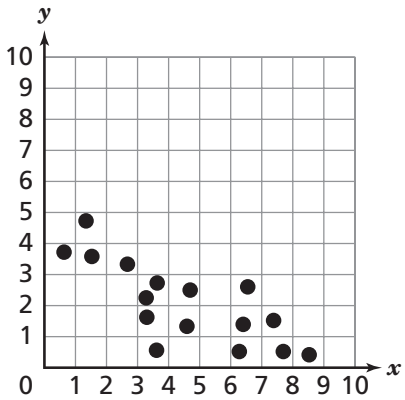
C



B



D



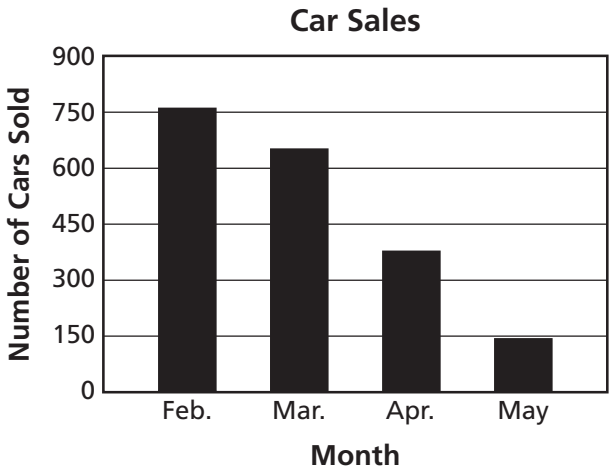
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Reporting Category: 5 Data Analysis, Statistics and Probability

Performance Indicator: 0806.5.4 Recognize misrepresentations of published data in the media.

20 The decrease in sales for a car dealership over four months is shown on the graph.



The dealership manager wants to make the decrease seem less significant. Which change to the graph would be most effective?

F use a greater vertical interval on the vertical axis

G only show the sales from the first and fourth months

H represent the data in a line graph instead of a bar graph

J compare the data to the previous year's sales using a bar graph

STOP

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Science



Reporting Category: INQUIRY AND TECHNOLOGY & ENGINEERING

Performance Indicator: 0807.INQ.1 Design a simple experimental procedure with an identified control and appropriate variables.

1 **A student designs an experiment to determine how surface type affects the amount of force needed to roll a ball 20 meters. What is the independent variable?**

A the lengths of the surfaces

B the force needed to roll the ball

C the type of surfaces used

D the type of ball chosen

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Reporting Category: INQUIRY AND TECHNOLOGY & ENGINEERING

Performance Indicator: 0807.INQ.5 Identify a faulty interpretation of data that is due to bias or experimental error.

2 The table below shows data used to calculate the speed of 4 identical toy cars moving down a ramp.

Table of Toy Car Trials

Car Color	Trial 1 Time (seconds)	Trial 2 Time (seconds)	Distance (centimeters)	Timer
Red	31	39	300	Student 1
Blue	30	33	300	Student 2
Yellow	37	40	300	Student 3
Green	33	28	300	Student 4

Which part of the experiment is most likely the source of error in this investigation?

F Car Color

G Car Type

H Distance

J Timer

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Reporting Category: INQUIRY AND TECHNOLOGY & ENGINEERING

Performance Indicator: 0807.TE.2 Evaluate a protocol to determine if the engineering design process was successfully applied.

3 **A technology company has identified the need for smaller, longer-lasting batteries to use in hybrid vehicles. What would be the first step engineers would take to design and produce an improved battery?**

A test the new battery

B reshape the existing battery

C research current battery technology

D build a prototype battery

Reporting Category: INQUIRY AND TECHNOLOGY & ENGINEERING

Performance Indicator: 0807.TE.4 Differentiate between adaptive and assistive engineered products.

4 **Which of these best describes why an artificial arm is considered an assistive engineered product?**

F It is an adaptation of an earlier technology.

G It helps a person with a disability overcome a handicap.

H It resembles a human body part.

J It causes a permanent change to an organism.

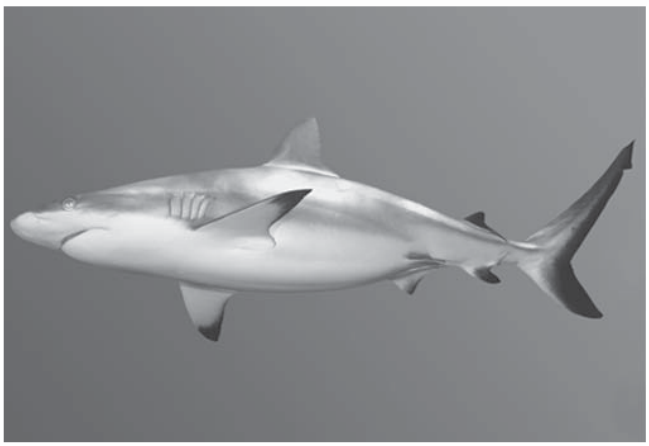
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Reporting Category: LIFE SCIENCE: Biodiversity & Change

Performance Indicator: 0807.5.1 Use a simple classification key to identify an unknown organism.

5 An organism like the one shown in the picture below is caught in a net.



Classification Key

1a. The organism has feathers ..... Class Aves
1b. The organism has no feathers..... Go to 2
2a. The organism has no hair..... Go to 3
2b. The organism has hair or hair-like structures.... Go to 4
3a. The organism has gills.....Class Chondrichthyes
3b. The organism has lungs.....Class Reptilia
4a. The organism has four legs .....Class Mammalia
4b. The organism has six legs ..... Class Insecta

Using the classification key above, identify the organism's class.

A Class Insecta

B Class Reptilia

C Class Mammalia

D Class Chondrichthyes

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Reporting Category:	**LIFE SCIENCE: Biodiversity & Change**
Performance Indicator:	**0807.5.2 Analyze structural, behavioral, and physiological adaptations to predict which populations are likely to survive in a particular environment.**

6 **Which population would best be adapted to maneuver in a rocky, mountainous region?**

F a population of organisms with hooves

G a population of organisms with thick fur

H a population of organisms with gills

J a population of organisms with moist skin

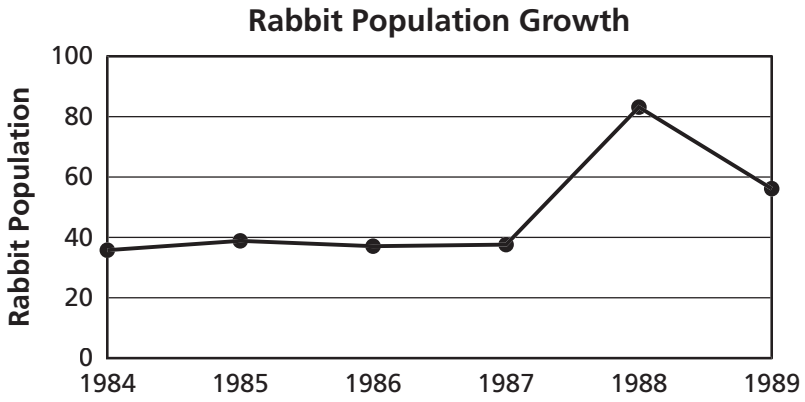
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Reporting Category: LIFE SCIENCE: Biodiversity & Change

Performance Indicator: 0807.5.3 Analyze data on levels of variation within a population to make predictions about survival under particular environmental conditions.

7 The graph below illustrates the growth of a rabbit population.



Which most likely occurred between 1987 and 1988?

A There was a decrease in available amount of food.

B There was an increase in competition.

C There was a decrease in the predator population.

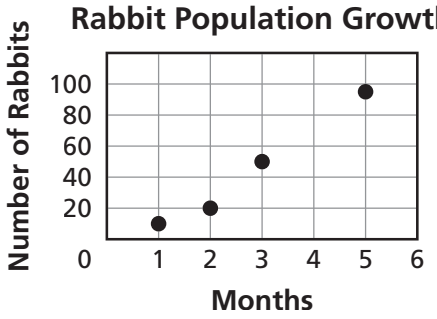
D There was an illness among the population.

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Reporting Category: LIFE SCIENCE: Biodiversity & Change

Performance Indicator: 0807.INQ.3 Interpret and translate data into a table, graph, or diagram.

8 The graph shows a rabbit population that has increased due to the lack of predators.



Which table correctly displays the population data?

F

Rabbit Population

Months	Population
1	5
2	50
3	60
5	85

H

Rabbit Population

Months	Population
1	10
2	15
3	35
5	75

G

Rabbit Population

Months	Population
1	10
2	20
3	50
5	95

J

Rabbit Population

Months	Population
1	20
2	30
3	75
5	120

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Reporting Category: LIFE SCIENCE: Biodiversity & Change

Performance Indicator: 0807.TE.3 Distinguish between the intended benefits and the unintended consequences of a new technology.

9 **Ethanol, often produced from corn, is being added to gasoline in an attempt to reduce the amount of fossil fuel usage. Which is an unintended consequence of ethanol use?**

A cost of corn products increases

B improvement in gas mileage

C conservation of fossil fuels

D improved health of environment

Reporting Category: LIFE SCIENCE: Biodiversity & Change

Performance Indicator: 0807.5.4 Identify several reasons for the importance of maintaining the earth's biodiversity.

10 **The clear-cutting of forests due to urban development will most likely result in**

F decreased forest biodiversity.

G increased oxygen production.

H decreased urban populations.

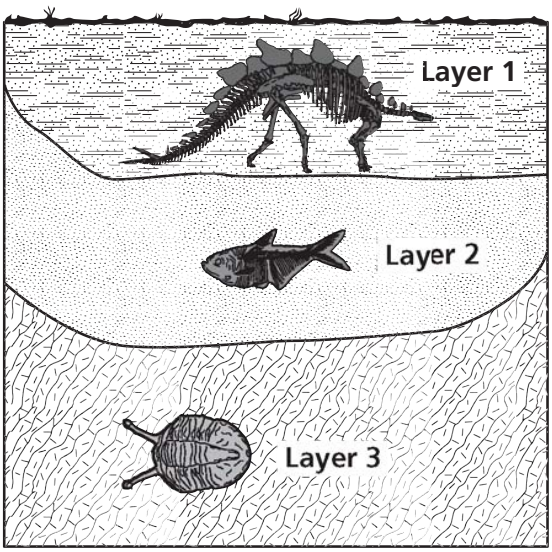
J increased organism diversity.

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Reporting Category: LIFE SCIENCE: Biodiversity & Change

Performance Indicator: 0807.5.5 Compare fossils found in sedimentary rock to determine their relative age.

11 The diagram below shows three substrate layers with fossils.



Which statement is best supported by the diagram?

A The fossil in Layer 1 is older than the fossil in Layer 2.

B The fossil in Layer 3 is older than the fossil in Layer 2.

C The fossils in Layers 2 and 3 are from closely related organisms.

D The fossils in Layers 1 and 3 are from closely related organisms.

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Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.9.2 Identify the common outcome of all chemical changes.

12 A new substance is usually formed when two or more substances combine and form new

F protons.

G chemical bonds.

H physical shapes.

J electrons.

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Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.9.3 Classify common substances as elements or compounds based on their symbols or formulas.

13 Which is classified as an element?

A NaCl

B CO_2

C Na

D H_2O

Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.9.4 Differentiate between a mixture and a compound.

14 Which combination of substances is a compound?

F salt and water stirred in a glass

G food coloring in frosting

H peanut butter and jelly sandwich

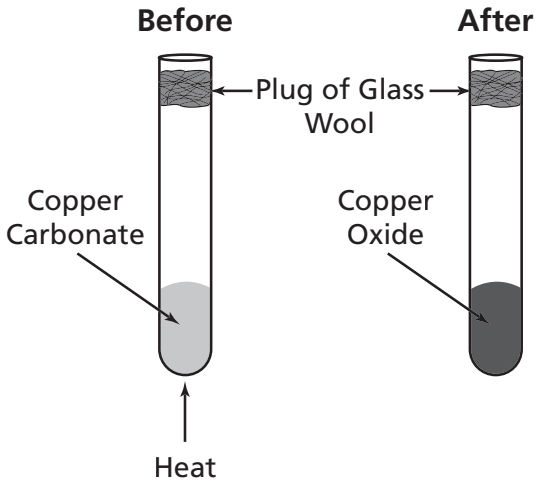
J sulfur dioxide and water forming acid rain

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Reporting Category:	PHYSICAL SCIENCE 1: Chemical Reactions
Performance Indicator:	0807.9.8 Interpret the results of an investigation to determine whether a physical or chemical change has occurred.

15 **Copper carbonate being heated in a test tube is shown in the diagram below.**



Which statement best describes what happened in this experiment?

A Copper carbonate reacted with the glass wool, causing a physical change.

B Copper carbonate decomposed when heated, causing a chemical change.

C Copper oxide reacted with the glass wool, causing a physical change.

D Copper oxide decomposed when heated, causing a chemical change.

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Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.INQ.2 Select tools and procedures needed to conduct a moderately complex experiment.

16 The steps used to determine the mass of sugar dissolved in a beaker of water are shown in the table below.

Table of Lab Steps

1. Find the mass of the sugar crystals on the wax paper
2. Boil the sugar water solution in the beaker
3. Scrape the sugar crystals out onto the wax paper
4. Find the mass of a piece of wax paper
5. Subtract the mass of the wax paper from the total mass
6. Wait until all the water has evaporated to collect the sugar crystals

Which correct sequence of steps should a student follow?

F 1, 2, 5, 3, 4, 6

G 1, 4, 6, 5, 3, 2

H 2, 3, 6, 5, 1, 4

J 2, 6, 4, 3, 1, 5

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Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.9.10 Identify the reactants and products of a chemical reaction.

