

SPECTRUM[®] Test Practice

Common Core State Standards Practice Test

Massachusetts Edition

Grade 6

The state of Massachusetts has adopted the Common Core State Standards in English Language Arts and Mathematics.

In addition, Massachusetts has adopted state-specific standards that make up no more than 15% of the total. Some items on this practice test are based on these state-specific standards. These questions are identified by a black circle around the item number, as shown below.

1. = Massachusetts Standards Question

In sixth grade, Massachusetts's standards encourage students:

- To understand the characteristics of legends and epics.
- To write stories, poems, and scripts based on myths, legends, and epics.
- To relate the mass of an object to its volume.
- To understand relatively prime numbers and prime factorization.
- To find the circumference and area of circles based on radius, diameter, and center.
- To read and interpret circle graphs.

For more information:

Common Core State Standards Initiative:

<http://www.corestandards.org/>

Massachusetts Department of Elementary and Secondary Education, Common Core State Standards Initiative:

<http://www.doe.mass.edu/candi/commoncore/>

MASSACHUSETTS EDITION
Grade 6 Common Core State Standards Practice Test
ENGLISH LANGUAGE ARTS

● **Part 1: Reading Literature**

Directions: Read the story. Mark the best answers to the questions that follow.

from Little Women

by Louisa May Alcott

“What in the world are you going to do now, Jo?” asked Meg one snowy afternoon, as her sister came tramping through the hall, in rubber boots, old sack, and hood, with a broom in one hand and a shovel in the other.

“Going out for exercise,” answered Jo with a mischievous twinkle in her eyes.

“I should think two long walks this morning would have been enough! It’s cold and dull out, and I advise you to stay warm and dry by the fire, as I do,” said Meg with a shiver.

“Never take advice! Can’t keep still all day, and not being a pussycat, I don’t like to doze by the fire. I like adventures, and I’m going to find some.”

Meg went back to toast her feet and read *Ivanhoe*, and Jo began to dig paths with great energy. . . . Now, the garden separated the Marches’ house from that of Mr. Laurence. Both stood in a suburb of the city, which was still country-like, with groves and lawns, large gardens, and quiet streets. A low hedge parted the two estates. On one side was an old, brown house, looking rather bare and shabby, robbed of the vines that in summer covered its walls and the flowers, which then surrounded it. On the other side was a stately stone mansion, plainly betokening every sort of comfort and luxury, from the big coach house and well-kept grounds to the conservatory and the glimpses of lovely things one caught between the rich curtains.

Yet it seemed a lonely, lifeless sort of house, for no children frolicked on the lawn, no motherly face ever smiled at the windows, and few people went in and out, except the old gentleman and his grandson. . . .

“That boy is suffering for society and fun,” she said to herself. “His grandpa does not know what’s good for him, and keeps him shut up all alone. He needs a party of jolly boys to play with, or somebody young and lively. I’ve a great mind to go over and tell the old gentleman so!”

. . . She saw Mr. Laurence drive off, and then sallied out to dig her way down to the hedge, where she paused and took a survey. All quiet, curtains down at the lower windows, servants out of sight, and nothing human visible but a curly black head leaning on a thin hand at the upper window.

“There he is,” thought Jo, “Poor boy! All alone and sick this dismal day. It’s a shame! I’ll toss up a snowball and make him look out, and then say a kind word to him.”



ENGLISH LANGUAGE ARTS**● Part 1: Reading Literature (cont.)**

Up went a handful of soft snow, and the head turned at once, showing a face which lost its listless look in a minute, as the big eyes brightened and the mouth began to smile. Jo nodded and laughed, and flourished her broom as she called out . . .

“How do you do? Are you sick?”

Laurie opened the window, and croaked out as hoarsely as a raven . . .

“Better, thank you. I’ve had a bad cold, and been shut up a week.”

“I’m sorry. What do you amuse yourself with?”

“Nothing. It’s dull as tombs up here.”

“. . . Have someone come and see you then. . . . Isn’t there some nice girl who’d read and amuse you? Girls are quiet and like to play nurse.”

“Don’t know any.”

“You know us,” began Jo, then laughed and stopped.

“So I do! Will you come, please?” cried Laurie.