17 **The equation below illustrates the reaction that occurs in chloroplasts during photosynthesis.**

$$\text{carbon dioxide + water} \xrightarrow{\text{sunlight}} \text{glucose + oxygen}$$

Which is a product of photosynthesis?

A carbon dioxide

B water

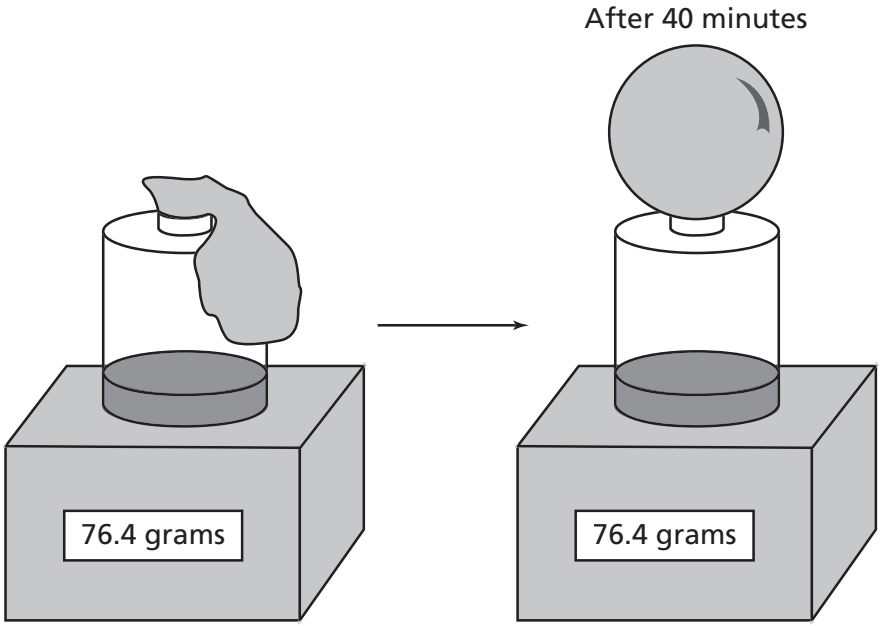
C sunlight

D oxygen

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Reporting Category:	PHYSICAL SCIENCE 1: Chemical Reactions
Performance Indicator:	0807.9.11 Recognize that in a chemical reaction the mass of the reactants is equal to the mass of the products (Law of Conservation of Mass).

18 **A student adds 5 grams of baking soda to 50 grams of vinegar in a container and quickly attaches a balloon to the top of the bottle. The student's investigation is shown below.**



What occurred in this investigation?

F The reaction produces heat, which causes the plastic of the balloon to soften and change shape.

G The reaction in the container produces gas, which causes the balloon to inflate.

H The outside air pressure pushes on the container and forces air inside the balloon.

J The air molecules from the container move into the balloon and form a solid substance.

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Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.9.11 Recognize that in a chemical reaction the mass of the reactants is equal to the mass of the products (Law of Conservation of Mass).

19 **Which sample equation best illustrates the law of conservation of mass?**

A 12 grams reactant X + 10 grams reactant Y ⟶ 2 grams product Z

B 5 grams reactant E + 5 grams reactant F ⟶ 20 grams product G + 5 grams product H

C 4 grams reactant U + 3 grams reactant V ⟶ 7 grams product W

D 10 grams reactant Q + 9 grams reactant R ⟶ 90 grams product S + 90 grams product T

Reporting Category: PHYSICAL SCIENCE 1: Chemical Reactions

Performance Indicator: 0807.9.12 Identify the basic properties of acids and bases.

20 **Which is the pH of a weak acid?**

F 9.1

G 8.2

H 7.0

J 6.5

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Reporting Category: PHYSICAL SCIENCE 2: Properties of Matter

Performance Indicator: 0807.9.1 Recognize that all matter consists of atoms.

21 **A glass of ice water is on a table in a room where the room's air temperature is 20 degrees Celsius. What do the drinking glass, ice, water, and air all have in common?**

A All four are in a solid state.

B All four are at the same volume.

C All four are at their freezing points.

D All four are made of atoms.

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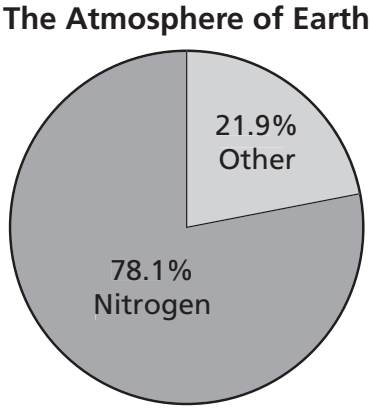
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Reporting Category: PHYSICAL SCIENCE 2: Properties of Matter

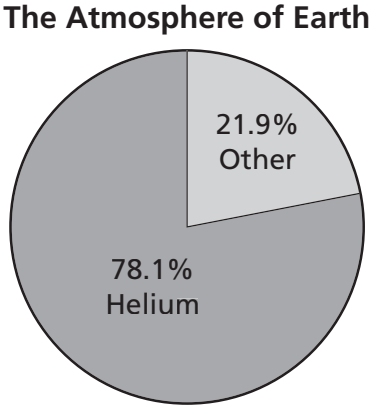
Performance Indicator: 0807.9.5 Describe the chemical makeup of the atmosphere.

22 Which circle graph correctly identifies the percentage makeup of the atmosphere of Earth?

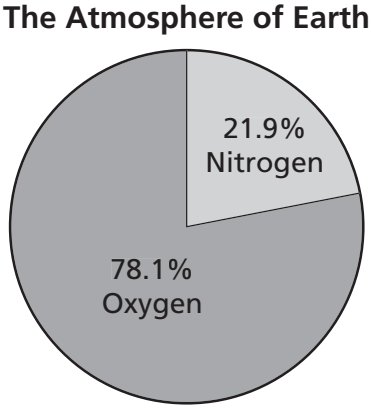
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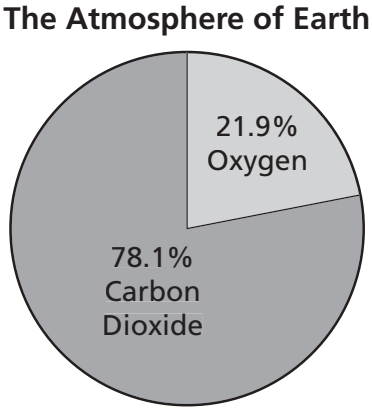
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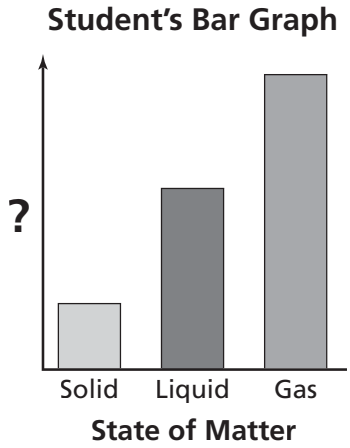
J



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Reporting Category:	PHYSICAL SCIENCE 2: Properties of Matter
Performance Indicator:	0807.9.6 Compare the particle arrangement and type of particle motion associated with different states of matter.

23 **A student created this bar graph to show how the physical state of matter is related to another factor.**



Which of these is the most appropriate label for the graph's vertical axis?

A weight

B shape

C speed of particle

D electrical charge

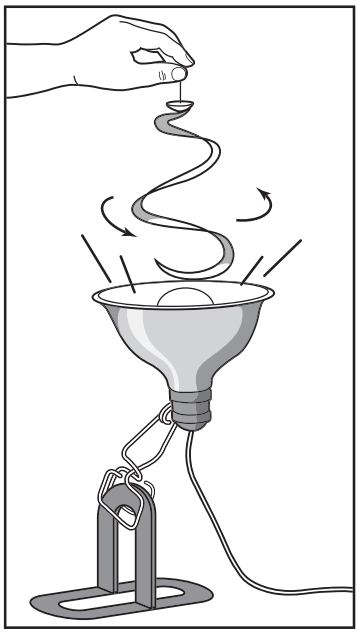
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Reporting Category: PHYSICAL SCIENCE 2: Properties of Matter

Performance Indicator: 0807.INQ.4 Draw a conclusion that establishes a cause and effect relationship supported by evidence.

24 When the lamp below is switched on, the paper will spin.



Which most likely causes the paper to spin?

F warm air rising

G warm paper expanding

H cool air sinking

J cool light bulb expanding

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Reporting Category: PHYSICAL SCIENCE 2: Properties of Matter

Performance Indicator: 0807.9.7 Apply an equation to determine the density of an object based on its mass and volume.

25 **A student is given an object and is asked to identify its density. The object has a volume of 3 cubic centimeters and a mass of 6 grams.**

$$\text{Density} = \frac{\text{mass}}{\text{volume}}$$

$$D = \frac{m}{v}$$

Using the formula above, what is the density of the object?

A 2 grams/cubic centimeter

B 3 grams/cubic centimeter

C 6 grams/cubic centimeter

D 9 grams/cubic centimeter

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Reporting Category: PHYSICAL SCIENCE 2: Properties of Matter

Performance Indicator: 0807.9.9 Use the periodic table to determine the properties of an element.

26 In the periodic table shown below, some elements are shaded.

H																	He
Li	Be											B	C	N	O	F	Ne
Na	Mg											Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	Ac	Unq	Unp	Unh	Uns	Uno	Une	Unn								

Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

Based on its position in the periodic table, which element is the heaviest?

F helium (He)

G neon (Ne)

H argon (Ar)

J krypton (Kr)

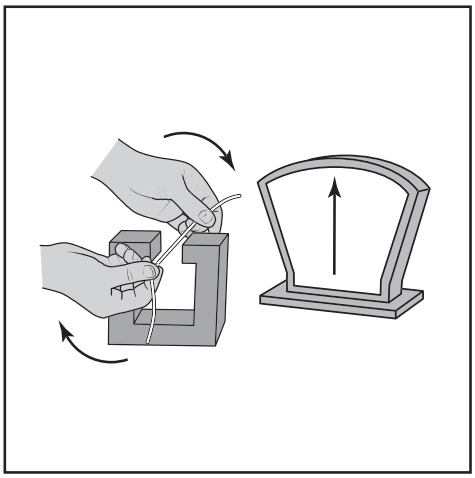
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Reporting Category: PHYSICAL SCIENCE 3: Forces of Nature

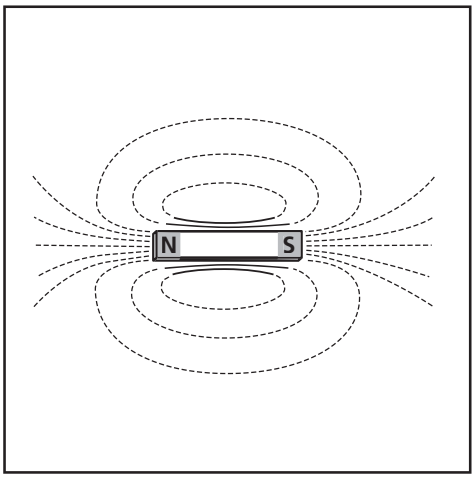
Performance Indicator: 0807.12.1 Recognize that electricity can be produced using a magnet and wire coil.

27 Which diagram best identifies how an electric current is produced?

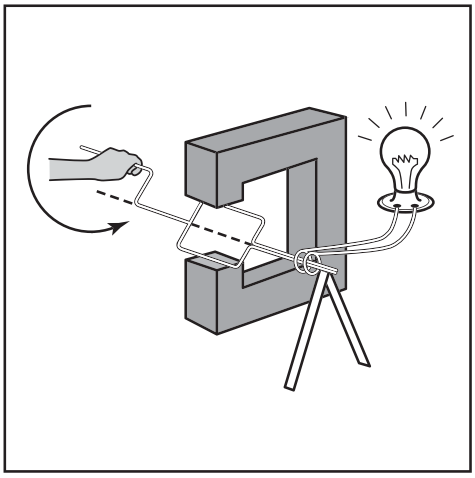
A



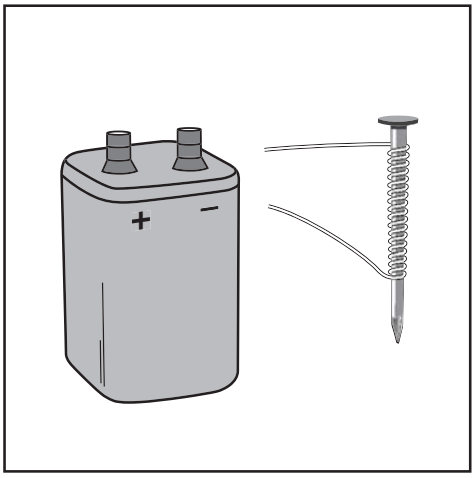
C



B



D



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Reporting Category: PHYSICAL SCIENCE 3: Forces of Nature

Performance Indicator: 0807.12.1 Recognize that electricity can be produced using a magnet and wire coil.

28 **Which is generated when a bar magnet is moved through a wire coil?**

F electric current

G mechanical energy

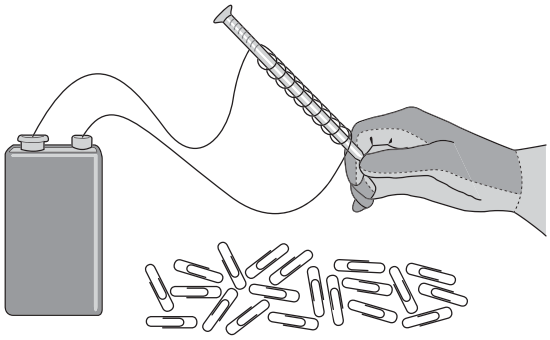
H thermal energy

J gravitational field

Reporting Category: PHYSICAL SCIENCE 3: Forces of Nature

Performance Indicator: 0807.12.2 Describe the basic principles of an electromagnet.

29 **A diagram is shown below.**



What device is the diagram representing?

A a barometer

B a bar magnet

C an electromagnet

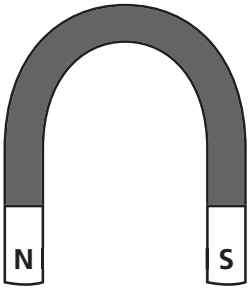
D an electric scale

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Reporting Category:	PHYSICAL SCIENCE 3: Forces of Nature
Performance Indicator:	0807.12.3 Distinguish among the Earth's magnetic field, a magnet, and the fields that surround a magnet and an electromagnet.

30 Which magnet below would provide the best example for the magnetic poles and magnetic fields of Earth?

F



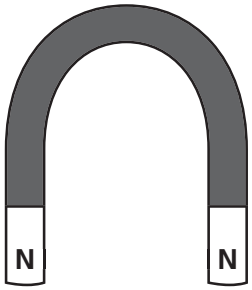
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G



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Reporting Category: PHYSICAL SCIENCE 3: Forces of Nature

Performance Indicator: 0807.12.4 Distinguish between mass and weight using appropriate measuring instruments and units.

31 **Which of these is best used to measure weight in newtons?**

A spring scale

B triple beam balance

C double pan balance

D simple lever

Reporting Category: PHYSICAL SCIENCE 3: Forces of Nature

Performance Indicator: 0807.TE.1 Identify the tools and procedures needed to test the design features of a prototype.

32 **Students are to build a model bridge using toothpicks and wood glue. The design of the bridge must support a specific weight and measure 20 centimeters long. Which tools would best help determine if the model bridge meets the design requirements?**

F ruler, weights, and string

G string, beaker, and water

H hammer, string, and nails

J pliers, saw, and string

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Reporting Category: PHYSICAL SCIENCE 3: Forces of Nature

Performance Indicator: 0807.12.5 Determine the relationship among the mass of objects, the distance between these objects, and the amount of gravitational attraction.

33 When will the gravitational attraction be greatest between two baseballs, each with the same mass?

A when they are 10 meters apart

B when they are 1 meter apart

C when they are 5 meters apart

D when they are 20 meters apart

Reporting Category: PHYSICAL SCIENCE 3: Forces of Nature

Performance Indicator: 0807.12.6 Illustrate how gravity controls the motion of objects in the solar system.

34 Which of these keeps a moon in orbit around a planet?

F shape

G composition

H size

J gravity

STOP

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Social Studies



Reporting Category: **1 Economics**

Performance Indicator: **8.2.1 Recognize America's natural resources (i.e., land, timber, fish, animal pelts, peppers, sweet potatoes, squash, pumpkins, turkeys, peanuts, potatoes, tomatoes, tobacco, cacao, beans, and vanilla).**

1 **Which food resource is native to the Americas?**

A eggplant

B peanuts

C rice

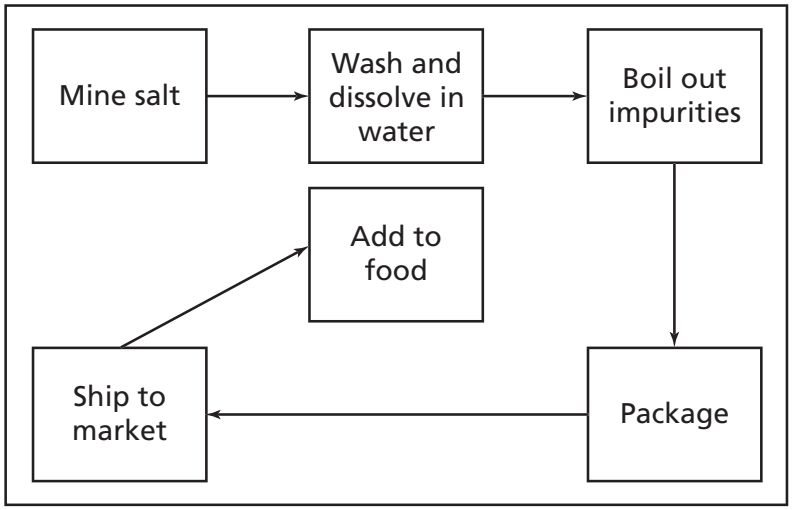
D soybeans

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Reporting Category: 1 Economics

Performance Indicator: 8.2.2 Interpret a diagram showing the steps of changing a resource into a product.

Salt Production



2 **Based on the diagram above, which step occurs immediately before packaging the salt?**

F Wash and dissolve in water

G Boil out impurities

H Ship to market

J Add to food

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Reporting Category: 1 Economics

Performance Indicator: 8.2.3 Differentiate between credit and debt.

3 **Which situation is an example of debt?**

A money borrowed by someone that must be paid back

B money that earns interest while kept in a bank

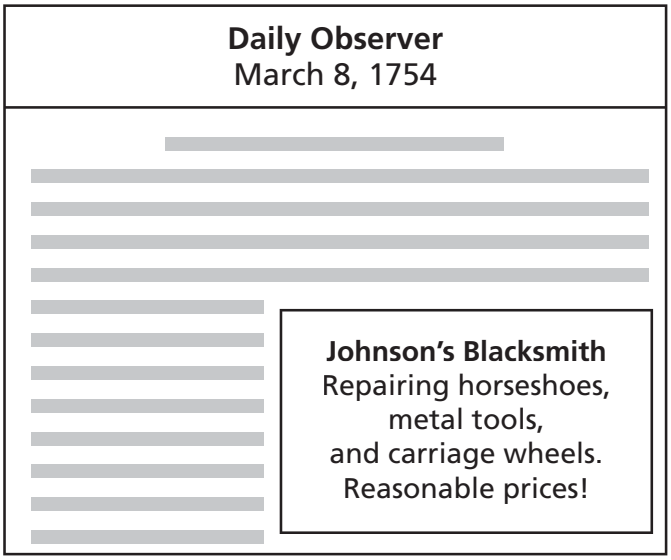
C money that a bank invests in stocks and bonds

D money held in reserve for emergencies

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Reporting Category: 1 Economics

Performance Indicator: 8.2.4 Recognize the economic activities of early America (i.e., agriculture, industry, and service).



4 **Which type of economic activity is illustrated in the advertisement above?**

F herding

G farming

H service

J barter

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Reporting Category: 1 Economics

Performance Indicator: 8.2.5 Identify various forms of taxation (i.e., tariffs, sales tax, excise tax).

5 **Which form of taxation is used by governments to collect revenue from international trade?**

A tariffs

B sales taxes

C income taxes

D user fees

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Reporting Category: 1 Economics

Performance Indicator: 8.2.6 Interpret a variety of economic graphs and charts with topics (e.g., the Columbian exchange, numbers of slaves, population of colonies, population diversity).

Slave Exports from Africa to the Americas

Time Period	Number
1450–1600	367,000
1601–1700	1,868,000
1701–1800	6,133,000
1801–1900	3,330,000
Total	**11,698,000**

Source: *A History of African Societies to 1870*

6 **Which statement is true based on the table above?**

F Slave exports were the highest in the 1800s.

G The 1600s had a lower rate of slave exportation to the Americas than the 1500s.

H The 1700s had the greatest number of slave exports to the Americas.

J Slave exports remained constant for three centuries beginning in 1500.

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Reporting Category: 1 Economics

Performance Indicator: 8.2.7 Differentiate between a commercial and a subsistence economy.

7 In which type of economy do families produce all of their own needs?

A commercial

B manufacturing

C subsistence

D capitalist

Reporting Category: 1 Economics

Performance Indicator: 8.2.8 Recognize the factors that led to urbanization and industrialization in early America (i.e., religious freedom, land ownership, thriving market).

8 Many New England colonists who lacked good farmland established shops in towns to produce

F finished goods for new settlers.

G crafts based on Native American designs.

H materials to build better roads.

J luxury items for the London market.

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Reporting Category:	1 Economics
Performance Indicator:	8.2.10 Distinguish among various economic markets found in early America (i.e., traditional, monopoly, oligopoly, free competition).

Colonial Shoemakers in New England

- Independent
- Numerous

9 **What economic system is represented above?**

A free competition

B monopoly

C traditional

D oligopoly

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Reporting Category: 2 Governance and Civics

Performance Indicator: 8.4.1 Identify the rights, responsibilities, and privileges of a member of the United States of America (i.e., Declaration of Independence, Articles of Confederation, Constitution, Bill of Rights).

> The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated . . .
>
> — 4th Amendment

10 **The amendment excerpted above <u>most</u> directly protects a person's right to**

F assembly.

G privacy.

H speech.

J citizenship.

Reporting Category: 2 Governance and Civics

Performance Indicator: 8.4.2 Identify the purposes and structures of various systems of governance (i.e., Federalism, Confederation, Republic, Democracy, Executive, Legislative, Judicial).

11 **Which type of government shares power between state and national governments?**

A oligarchy

B democracy

C republic

D federal

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Reporting Category: 2 Governance and Civics

Performance Indicator: 8.4.3 Recognize the purpose of government and how its powers are acquired, used, and justified.

Services Provided by Governments

- Schools
- Highways
- Bridges

12 **Which statement best explains why governments are responsible for providing the services on the list above?**

F The services provide for national defense.

G The court system requires the services.

H The services provide a public good.

J The business community demands the services.

Reporting Category: 2 Governance and Civics

Performance Indicator: 8.4.4 Recognize the rights and responsibilities of individuals throughout the development of the United States.

13 **The First Amendment right to a free press assists Americans in which civic responsibility?**

A serving in the military

B serving on juries

C staying informed

D paying taxes

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Reporting Category: 2 Governance and Civics

Performance Indicator: 8.4.5 Identify how conditions, actions, and motivations contributed to conflict and cooperation between states, regions, and nations.

14 **Which political agreement in the Constitutional Convention temporarily reduced conflict between the North and the South?**

F Missouri Compromise

G Kansas-Nebraska Act

H Three-Fifths Compromise

J Fugitive Slave Act

Reporting Category: 2 Governance and Civics

Performance Indicator: 8.4.6 Recognize the rights guaranteed in the Bill of Rights.

- Protection against cruel and unusual punishment
- Guarantee of a speedy trial
- Guarantee of a trial by jury

15 **The guarantees described above are listed in the**

A Bill of Rights.

B Emancipation Proclamation.

C Declaration of Independence.

D Mayflower Compact.

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Reporting Category:	**2 Governance and Civics**
Performance Indicator:	**8.4.7 Recognize the impact that major court decisions have had on American life (i.e., Marbury v. Madison, McCulloch v. Maryland, Dred Scott v. Sanford).**

16 **What is significant about the United States Supreme Court's decision in *Marbury v. Madison*?**

F It eliminated government regulation of commerce.

G It established the principle of judicial review.

H It ended segregation in public schools.

J It reinforced the supremacy of the federal government.

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Reporting Category:	**2 Governance and Civics**
Performance Indicator:	**8.4.8 Recognize how a right must be interpreted to balance individual rights with the need for order (i.e., freedom of speech, freedom of religion, trial by jury).**



17 **Why would the city council <u>most</u> likely require an organization to get a permit for the parade?**

A to prevent spectators from watching

B to reduce utility rates

C to limit the group's free speech

D to maintain public order

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Reporting Category: 2 Governance and Civics

Performance Indicator: 8.6.4 Identify the role of institutions in furthering both continuity and change (i.e., governments, churches, families, schools, communities).

18 Which institutions are established by communities to provide an educated work force?

F governments

G schools

H churches

J families

Reporting Category: 2 Governance and Civics

Performance Indicator: 8.6.5 Recognize how groups and institutions work together to meet common needs.

19 A group attempting to overturn an unjust law would most likely turn to which government institution?

A health department

B the courts

C school systems

D the military

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Reporting Category: 3 Geography

Performance Indicator: 8.1.1 Recognize the definition of religion.

20 **Which of these phrases best describes religion?**

F belief in a single government

G written trade agreements

H a set of shared beliefs and practices

J written stories of fiction

Reporting Category: 3 Geography

Performance Indicator: 8.1.7 Recognize how immigration and cultural diffusion have influenced the character of a place (i.e., religion within certain colonies, African songs in the American South, British v. French influences).

21 **Canada's official languages, English and French, indicate the country**

A was colonized by England and France.

B only allows residents from England and France to become citizens.

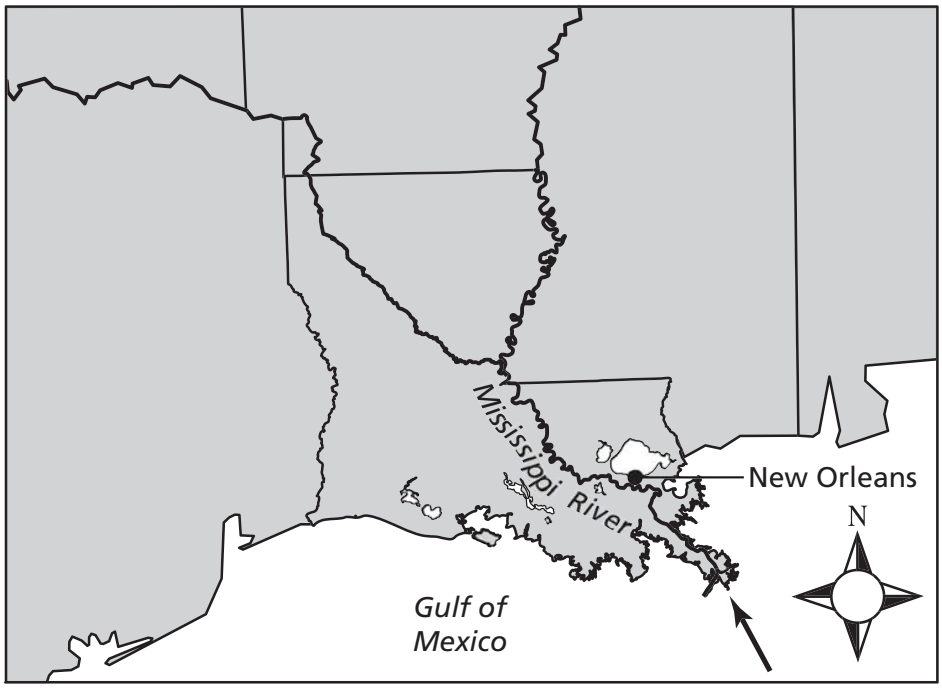
C required its citizens to be knowledgeable of England and France.