“I’m not quiet and nice, but I’ll come, if Mother will let me. I’ll go ask her. Shut the window, like a good boy, and wait till I come.”

With that, Jo shouldered her broom and marched into the house, wondering what they would all say to her.

1. **The reader knows that Laurie lives in an expensive house because the story says that**

- (A) the mansion seemed a lonely, lifeless sort of house.
- (B) no children frolicked on the lawn.
- (C) the mansion was plainly betokening every sort of comfort and luxury.
- (D) few people went in and out.

2. **The story says that Jo had a *mischievous twinkle in her eyes* because she**

- (F) was usually a naughty girl.
- (G) was about to tell a joke.
- (H) had sparkling eyes.
- (J) had a secret plan.

3. **The reader can infer from the story that**

- (A) Jo and Laurie will become friends.
- (B) Jo is a shy girl.
- (C) Laurie doesn’t like other children.
- (D) Jo doesn’t like Laurie.



ENGLISH LANGUAGE ARTS**● Part 1: Reading Literature (cont.)**

Directions: Use the story you read on pages 1–2 to choose the best answers to the questions.

4. The reader learns that Jo believes

- (F) people who live in fancy houses are lonely.
- (G) children should have other children to play with.
- (H) it's important to stay inside on a winter day.
- (J) you should dig out your neighbor's path on a snowy day.

5. In the story, Jo uses the snowy day to

- (A) play in the snow.
- (B) get away from her sister.
- (C) spy on the neighbors.
- (D) get outside for some exercise.

6. The reader learns that Jo is more adventurous than Meg when

- (F) Jo goes out into the snow for a third time in one day.
- (G) Meg reads *Ivanhoe*.
- (H) Meg gives Jo some advice.
- (J) Jo likes to exercise.

7. In the story, Jo *sallied out to dig her way down to the hedge*. The word *sallied* means

- (A) tripped.
- (B) tiptoed.
- (C) burst forth.
- (D) sneaked.

8. When the story says *no children frolicked on the lawn*, it means

- (F) there was no sidewalk.
- (G) there was no place for children to play.
- (H) no children lived there.
- (J) no children played in the yard.

9. When Laurie *croaked out as hoarsely as a raven*, he

- (A) made a sound like a horse.
- (B) made a sound like a frog.
- (C) spoke excitedly.
- (D) spoke in a rough voice.



ENGLISH LANGUAGE ARTS**● Part 1: Reading Literature (cont.)**

Directions: Use the story you read on pages 1–2 to choose the best answer for each question.

10. Jo *flourished her broom*, so she could

- (F) shake off the snow.
- (G) get Laurie's attention.
- (H) finish her sweeping.
- (J) get ready to go back in the house.

11. When Jo describes Laurie's home as *a lonely, lifeless sort of house*, she means

- (A) no one likes to live in Laurie's house.
- (B) only lonely people live in Laurie's house.
- (C) it is probably cold inside the house.
- (D) nothing ever seems to happen in the house.

12. When Jo *shouldered her broom and marched into the house*, the reader knows that

- (F) Jo is cold and ready to go in and warm up.
- (G) Jo is ready to clear away the snow.
- (H) Jo is determined to go and play with Laurie.
- (J) Jo is pretending to be a soldier.

13. Jo understands that

- (A) Laurie needs a friend.
- (B) the grandfather is a mean man.
- (C) she and Laurie can't be friends because his family has more money than hers.
- (D) Meg would make the best friend for Laurie.

14. Through Jo's actions in the story, the reader learns that

- (F) you shouldn't bother your neighbors.
- (G) it is good to help others.
- (H) digging snow can be fun.
- (J) grandfathers do not know how to take care of children.

15. In the sentence *On one side was an old, brown house, looking rather bare and shabby, robbed of the vines that in summer covered its walls*, the phrase *robbed of the vines* means

- (A) someone had cut away the vines.
- (B) a robber had torn away the vines.
- (C) the vines had lost their leaves in winter.
- (D) someone had stolen the vines.



ENGLISH LANGUAGE ARTS**● Part 2: Reading Informational Text**

Directions: Read the article, and then answer the questions that follow.

Yakyu

What could be more American than baseball? It was one of the earliest sports played in the United States, created during the mid-1800s. But, did you know that the Japanese have been playing for nearly as long? In fact, baseball's popularity in Japan rivals its popularity here in the U.S.