D trades equally with England and France.

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Reporting Category:	**3 Geography**
Performance Indicator:	**8.3.2 Identify and use the key geographic elements on a map (i.e., island, flood plain, swamp, delta, marsh, harbor, cape, sea level, bay, prairie, desert, oasis, mesa, mountain, valley, glacier, canyon, cliff, plateau).**

Louisiana Gulf Coast



22 **Which geographic feature is marked by an arrow on the map above?**

F delta

G glacier

H oasis

J plateau

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Reporting Category:	**3 Geography**
Performance Indicator:	**8.3.3 Interpret examples which illustrate how cultures adapt to or change the environment (i.e., deforestation, subsistence farming, cash crop, dam and road building).**

Nation 1: The government encourages and supports efforts to import natural resources.
Nation 2: The government refuses to help its citizens attain health care.
Nation 3: The government supports a large military.
Nation 4: The government constructs dams on major rivers.

23 **Which of the cultures described above is changing its environment?**

A Nation 1

B Nation 2

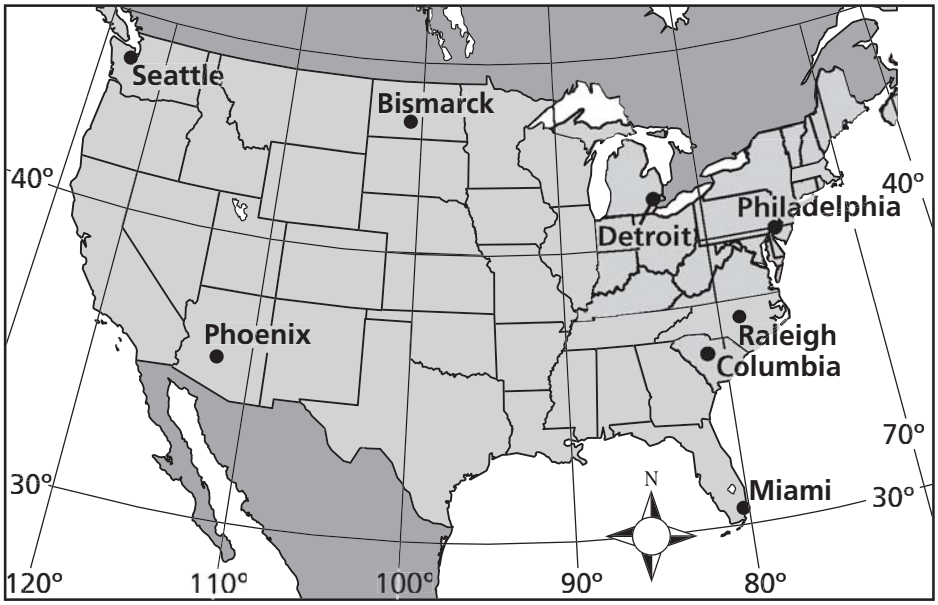
C Nation 3

D Nation 4

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Reporting Category:	**3 Geography**
Performance Indicator:	**8.3.4 Use various geographic data from maps and globes to determine longitude, latitude, distance, direction.**

United States



24 **Which two cities are separated by a measurement of roughly 20° longitude?**

F Bismarck and Columbia

G Detroit and Philadelphia

H Miami and Seattle

J Phoenix and Raleigh

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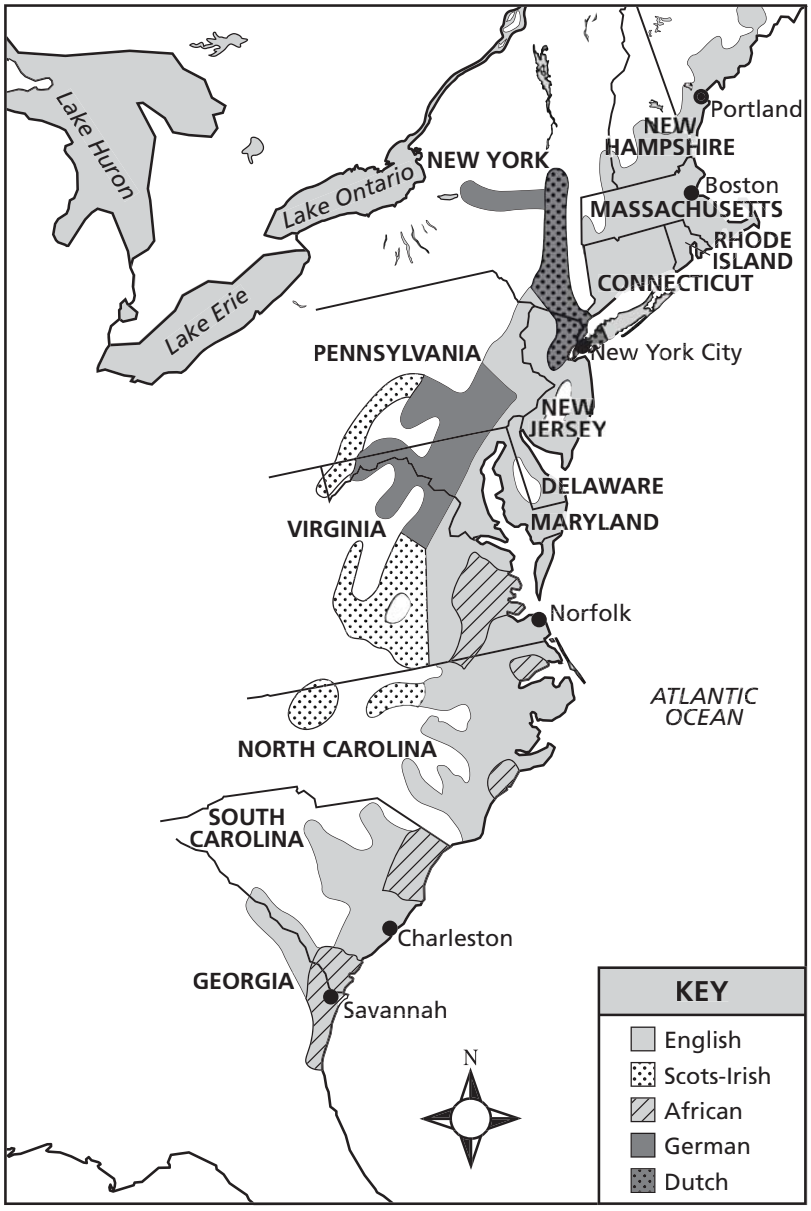
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Reporting Category: 3 Geography

Performance Indicator: 8.3.5 Interpret a geographic map of the early United States.

Directions Use the map below and what you know to do Number 25.

Major Immigrant/Ethnic Groups in Colonial America: 1760



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25 **Based on this map, which immigrant group was most likely the first to move into Tennessee in great numbers?**

A Dutch

B English

C German

D Scots-Irish

Reporting Category:	**3 Geography**
Performance Indicator:	**8.3.6 Recognize how topographical features such as mountain and river systems influenced the settlement and expansion of the United States (i.e., Cumberland Gap, Wilderness Road, Ohio and Tennessee river systems).**

26 **Which geographic feature aided the early exploration of Tennessee?**

F Cumberland Gap

G Ozark Plateau

H Missouri River

J Mississippi Delta

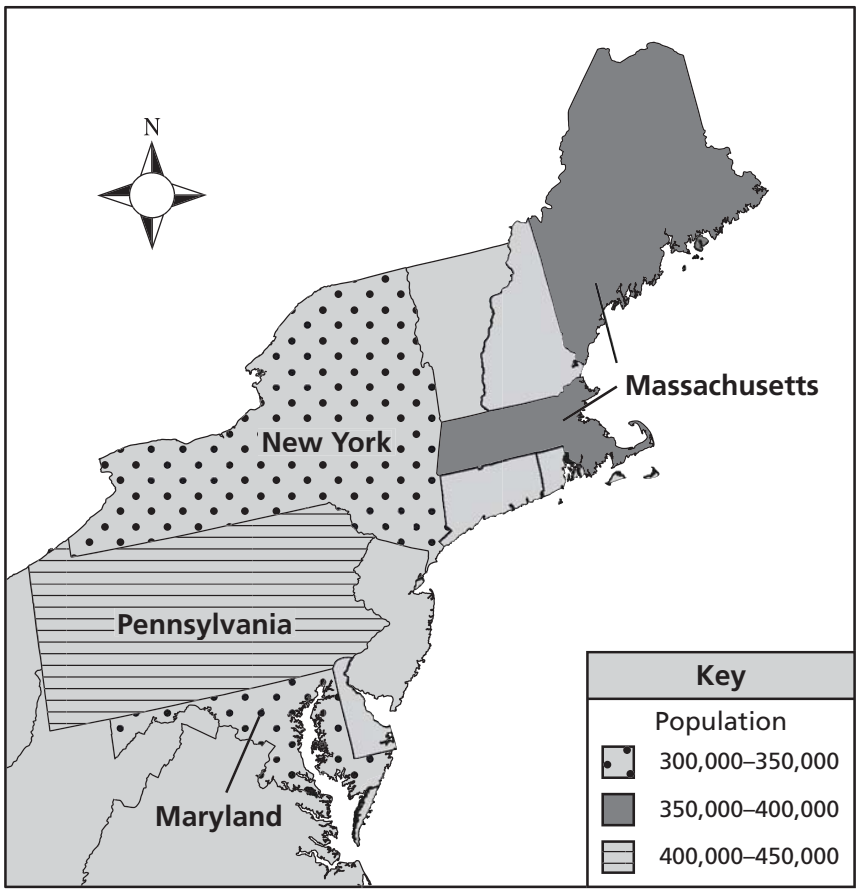
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Reporting Category: 3 Geography

Performance Indicator: 8.3.7 Interpret a chart or map of population characteristics of the early United States (i.e., density, distribution, regional growth).

Population of Selected U.S. States, 1790



Source: U.S. Census

27 According to the map above, which of these states had the greatest population in 1790?

A Maryland

B Massachusetts

C New York

D Pennsylvania

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Reporting Category:	4 US History Period 1 (Beginnings -1820)
Performance Indicator:	UH1.8.1.3 Recognize the influence of science and technology on the development of early American colonial cultures (i.e., compass, shipbuilding, food storage, printing press, financial markets, weaponry, transportation).

?

- Use of iron tools
- Use of horses
- Use of firearms

28 **What is the best title for the list above?**

F Colonial Advantages Over Native Americans

G Native American Contributions to the Colonies

H Colonial Contributions to the Triangular Trade

J Native American Farming Innovations

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Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.1.4 Compare and contrast the tenets of America's early major religions (i.e., Olmec beliefs, Native American Earth/Mother Spirit, African Traditional Religion, Puritanism, Quakerism).

29 During the Colonial Era, followers of both African and European religious traditions

A believed in spiritual forces.

B worshipped the world around them.

C believed in monotheism.

D worshipped ancestors.

Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.1.5 Identify how religion contributed to early American society (i.e., impact on government, education, social norms, slavery, tolerance).

30 Which institution was most important in establishing social norms and organizing the early Puritan society in New England?

F the local militia

G the colonial government

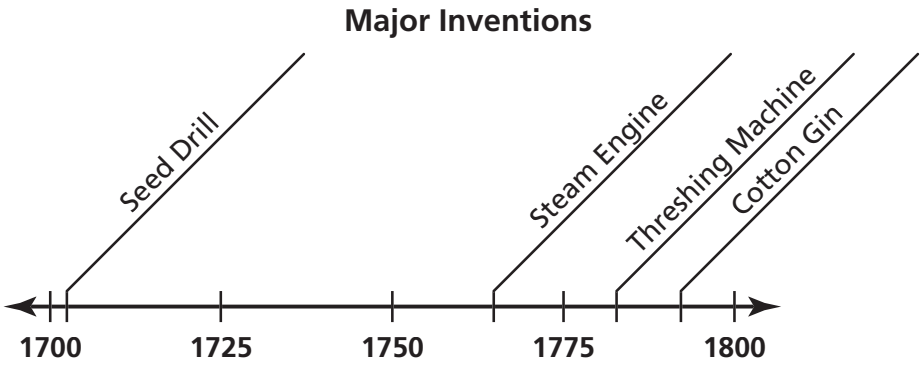
H the royal governor

J the community church

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Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.1.6 Interpret a timeline of technological innovations.



31 Which area of the economy was most affected by the innovations shown above?

A banking

B agriculture

C steel

D transportation

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Reporting Category:	**4 US History Period 1 (Beginnings -1820)**
Performance Indicator:	**UH1.8.2.9 Analyze in economic terms (i.e., climate, triangle trade, infrastructure, topography) why slavery flourished in the South as opposed to the North.**

32 **Slavery did not become an important part of the economy in the northern United States because**

F the triangle trade only affected southern colonies.

G strict religious beliefs forbade slavery.

H the cold climate made cash crops unprofitable.

J a lack of industrial development discouraged slavery.

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Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.5.1 Contrast the characteristics of major native civilizations of the Americas.

Culture	Location	Characteristics
Pueblo	Southwest	• Used stone, straw, and earth to build their homes • Made pots and other objects out of clay • Grew crops such as corn and cotton
Mohawk	Northeast	• Built homes and other buildings out of bark and twigs • Used fish and deer as important food sources • Built canoes from trees • Wove baskets

33 **The main differences between the groups described above were a result of the**

A size of their populations.

B amount of wealth they collected.

C types of basic needs they needed to meet.

D types of natural resources available in their regions.

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Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.5.3 Differentiate between a primary and a secondary source.

34 **Which document is a secondary source?**

F a journal kept by a soldier

G a history book written by a professor

H a letter written by a military officer to his wife

J a map drawn for use in battle planning

Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.5.4 Recognize causes and consequences of conflict (i.e., French and Indian War, Revolutionary War, War of 1812).

35 **Which conflict resulted from competition between two European nations for control of North America?**

A the French and Indian War

B the American Revolution

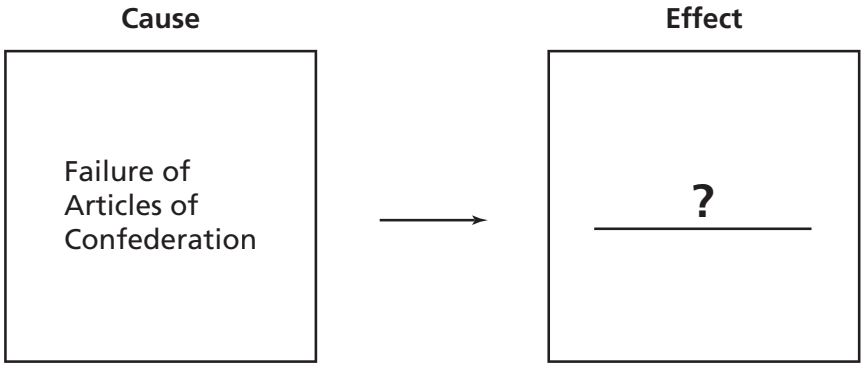
C the War of 1812

D the Civil War

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Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.5.6 Classify the characteristics of major historic events into causes and effects (i.e., exploration, colonization, revolution, expansion, and Civil War).



36 **Which event <u>best</u> completes the diagram above?**

F Pilgrims Sign the Mayflower Compact

G Thomas Paine Writes *Common Sense*

H Declaration of Independence Is Signed

J U.S. Constitution Is Written

Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.5.7 Recognize the historical impacts of European settlement in North America.

37 **European settlement in North America resulted in the**

A introduction of new diseases.

B beginning of the Protestant Reformation.

C increased power of the Aztec civilization.

D decline of international trade.

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Reporting Category: 4 US History Period 1 (Beginnings -1820)

Performance Indicator: UH1.8.5.12 Differentiate between primary and secondary source documents.

38 **Recording daily events in a journal is one way to create a**

F secondary source.

G brochure.

H primary source.

J biography.

Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.1.2 Identify cultures that contributed to the development of the United States (i.e., Native American, African, British, Scottish, Irish, German).

39 **By 1820, Tennessee's inhabitants included Native Americans, African Americans, and**

A immigrants from Europe.

B workers from Asia.

C farmers from Mexico.

D soldiers from Canada.

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Reporting Category:	**5 US History Period 2 (1801-1900)**
Performance Indicator:	**UH2.8.3.1 Recognize the causes and examples of migration and immigration in Early American (i.e. land, religion, money, pioneer spirit, indentured servitude, displacement, and slavery).**

40 **At the end of the 19th century, most immigrants from Eastern Europe came to America in response to**

F poor economic conditions in their homelands.

G U.S. government programs offering free land.

H generous terms of indentured servitude.

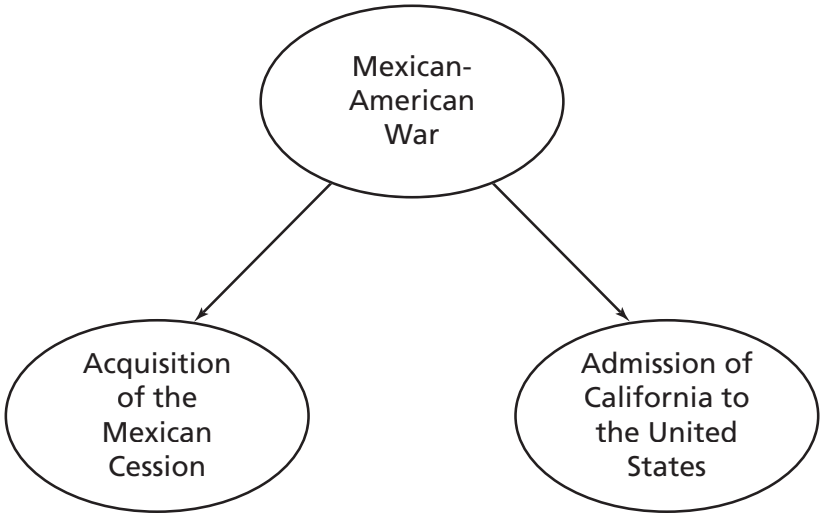
J career opportunities in the U.S. military.

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Reporting Category: **5 US History Period 2 (1801-1900)**

Performance Indicator: **UH2.8.4.9 Analyze the contributions of Tennessee political leaders on the national scene (i.e., Andrew Jackson, Andrew Johnson, James K. Polk, Sequoyah, Sam Houston).**



41 **Which president made the decisions that began the sequence of events above?**

A William Henry Harrison

B Andrew Jackson

C James K. Polk

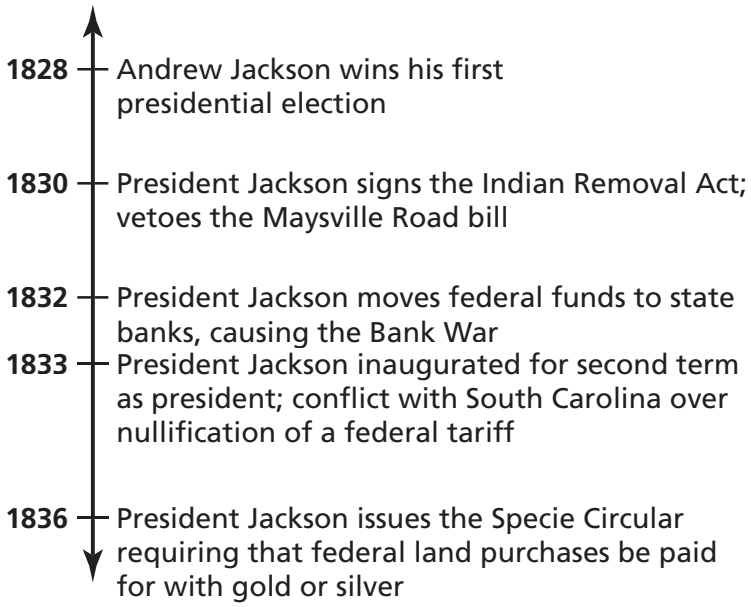
D Millard Fillmore

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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.2 Read a timeline and order events of the past.

Andrew Jackson's Presidency



42 **Based on the timeline above, which action did President Andrew Jackson take during his second term in office?**

F vetoed a road bill

G issued the Specie Circular

H signed the Indian Removal Act

J moved federal funds to state banks

Go On ▶

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Reporting Category: **5 US History Period 2 (1801-1900)**

Performance Indicator: **UH2.8.5.3 Differentiate between a primary and secondary source.**

> Late in the fall of 1838 we emigrated from Ohio to Missouri. Our first halting place was on Green River, but the next year we took a farm in Platte County. . . . [I]n April, 1844, we started across the plains.
>
> — *Across the Plains in 1844* by Catherine Pringle, 1860

43 **Why is the excerpt above a primary source?**

A It is a textbook chapter.

B It is an autobiographical account.

C It is a summary of a historical event.

D It is an official government document.

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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.4 Recognize causes and consequences of conflict, (i.e., French and Indian War, Revolutionary War, War of 1812).

- British forces encourage Native Americans to attack settlers
- British navy impresses American sailors
- British navy attacks U.S. ships

44 War Hawks in Congress reacted to the issues listed above by calling for which conflict?

F French and Indian War

G the War of 1812

H Pontiac's Rebellion

J the First Seminole War

Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.5 Recognize consequences of the westward expansion of the United States.

45 The rapid settlement of the western territories during the first half of the 19th century led to

A economic depression.

B laws restricting immigration.

C sectional differences.

D laws restricting reform movements.

Go On ▶

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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.6 Classify the characteristics of major historical events into causes and effects (i.e., exploration, colonization, revolution, expansion, and Civil War).

46 Which event led most directly to the Civil War?

F completion of the Transcontinental Railroad

G passing the Homestead Act

H secession of South Carolina

J fighting the Battle of Gettysburg

Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.8 Determine the social, political, and economic factors that contributed to the institution of slavery in America.

47 Which economic factor contributed most to the increase in slavery after 1800?

A creation of monopolies

B growth of factory towns

C discovery of mineral deposits

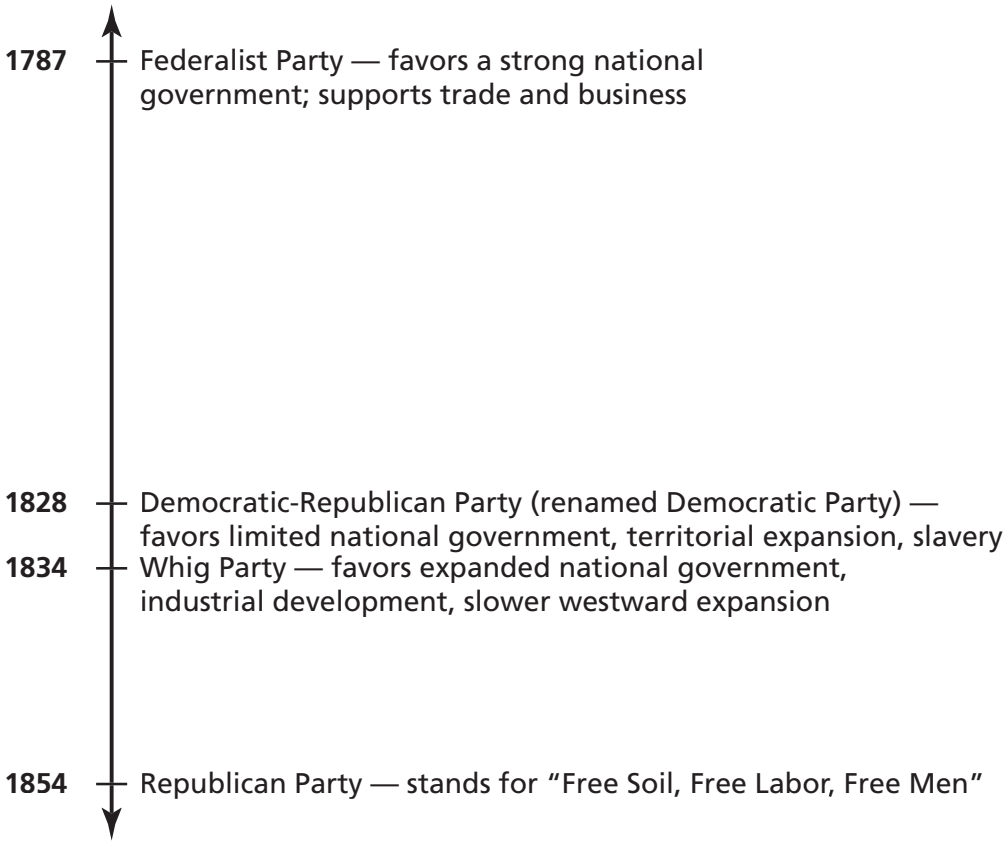
D expansion of cotton plantations

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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.9 Interpret a timeline, detailing the development of political parties in the United States to the Civil War.

Development of Some Political Parties From 1787 to 1854



Note: Some dates are approximate

48 **According to the timeline above, abolitionists would most likely have been attracted to the**

F Federalist Party.

G Democratic Party.

H Republican Party.

J Whig Party.

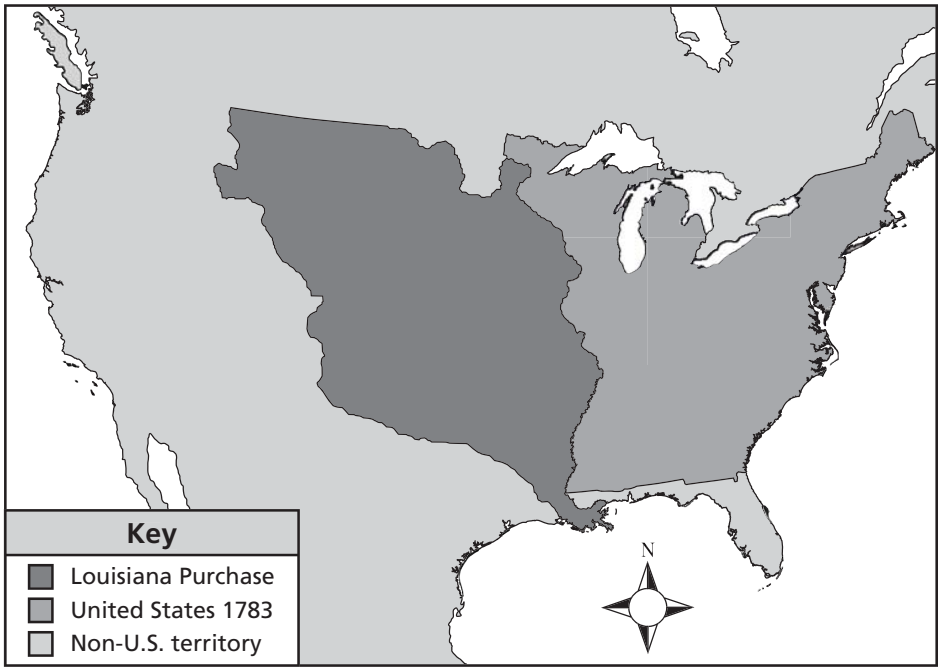
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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.10 Interpret maps, timelines, and charts that illustrate key elements of history (i.e., expansion, economics, politics, society).