In the early 1870s, Horace Wilson, an American professor living in Tokyo, introduced baseball to his students. They loved it, calling the game *yakyu*, which means “field ball.” It quickly caught on with students all over the country. Japanese leaders also embraced baseball because they believed it contained elements that were already part of Japanese culture. For instance, baseball's focus on the mental competition between pitcher and hitter was similar to the one-on-one competitions of martial arts.

By the early 1900s, amateur baseball leagues had been established in secondary schools and colleges throughout Japan. To this day, the enthusiasm for college baseball in Japan is equivalent to the excitement people have for college football or college basketball's March Madness in the United States.

To make baseball even more popular, American teams regularly toured Japan in the early 1900s and played exhibition games. Top American baseball stars like Babe Ruth and Lou Gehrig came to Japan in the 1930s and played against the top Japanese college teams. The Americans won all 17 games they played, but baseball fever swept the whole country. A professional Japanese baseball league was formed in 1936. The Great Japan Tokyo Baseball Club—known today as the Yomiuri Giants—was the first team, but it was soon joined by six others.

As it did to so many other activities around the world, World War II interrupted Japanese baseball when almost all of the players became soldiers. After the war, the United States occupied Japan. The military commanders who were in charge recognized that baseball was an important part of Japanese culture, so they encouraged the professional teams to reform and continue playing. By 1955, with the help of television, professional baseball in Japan became bigger than ever.

The Yomiuri Giants are not just the oldest pro team in Japan; they may also be the greatest. From 1965 through 1973, the Giants won nine consecutive national championships partly because of the legendary player Sadaharu Oh. The surname *Oh* means “king,” and he certainly was the king of baseball in Japan. Among his many incredible statistics, Oh holds the world record for career home runs—868!



ENGLISH LANGUAGE ARTS

● Part 2: Reading Informational Text (cont.)

Japanese professional players have also come to the United States and played in Major League Baseball, setting more records. In 2004, Ichiro Suzuki, playing for the Seattle Mariners, broke a baseball record for hitting that had stood for more than 80 years! Kazuhiro Sasaki, who also played for the Mariners, was named the American League Rookie of the Year in 2000, and Hideo Nomo of the Los Angeles Dodgers was MLB’s 1995 Rookie of the Year.

Sadaharu Oh	
Born:	May 20, 1940
Batted:	Left
Threw:	Left
Professional debut:	April 11, 1959 for the Yomiuri Giants
Last professional appearance:	October 12, 1980 for the Yomiuri Giants
Career statistics:	
Batting average	.301
Home runs	868
Hits	2,786
RBI	2,170

Hank Aaron	
Born:	February 5, 1934
Batted:	Right
Threw:	Right
Professional debut:	April 13, 1954 for the Milwaukee Braves
Last professional appearance:	October 3, 1976 for the Milwaukee Brewers
Career statistics:	
Batting average	.305
Home runs	755
Hits	3,771
RBI	2,297

- The article relates that baseball appealed to the Japanese because**
 - (A) it was an easy game to learn.
 - (B) the Japanese are natural athletes.
 - (C) it focuses on the mental competition between pitcher and hitter.
 - (D) it originated in America.
- Which sentence from the text tells that the Japanese teams weren’t very good at playing in the beginning?**
 - (F) It quickly caught on with students all over the country.
 - (G) Japanese leaders also embraced baseball.
 - (H) The Americans won all 17 games they played.
 - (J) A professional Japanese league formed in 1936.

- The main idea of this article is**
 - (A) why the Japanese people love baseball.
 - (B) how WWII influenced baseball.
 - (C) that American players have better statistics than Japanese players.
 - (D) that baseball is just as popular in Japan as it is in the U.S.
- The main purpose of this article is**
 - (F) to show that two cultures can enjoy the same sport.
 - (G) to show that Japanese players are better than American players.
 - (H) to tell the history of the Yomiuri Giants.
 - (J) to explain the meaning of *baseball fever*.



ENGLISH LANGUAGE ARTS**● Part 2: Reading Informational Text (cont.)**

Directions: Use the text you read on pages 5–6 to choose the best answer for each question.