Louisiana Purchase



49 **The map above shows that the Louisiana Purchase**

A doubled the land area of the United States.

B expanded the United States to its present-day boundaries.

C added most of the Southwest to the United States.

D gave the United States control of the Ohio River valley.

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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.11 Identify conclusions about historical events using primary and secondary sources.

> Until lately, there were no Europeans on this continent; that it then all belonged to [Native Americans] . . . to keep it, to traverse it, to enjoy its productions. . . . The way, and the only way, is for all the [Native Americans] to unite in claiming a common and equal right in the land . . .
>
> — Tecumseh, Speech at Vincennes, 1810

50 **In the excerpt above, Tecumseh states that to stop settlers from taking their land, Native Americans needed to**

F work together as a group.

G move farther west.

H sell at a fair price.

J move onto reservations.

Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.13 Examine the demographic changes brought about by westward movement (i.e., slavery, industrialization, and Native American relocation).

51 **Which of these demographic changes was created by United States westward expansion?**

A Native Americans were forced to relocate to new lands.

B Africans were forced to be slaves on Caribbean plantations.

C Children worked long hours in American factories.

D Irish immigrants relocated to growing urban centers.

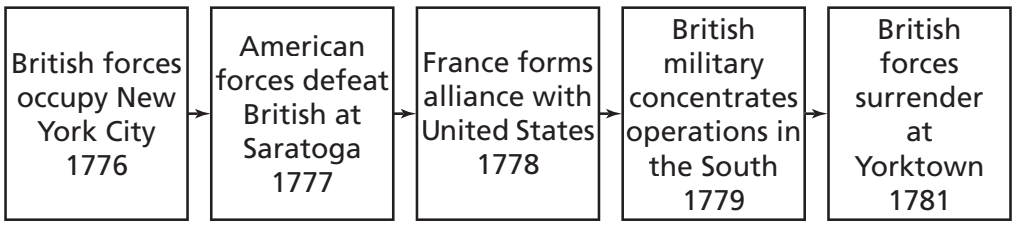
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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.5.14 Recognize the course of conflicts including major battles, alliances, strategy, leadership, resources, or technology using a diagram for the Revolutionary War.

Events of the Revolutionary War



52 **Based on the diagram above, why is the Battle of Saratoga considered the turning point of the Revolutionary War?**

F It occurred about halfway through the war.

G It moved the center of fighting south.

H It took place between major British victories.

J It persuaded France to join the American cause.

Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.6.1 Identify the impact of individual and group decisions on historical events.

53 **Which president was responsible for increasing the size of the United States by purchasing land from France?**

A John Adams

B Thomas Jefferson

C James Madison

D James Monroe

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Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.6.2 Recognize the impact groups have on change at the local, state, national, and world levels.

54 **Which social injustice did abolitionists bring to the attention of the American public?**

F discrimination against women

G slavery of African Americans

H theft of Native American land

J child labor in factories

Reporting Category: 5 US History Period 2 (1801-1900)

Performance Indicator: UH2.8.6.3 Recognize examples of stereotyping, prejudice, conformity, and altruism in early American history.

55 **During the 1800s, women were forbidden by law to**

A attend public schools.

B vote in elections.

C work in textile factories.

D write newspaper editorials.

STOP

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Reading/Language Arts
Answer Key

1	A
2	J
3	C
4	F
5	D
6	G
7	B
8	J
9	B
10	G
11	C
12	G
13	B
14	H
15	A
16	J
17	A
18	H
19	B
20	J
21	B
22	G
23	A
24	F

25	A
26	H
27	A
28	H
29	B
30	H
31	D
32	F
33	C
34	G
35	B
36	H
37	A
38	J
39	D
40	F
41	D
42	J
43	A
44	J
45	A
46	G
47	A
48	J

49	A
50	H
51	C
52	F
54	H
55	D
57	D
68	F
69	C
70	F
71	C
72	G

73	A
74	H
75	B
76	J
77	B
78	F
79	D
80	G
81	D
82	H
83	D
84	G
85	C
86	J
87	B
88	G
89	C
90	G
91	C
92	F
93	D

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Math
Answer Key

1	C
2	H
3	D
4	G
5	B

6	G
7	D
8	F
9	D
10	H

11	B
12	J
13	A
14	G
15	B

16	H
17	A
18	F
19	D
20	F

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Science
Answer Key

1	C
2	J
3	C
4	G
5	D
6	F
7	C
8	G
9	A

10	F
11	B
12	G
13	C
14	J
15	B
16	J
17	D
18	G

19	C
20	J
21	D
22	F
23	C
24	F
25	A
26	J
27	B

28	F
29	C
30	H
31	A
32	F
33	B
34	J

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Social Studies
Answer Key

1	B
2	G
3	A
4	H
5	A
6	H
7	C
8	F
9	A
10	G
11	D
12	H
13	C
14	H

15	A
16	G
17	D
18	G
19	B
20	H
21	A
22	F
23	D
24	F
25	D
26	F
27	D
28	F

29	A
30	J
31	B
32	H
33	D
34	G
35	A
36	J
37	A
38	H
39	A
40	F
41	C
42	G

43	B
44	G
45	C
46	H
47	D
48	H
49	A
50	F
51	A
52	J
53	B
54	G
55	B

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Tennessee Comprehensive Assessment Program

Achievement Test ~ Grade 8

Item Sampler

542241 1 2 3 4 5 A B C D E Printed in the USA ISD4530

Mathematics



Part 1

1 What is the value of y in the solution to this system of linear equations?

$$2y - x = -8$$
$$5y + x = -6$$

A 4

B 2

C -2

D -4

2 Four numbers are shown below.

$$2^3,\ 7.5,\ \sqrt{70},\ 2\sqrt{10}$$

Which list shows these numbers in order, from greatest to least value?

F $\sqrt{70},\ 2^3,\ 7.5,\ 2\sqrt{10}$

G $\sqrt{70},\ 2\sqrt{10},\ 2^3,\ 7.5$

H $2\sqrt{10},\ 7.5,\ 2^3,\ \sqrt{70}$

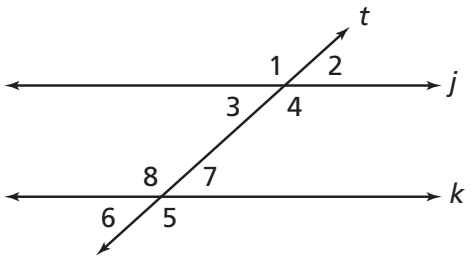
J $2\sqrt{10},\ \sqrt{70},\ 2^3,\ 7.5$

Go On ▶

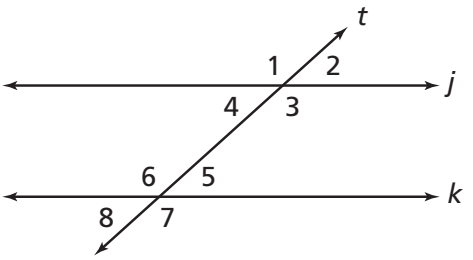
3 Which figure appears to contain all the characteristics below?

- Line *j* and Line *k* are parallel lines.
- Line *j* and Line *k* are cut by a transversal, *t*.
- The measure of Angle 2 is equal to the measure of Angle 4.
- The measure of Angle 5 is equal to the measure of Angle 7.

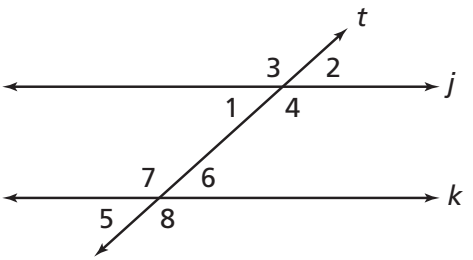
A



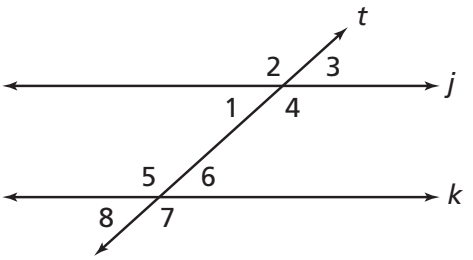
B



C



D



4 Which equation represents a linear function?

F $y = 5x^2 + 12$

G $y = \sqrt{4x} + 4$

H $y = -2x - 3$

J $y = |3x| + 7$

5 Which statement is true?

A The number $\frac{9}{10}$ is irrational.

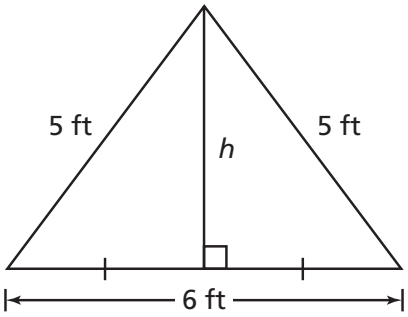
B The number $\left(\sqrt{2}\right)^2$ is rational.

C The number $\sqrt{44}$ is rational.

D The number $\frac{6\pi}{15\pi}$ is irrational.

Go On ▶

6 A triangular face of a dog house is represented in the diagram below.



$$a^2 + b^2 = c^2$$

Which measurement is closest to the height, *h*, of this dog house?

F 3.3 feet

G 4 feet

H 5.8 feet

J 11 feet

7 The speed of a space shuttle is 17,321 miles per hour. At this speed, without stopping, what is the total number of miles the space shuttle will travel in five days?

$$\text{distance} = \text{rate} \times \text{time}$$

A 86,605 miles

B 415,704 miles

C 2,078,520 miles

D 5,196,300 miles

8 Which expression is equivalent to the product of 231,000,000,000 and 42,000,000,000,000?

F $(2.31 + 4.2) \times 10^{(11 \times 13)}$

G $(2.31 + 4.2) \times 10^{(11 + 13)}$

H $(2.31 \times 4.2) \times 10^{(11 \times 13)}$

J $(2.31 \times 4.2) \times 10^{(11 + 13)}$

9 Given:

$$\begin{cases} f(x) = \dfrac{6}{x - 4} \\ \\ g(x) = \dfrac{5}{x + 4} \end{cases}$$

For what value of x does $f(x) = g(x)$?

A 4

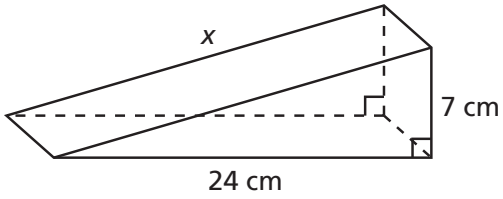
B 0

C -8

D -44

Go On ▶

10 The lengths of two edges of the figure below are shown in centimeters.



$a^2 + b^2 = c^2$

What is the length of Edge *x*?

F 25 cm

G 31 cm

H 569 cm

J 625 cm

11 The sponsor of a math club is ordering shirts for club members. The table below shows the total price for a number of shirts from each of four vendors.

Shirt Vendors

Vendor	Number of Shirts	Total Price
Q	50	$320.00
R	60	$380.00
S	75	$530.00
T	80	$560.00

Which vendor offers the lowest price per shirt?

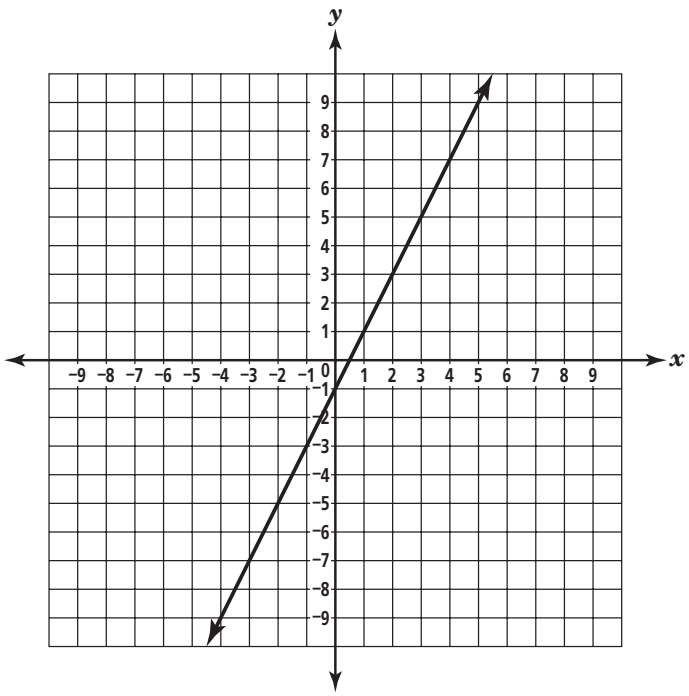
A Vendor Q

B Vendor R

C Vendor S

D Vendor T

12 Which equation is best represented by the graph below?



F $y = -x + 2$

G $y = -x + \frac{1}{2}$

H $y = \frac{1}{2}x - 1$

J $y = 2x - 1$

Go On ▶

13 Steven's morning workout consists of jogging 8 miles per hour for 0.75 hour and then walking at a rate of 3 miles per hour for 0.5 hour. How many miles does Steven travel during his morning workout?

$$\boxed{\text{distance} = \text{rate} \times \text{time}}$$

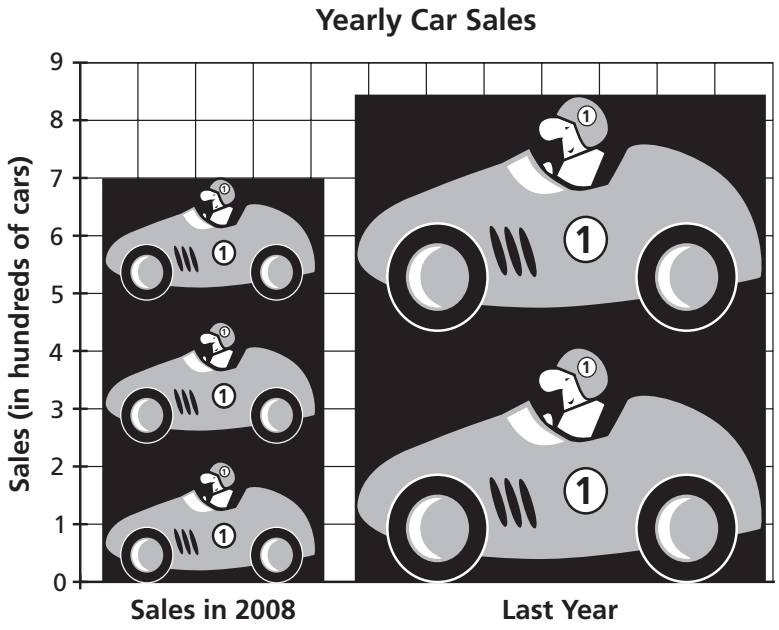
A 7.5 miles

B 8.8 miles

C 13.8 miles

D 16.7 miles

14 The manager of a car dealership wanted to show that his dealership sold more cars last year than in 2008. The manager created the graph below to show this increase in sales.