5. In the article, the reader learns that Sadaharu Oh is ranked as an extraordinary baseball player because
- (A) he holds the world record for home runs.
 - (B) he played for the Yomiuri Giants.
 - (C) his surname means “king.”
 - (D) he is a legendary player.
6. The article states that the Yomiuri Giants are the greatest Japanese baseball team ever because
- (F) they were the first Japanese baseball team.
 - (G) their star player was Sadaharu Oh.
 - (H) they won nine consecutive national championships.
 - (J) their name used to be the Great Japan Tokyo Baseball Club.
7. The article states that *Japanese leaders also embraced baseball*. In this sentence, *embraced* means
- (A) hugged.
 - (B) ignored.
 - (C) adopted.
 - (D) disliked.
8. The sentence *baseball fever swept the whole country* is a way of saying
- (F) a number of fans became ill at baseball games.
 - (G) no one liked baseball any better than catching an illness.
 - (H) most of the people in Japan really enjoyed baseball.
 - (J) baseball swept all the other sports out of people’s minds.
9. The Japanese believed that baseball contained elements that were already part of their culture. This is important because
- (A) baseball was an American game.
 - (B) it was easier for the Japanese to understand baseball.
 - (C) balls were never used in Japan.
 - (D) the Japanese language makes it difficult to play baseball.
10. The sentence *The Great Japan Tokyo Baseball Club—known today as the Yomiuri Giants—was the first team, but it was soon joined by six others*, indicates that
- (F) the Japanese are very competitive.
 - (G) baseball quickly became very popular in Japan.
 - (H) more baseball fields were needed.
 - (J) Americans were going to play in Japan.



ENGLISH LANGUAGE ARTS**● Part 2: Reading Informational Text (cont.)**

Directions: Use the text you read on pages 5–6 to choose the best answer for each question.

11. The author believes that the United States military commanders helped baseball regain popularity in Japan after World War II because

- (A) they offered to play games with the Japanese.
- (B) they made soldiers into baseball players.
- (C) they encouraged the professional teams to form again.
- (D) they wanted something to entertain the soldiers.

12. The author likely wrote this article to show that

- (F) two very different cultures can share a love of the same sport.
- (G) baseball teams should not draft players from other countries.
- (H) American baseball players are the best.
- (J) baseball and *yakuyu* are not really the same sport.

13. Using the two baseball cards, the reader can find statistics to show that

- (A) Hank Aaron had more runs batted in than Sadaharu Oh.
- (B) Hank Aaron was younger than Sadaharu Oh.
- (C) Hank Aaron hit more home runs than Sadaharu Oh.
- (D) Hank Aaron had a lower batting average than Sadaharu Oh.

14. Using information from both the baseball cards and the article, the reader knows that

- (F) Sadaharu Oh had over 3,000 hits in his career.
- (G) Sadaharu Oh was a left-handed hitter for the team once known as the Great Japan Tokyo Baseball Club.
- (H) Sadaharu Oh was a soldier during World War II.
- (J) Sadaharu Oh is the king of Japanese baseball.

15. Which statement does not support the claim that baseball is loved in Japan?

- (A) Baseball's popularity in Japan rivals its popularity in the U.S.
- (B) Enthusiasm for college baseball in Japan is equivalent to the excitement over college football in the U.S.
- (C) Horace Wilson, an American professor, introduced baseball to his students.
- (D) With the help of television, professional baseball in Japan became bigger than ever.

16. This article traces the development of baseball in Japan from

- (F) its introduction by an American professor.
- (G) the end of World War II.
- (H) the career of Sadaharu Oh.
- (J) "field ball" to baseball.



ENGLISH LANGUAGE ARTS

● Part 3: Writing

Directions: On a separate sheet of paper, write a response to each prompt. Include all the parts in the checklists.

1. Write an Argument

Write an essay to tell whether you think it is important to wear a helmet when biking, skating, or skateboarding.

Checklist:

Read what you wrote. Did you remember to do the following?