Which statement best describes how this graph misrepresents the change in sales?

F The graph actually shows a decrease in the number of cars sold because the dealership went from selling three small cars to selling two large cars.

G Using differently sized cars for each year makes it appear as if the sales last year were much greater than they actually were.

H Sales should have been reported in the number of dollars spent instead of the number of units sold.

J The graph does not show the sales between 2008 and last year.

Go On ▶

15 Four numbers are shown below.

$$3.9,\ \frac{31}{7},\ \sqrt{15},\ \frac{15}{4}$$

Which list shows these numbers in order, from least to greatest value?

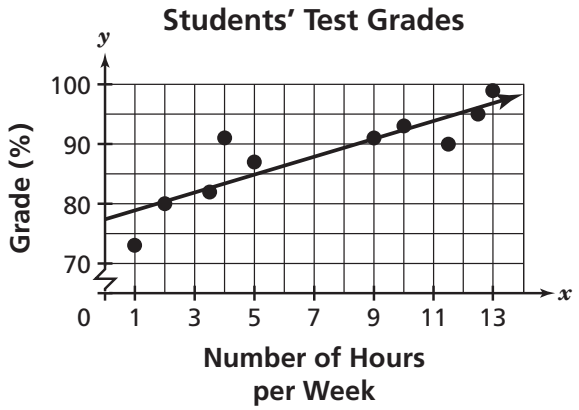
A $\frac{15}{4}, \frac{31}{7}, 3.9, \sqrt{15}$

B $\frac{31}{7}, 3.9, \sqrt{15}, \frac{15}{4}$

C $\sqrt{15}, \frac{15}{4}, 3.9, \frac{31}{7}$

D $\frac{15}{4}, \sqrt{15}, 3.9, \frac{31}{7}$

16 The scatterplot below shows the relationship between the test grades for 10 students and the numbers of hours they studied per week.



Based on the scatterplot, which is the best prediction of the test grade for a student who studied for 7 hours?

F 98%

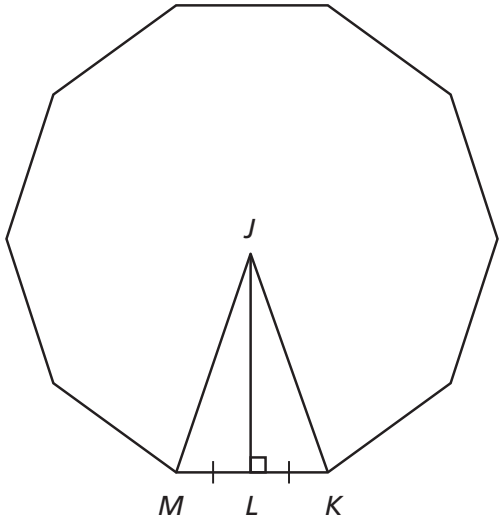
G 91%

H 88%

J 82%

Go On ▶

17 The regular decagon below has the Center *J*.



$a^2 + b^2 = c^2$

The length of Line Segment *JK* is 4 feet and the length of Line Segment *JL* is 3.8 feet. Which is closest to the perimeter of the regular decagon?

A 31.2 ft

B 25.0 ft

C 15.6 ft

D 12.5 ft

18 Given the equations below, what is the value of x when $f(x) = g(x)$?

$$f(x) = 3(x - 2)$$
$$g(x) = 0.5(4x - 8)$$

F -10

G -6

H -2

J 2

19 The list below shows the size and price of four different packages of pet snacks.

- 32 ounces for $29
- 24 ounces for $22
- 18 ounces for $16
- 16 ounces for $15

Which size package has the lowest price per ounce for pet snacks?

A 32 ounces

B 24 ounces

C 18 ounces

D 16 ounces

20 A red blood cell is 8×10^{-6} meters long. A skin cell is 3×10^{-5} meters long. How many times longer is the skin cell than the red blood cell?

F 3.75×10^{-1}

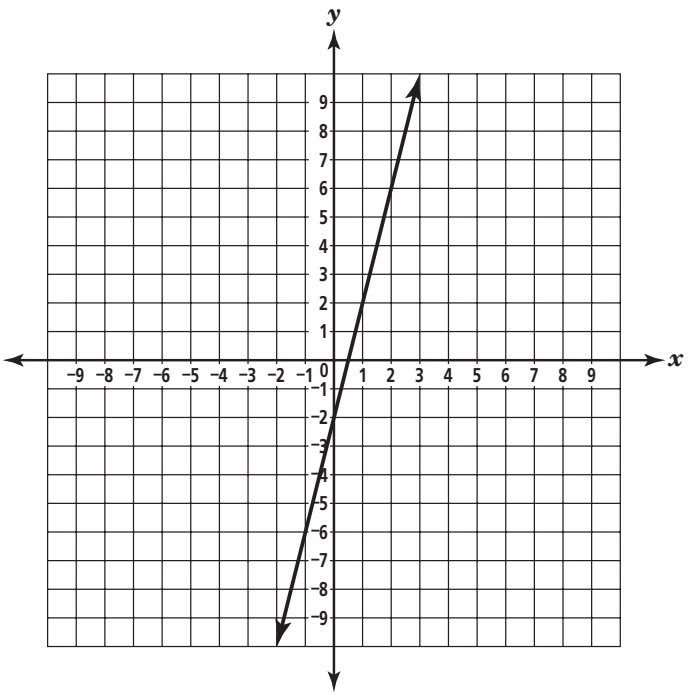
G 2.67×10^{0}

H 3.75×10^{0}

J 2.67×10^{1}

Go On ▶

21 The graph of the function $y = 4x - 2$ is shown below.



What is the value of y in this function when $x = 2$?

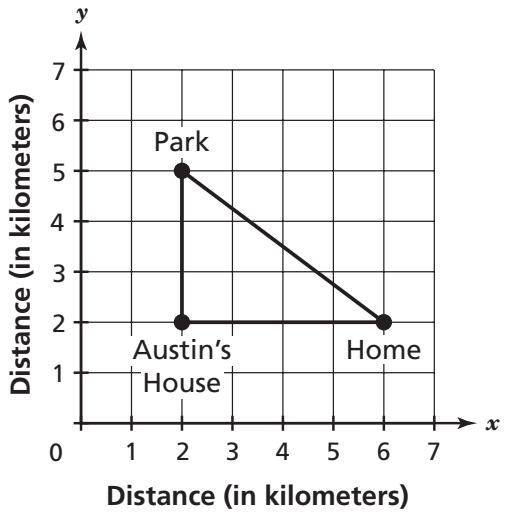
A −10

B −4

C 1

D 6

22 Jamal rode his bike from his home to Austin's house. From Austin's house, he rode to the park and then directly back home. The path on the coordinate grid below represents the path Jamal took.



$a^2 + b^2 = c^2$

What is the total distance that Jamal rode his bike?

F 4 km

G 5 km

H 12 km

J 25 km

Go On ▶

23 Which expression can be used to find the quotient of 0.000000048 and 16,000,000?

A $\frac{4.8}{1.6} \times 10^{(-8-7)}$

B $\frac{4.8}{1.6} \times 10^{(8-7)}$

C $(4.8 - 1.6) \times 10^{(-8-7)}$

D $(4.8 - 1.6) \times 10^{(8-7)}$

24 Which set of ordered pairs best represents the linear function $f(x) = \frac{1}{2}x + 2$?

F $\{(-4, -7.5), (-1, -1.5), (2, 4.5), (4, 8.5)\}$

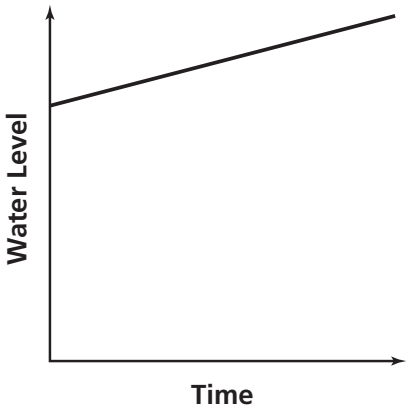
G $\{(-4, -1), (-1, 0.5), (2, 2), (4, 3)\}$

H $\{(-4, 0), (-1, 1.5), (2, 3), (4, 4)\}$

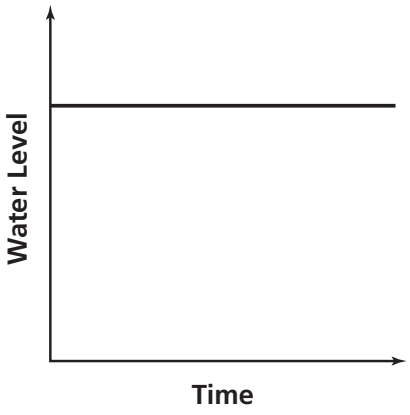
J $\{(-4, 0), (-1, 3), (2, 6), (4, 8)\}$

25 Which graph best represents the relationship between the water level in a swimming pool and the time that has passed since the pool began draining?

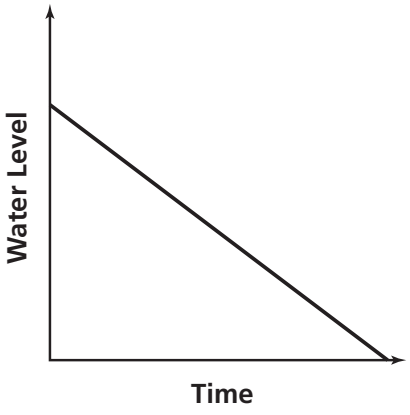
A



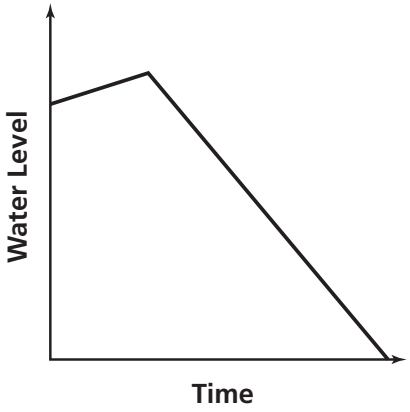
C



B



D



26 Which number is rational?

F $\frac{7\pi}{4}$

G $\sqrt{18}$

H 2.121121112 . . .

J $\frac{\sqrt{44}}{\sqrt{99}}$

Go On ▶

27 What is the solution to this system of linear equations?

$$2x - 2y = 10$$
$$x + 4y = 30$$

A $(10, 5)$

B $(50, -5)$

C $(0, 5)$

D $(10, -5)$

28 What is the slope of the line represented by the equation $\frac{3}{7}y + \frac{3}{4}x = \frac{3}{5}$?

F $-\frac{21}{4}$

G $-\frac{7}{4}$

H $\frac{3}{4}$

J $\frac{7}{4}$

STOP

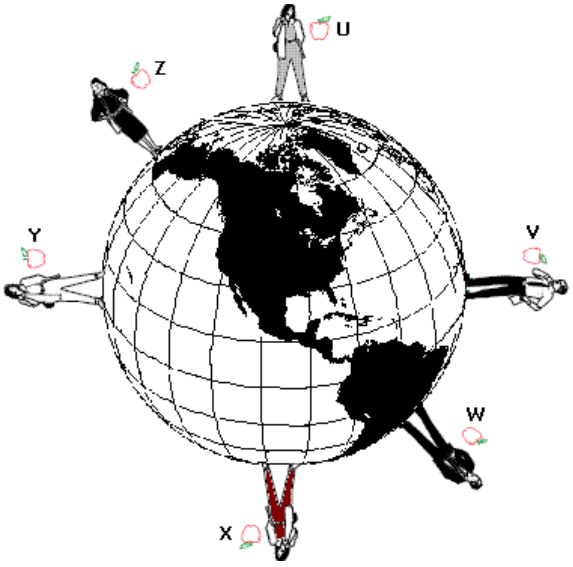
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8th Grade Science Pre-Test

1. What is the main difference between weight and mass?

- A. There is no difference between weight and mass.
- B. Weight can be measured, and mass cannot.
- C. Weight is dependent on gravity, and mass is not.
- D. Weight is measured in grams, and mass is measured in pounds.

2.

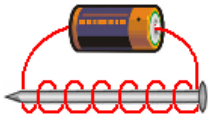


In an experiment, six people at different places around the Earth drop an apple at the same time. Which apples will fall to the Earth?

- A. Only apple U will fall to the Earth.
- B. Only apples U and Z will fall to the Earth.
- C. All of the apples will fall to the Earth.
- D. Only apples U, V, Y and Z will fall to the Earth.

---

3. Lindsey created a magnetic field using the setup shown below.



What could Lindsey pick up using this setup?