	Yes	No
Make a claim to state your opinion.	<input type="checkbox"/>	<input type="checkbox"/>
Support your claim with reasons and evidence.	<input type="checkbox"/>	<input type="checkbox"/>
Organize your reasons and evidence.	<input type="checkbox"/>	<input type="checkbox"/>
Use words such as <i>because, since, therefore, so, and then</i> to join claims and reasons.	<input type="checkbox"/>	<input type="checkbox"/>
Write a conclusion that makes your argument.	<input type="checkbox"/>	<input type="checkbox"/>

2. Write to Inform

Write an article that compares and contrasts moths and butterflies or two other similar things.

Checklist:

Read what you wrote. Did you remember to do the following?

	Yes	No
Introduce the two things being compared.	<input type="checkbox"/>	<input type="checkbox"/>

Give organized facts, details, and examples.

Use words such as *like, different, same, both, and too.*

Use precise terms to describe the things being compared.

Give a concluding statement.

3. Write a Narrative

Write a story that tells about a special time in your life.

Checklist:

Read what you wrote. Did you remember to do the following?

	Yes	No
Write a beginning sentence that will catch the reader's interest.	<input type="checkbox"/>	<input type="checkbox"/>
Describe the setting and characters.	<input type="checkbox"/>	<input type="checkbox"/>
Use interesting, descriptive words that reflect the five senses.	<input type="checkbox"/>	<input type="checkbox"/>
Use transition words such as <i>then, after that, later, and at the end</i> to move the story along in a logical way.	<input type="checkbox"/>	<input type="checkbox"/>
Write a good ending.	<input type="checkbox"/>	<input type="checkbox"/>



ENGLISH LANGUAGE ARTS**● Part 4: Language**

Directions: For each item, choose the sentence that uses pronouns and punctuation marks correctly.

1.

(A) Juan and I mowed the grass for Mrs. Ruaz.

(B) I and Juan mowed the grass for Mrs. Ruaz.

(C) Me and Juan mowed the grass for Mrs. Ruaz.

(D) Juan and me mowed the grass for Mrs. Ruaz.

2.

(F) After band practice, he walked home by herself.

(G) After band practice, he walked home by himself.

(H) After band practice, he walked home by himself.

(J) After band practice, he walked home by itself.

3.

(A) Jana and Olivia went to the mall because she needed new shoes.

(B) Jana and Olivia went to the mall because they needed new shoes.

(C) Jana and Olivia went to the mall because her needed new shoes.

(D) Jana and Olivia went to the mall because them needed new shoes.

4.

(F) If people find a prize, them can keep it.

(G) If one finds a prize, you can keep it.

(H) If people find a prize, he or she can keep it.

(J) If one finds a prize, he or she can keep it.

5.

(A) Nobody like rain on game day.

(B) Everyone make a mistake now and then.

(C) Make sure someone closes all the windows.

(D) Everything in this pile need to be washed.

6.

(F) My friend Brady who lives next door is having a party.

(G) My friend Brady, who lives next door is having a party.

(H) My friend Brady who lives next door, is having a party.

(J) My friend Brady, who lives next door, is having a party.



ENGLISH LANGUAGE ARTS**● Part 4: Language (cont.)****Directions:** Choose the best answer for each question.**7. Which sentence has correct spelling?**

- (A) Cynthia bought the shampoo I saw in the advertisement.
- (B) Cynthia baught the shampoo I saw in the advertisement.
- (C) Cynthia bought the shampu I saw in the advertisement.
- (D) Cynthia bought the shampoo I saw in the advertizement.

8. Which sentence has correct spelling?

- (F) The submarine surfaced for a few moments and then submurged.
- (G) The submurine surfaced for a few moments and then submerged.
- (H) The submarine serfaced for a few moments and then submerged.
- (J) The submarine surfaced for a few moments and then submerged.

9. Which sentence has the clearest meaning?

- (A) The reason why he fell down was because he tripped on something.
- (B) The reason he fell was because he tripped on something.
- (C) He fell because he tripped on that rock.
- (D) I figure the reason he fell down was because he tripped on that rock.

10. Which sentence is the most logical?

- (F) After the team won the game, the coach congratulated each player.
- (G) After the team won the game, the coach sadly wept in the locker room.
- (H) After the team won the game, the coach called his friend about the loss.
- (J) After the team won the game, the coach yelled at the players.

11. *I felt so ambitious on Saturday that I washed the car and cleaned the garage.* In this sentence, the word *ambitious* means

- (A) angry.
- (B) full of energy.
- (C) happy.
- (D) tired.