- A. pieces of plastic
- B. glass shards
- C. paper scraps

- D. iron filings

---

4. Balances are used

- A. to measure the volume of an object.
- B. to measure the mass of an object.
- C. to measure the force acting on an object.
- D. to create level surfaces on the lab table.

---

5. If we know the relative age of a fossil, we also know

- A. how it became extinct.
- B. the relative age of the rock where it was found.
- C. the type of climate from which it came.
- D. how long the organism was alive.

---

6. **Directions: Drag each tile to the correct box.**
Juan is interested in finding out whether hummingbirds are attracted to some flowers more than others. In what order should Juan perform the steps of his experiment?

Write a report on his findings.

Create a garden of different flowers.

Make a prediction about which flowers hummingbirds are most attracted to.

Record his observations.

Observe how many times hummingbirds visit each flower.

↓

↓

↓

↓

7. Which object most likely exerts the strongest gravitational pull on other objects?

- A. a bowling ball
- B. a golf ball
- C. a baseball
- D. a beach ball

8. Jacques moves a bar magnet near a circle of copper wire. Moving the magnet creates a changing magnetic field passing through the copper loop.

What happens to the copper wire because of the moving magnet?

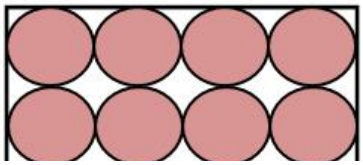
- A. The copper wire carries an electric current.
- B. The copper wire develops a positive electric charge.
- C. The copper wire loses its magnetic charge.
- D. The copper wire develops a negative electric charge.

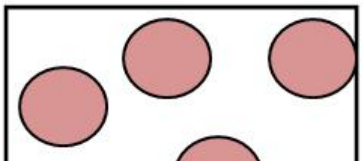
9. During the 1900s, many chemical companies invented a variety of plastics. Plastics are used in a wide array of technologies, including food packaging. Which of the following is an effect of the widespread use of plastics for packaging foods?

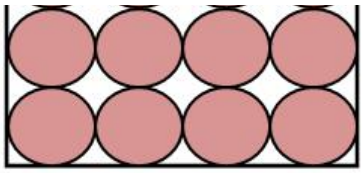
- A. a decrease in air and water pollution
- B. an increase in solid waste pollution
- C. an increase in food consumption
- D. a decrease in the amount of nutrients in food

10. A change of _____, such as a liquid changing to a gas, is an example of a physical change.

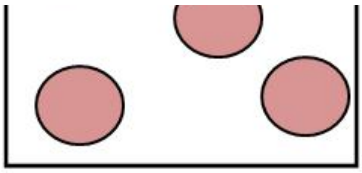
- A. location
- B. energy
- C. charge
- D. state







I



II

11.

Substance I in the picture above has molecules that are closely packed together in a regular pattern. Substance II has molecules that are far apart and are not in any kind of pattern.

Substance II is a _____ and its molecules are moving _____ than the molecules in substance I.

- A. solid; faster
- B. solid; slower
- C. gas; slower
- D. gas; faster

---

12. A solution of salt water is boiled. The water evaporates and solid salt remains. Which statement is true?

- A. The salt has undergone a chemical change, and the water has undergone a physical change.
- B. The salt has undergone a physical change, and the water has undergone a chemical change.
- C. The salt and the water have both undergone physical changes.
- D. The salt and the water have both undergone chemical changes.

---

13. If a chemical is spilled on the floor of a lab, what is the safest way to determine if it is an acid?

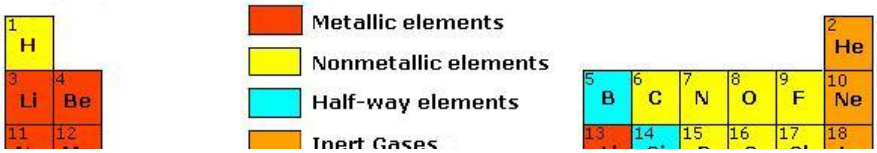
- A. taste a small amount
- B. use litmus paper
- C. determine if it dissolves metal
- D. inhale deeply

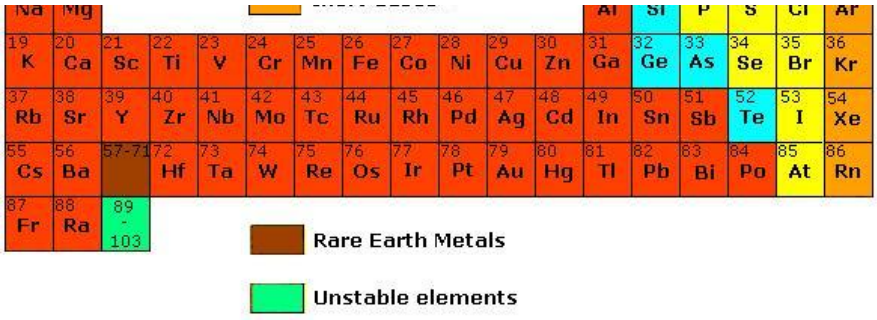
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14. Electromagnets are created using

- A. charged and uninsulated wire wrapped around a piece of steel.
- B. charged and insulated wire wrapped around a piece of iron.
- C. insulated wire wrapped around a piece of plastic.
- D. uncharged and insulated wire wrapped around a piece of iron.

15.





Which element has characteristics most similar to fluorine (F)?

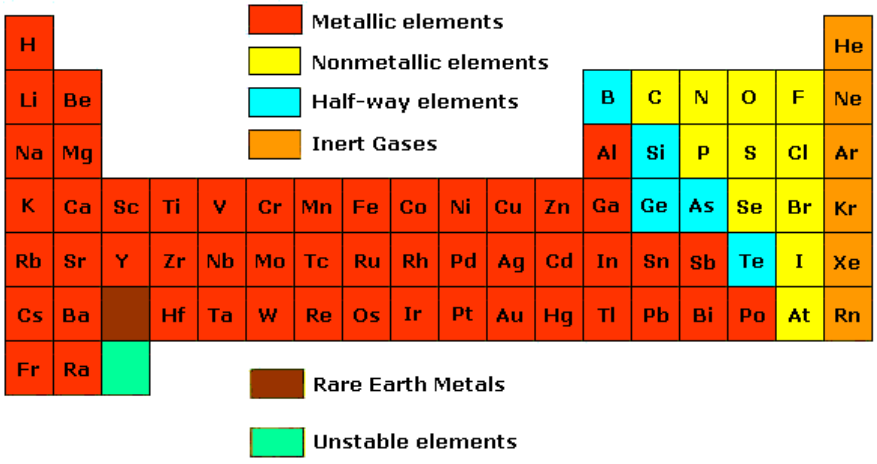
- A. lead (Pb)
- B. bromine (Br)
- C. nitrogen (N)
- D. hydrogen (H)

---

16. Which of the following is a matter phase in which the molecules are arranged in a matrix and close together?

- A. liquid
- B. gas
- C. solid
- D. all of these

17.



What is the atomic number of carbon (C)?

- A. 14
- B. 4
- C. 6
- D. 3

---

18. Sharon pours salt into a glass of water. The salt dissolves. The substance in the glass is a(n) _____.

- A. mixture

A. mixture
B. element
C. compound
D. atom

---

19. How are elements arranged in the periodic table?

A. by atomic mass
B. alphabetically
C. by the date of discovery
D. by atomic number

---

20. Dr. Thakkar was studying a fossil from a dig in a desert when he noticed that the organism had evidence of fins. What would this most likely tell Dr. Thakkar?

A. The desert was once covered by water.
B. Nothing; every fossilized organism has fins.
C. Sea animals used to live in deserts.
D. The organism grew legs when it wanted to leave the ocean.

---

21. The chemical combination of two or more different atoms in fixed amounts is called a(n)

A. compound.
B. mixture.
C. element.
D. orbit.

---

22. Ron is studying cells. He needs to view the cells to see their physical characteristics.

What is the best tool that Ron could use to do this?

A. a thermometer
B. a spring scale
C. a microscope
D. a balance

---

23. By studying fossils, scientists have learned that

A. animals have changed over time, but plants have not.
B. both animals and plants have changed over time.
C. neither animals nor plants have changed over time.
D. plants have changed over time, but animals have not.

---

24. George holds a magnet above a pile of paperclips. The paperclips move toward the magnet and stick to it before the magnet actually touches it.

A magnet is surrounded by _____, which applies a push or a pull to an object without actually touching it.

- A. a generator
- B. a magnetic field
- C. an electric current
- D. a simple machine

---

25. Directions: Drag each tile to the correct box.
Abbey wants to determine how long it takes for a tadpole to develop into a frog. In what order should she perform the steps below?

Record changes that take place as the eggs hatch and tadpoles develop	Write a report on her findings.	Observe the frog eggs every day.	Predict how long it will take for a tadpole to develop into a frog.	Obtain frog eggs.
→	→	→	→	

---

26. In which of the following phases of matter are molecules arranged in a matrix and close together?

- A. Solid
- B. Liquid
- C. Gas
- D. Light

---

27. An engineer invents a robot that can assemble cars. Many car manufacturers buy the robot to use in their factories. What is the most likely effect of this new technology?

- A. The price of new cars will increase drastically.

B. The factories will completely stop employing humans.
C. Cars will be assembled more quickly and accurately.
D. People will start using cars less and bicycles more.

---

28. What holds a moon in its orbit?

A. its own internal magnetism
B. the heat generated by the planet it orbits
C. the gravitational pull of the star it orbits
D. the gravitational pull of the planet it orbits

---

29. The following items are all basic substances.

Substance	pH value
Ammonia	11.6
Baking Soda	8.0
Egg	7.8
Limewater	12.4
Milk of Magnesia	10.5
Lye	14.0

Which substance is the weakest base?

A. lye
B. baking soda
C. egg
D. ammonia

---

30. Which adaptation is best suited for flying?

A. light, hollow bones
B. strong, dense bones
C. large body size
D. large amounts of body fat

31.





Look at the fish above. They have probably adapted to have different fin shapes and locations because

- A. it helps the fish attract more predators.
- B. it does not help the fish in any way.
- C. it helps the fish to survive in their environment.
- D. it helps the fish to have more friends.

---

32. What happens to the gravitational force between two objects as the bodies become closer to each other?

- A. The gravitational force stays the same.
- B. The gravitational force increases.
- C. The gravitational force decreases.
- D. The gravitational force begins to repel the objects.

33.

	Coat Color	Underbelly	Tail	Legs
Sumatran Rabbit *Nesolagus netscheri*	gray with brown stripes	white	small and bright red	small and gray
Riverine Rabbit *Bunolagus monticularis*	brown with black stripe on face	cream	large, woolly, and solid brown	short and brown
Mountain Cottontail *Sylvilagus nuttallii*	grayish brown	white	large and gray with white underside	small and reddish brown
Volcano Rabbit *Romerolagus diazi*	dark brown with yellow tips	dark brownish gray	almost nonexistent	small and dark brown

Thomas sees the rabbit shown in the image below near the edge of a forest. Thomas wants to identify the species of the rabbit.



Based on the chart above, what species of rabbit does Thomas most likely see?

- A. mountain cottontail
- B. volcano rabbit
- C. riverine rabbit

D. Sumatran rabbit

Species Characteristics

Trait	Flowering Plants	Ferns	Conifers
Have true leaves, stems, and roots	Yes	Yes	Yes
Are often found in dry places	Yes	No	Yes
Have sharp, needle-like leaves	Some species	No	Yes
Seeds develop in a cone	No	No	Yes
Seeds are enclosed in a fruit	Yes	No	No

34. Use the characteristic chart provided to answer the question.

An unknown species has true leaves, stems, and roots, and its seeds are not enclosed in a fruit. If this unknown species is often found in dry places, what species is it?

A. Cotton Tree
B. Conifer
C. Weeping Willow
D. Fern

---

35. While David was riding his bike around the circular cul-de-sac by his house, he wondered if the constant circular motion was having any effect on his tires. What would be the best way for David to investigate this?

A. Measure the circumference of the tire before and after riding.
B. Measure the wear on his treads before and after riding a certain number of laps.
C. Time how long it takes him to ride 5 laps around his cul-de-sac.
D. Measure the total distance traveled on his bike and divide this by how long it took him.

---

36. Each square of the periodic table shows information about one element. The square usually shows the element's _____.

A. atomic number
B. symbol
C. atomic mass
D. all of these

---

37. When using pH paper, the pH of a solution can be determined by looking at the _____ of the paper.

A. texture
B. mass
C. length
D. color

---

38. Matter is made up of tiny particles that are too small to be seen with the naked eye. These tiny particles are known as _____.

A. atoms
B. gases

- C. cells
- D. forces

---

39. A group of scientists have collected a lot of data and now need to organize and analyze that data. In order to do this successfully, the scientists should use

- A. a computer.
- B. a meter.
- C. a balance.
- D. a microscope.

---

40. Michael mixes two chemicals together in a beaker. The chemicals change color, and the beaker heats up quickly. What kind of change most likely occurred?

- A. Only a physical change occurred.
- B. A mixture formed.
- C. No change occurred.
- D. A chemical change occurred.

---

41. Universal indicator is an acid/base indicator that can be added to a solution to determine its pH. Universal indicator turns solutions different colors based on its pH.



If universal indicator is added to a solution, and the solution turns red, the solution must be

- A. slightly acidic.
- B. strongly basic.
- C. strongly acidic.
- D. slightly basic.

Answers

1. C
2. C
3. D
4. B
5. B
6. --
7. A
8. A
9. B
10. D
11. D
12. C
13. B

14. B
15. B
16. C
17. C
18. A
19. D
20. A
21. A
22. C
23. B
24. B
25. --
26. A
27. C
28. D
29. C
30. A
31. C
32. B
33. A
34. B
35. B
36. D
37. D
38. A
39. A
40. D
41. C