12. Choose features you are likely to encounter when reading a legend or epic.

- (F) castles and dragons
- (G) heroes and dangerous quests
- (H) spaceships and time travel
- (J) modern-day people and problems



ENGLISH LANGUAGE ARTS**● Part 4: Language (cont.)****Directions:** Choose the best answer for each question.

13. The suffix *-ous* means “full of.” Which definition of *furious* is correct?

- (A) full of fur
- (B) full of beauty
- (C) far away
- (D) full of anger

14. The prefix *il-* means “not.” Which is the correct meaning of *illegal*?

- (F) without a law
- (G) with a lawyer
- (H) unlawful
- (J) unclear

15. What does the following part of the dictionary entry tell?

\ˈnā·vē \

- (A) the spelling of the word
- (B) the pronunciation of the word
- (C) the plural of the word
- (D) the origin of the word

16. When you find a word while reading that you don’t know, which should you not do?

- (F) Look for a clue in the other words in the sentence.
- (G) Ask someone.
- (H) Look it up in the dictionary.
- (J) Skip it and read on.

17. *I was so busy that time got away from me.* This sentence means

- (A) I was early.
- (B) I forgot to check the clock.
- (C) I was too late.
- (D) I lost my clock.

18. *The river crawled along the valley until it dove over the cliff.* This sentence means that

- (F) the water in the river was moving swiftly before it fell over the cliff.
- (G) people like to dive over the cliff into the river.
- (H) the water in the river was moving slowly until it fell over the cliff.
- (J) the water in the river was full of dangerous places.

19. Which sentence is an example of cause and effect?

- (A) We saw raindrops trickle down the window.
- (B) After the storm, a beautiful rainbow appeared in the sky.
- (C) The sky was dark and threatening.
- (D) Many people gathered in the shelter house.



ENGLISH LANGUAGE ARTS

● Part 4: Language (cont.)

Directions: Choose the best word to complete each sentence in numbers 20–25.

20. Nearly one hundred athletes _____ to complete the triathlon.

- (F) played
- (G) exercised
- (H) moved
- (J) raced

21. Speed and stealth are important to the lion because it is a _____ and the zebra is one of its prey.

- (A) big cat
- (B) predator
- (C) land animal
- (D) mammal

22. Many California store owners became _____ during the gold rush by selling supplies to miners.

- (F) disappointed
- (G) homesick
- (H) prosperous
- (J) nervous

23. Life in ancient Egypt was based on the _____ of crops in the Nile Delta.

- (A) flight
- (B) abdomens
- (C) grasp
- (D) cultivation

24. The invention of the _____ made it possible for scientists to study distant objects in the sky.

- (F) telescope
- (G) telegraph
- (H) microscope
- (J) computer

25. My grandmother has been alive for six _____.

- (A) months
- (B) millennia
- (C) decades
- (D) centuries

Directions: For numbers 26–27, choose the word that would not be used to complete the sentence.

26. The _____ crowd cheered as the athletes crossed the finish line.

- (F) enthusiastic
- (G) happy
- (H) excited
- (J) courageous

27. The _____ children ran toward the carnival games.

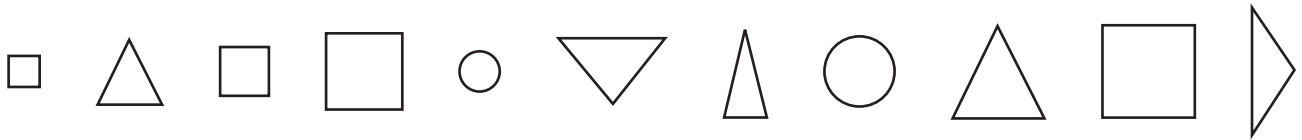
- (A) eager
- (B) anxious
- (C) unruly
- (D) energetic



MATHEMATICS

● Part 1: Ratios and Proportional Relationships

Directions: For numbers 1–3, use the diagram to answer the questions.



1. What is the ratio of squares to total shapes?

- (A) 4:7
- (B) 7:4
- (C) 4 to 11
- (D) $\frac{11}{4}$

2. What is the ratio of triangles to circles?

- (F) 2:11
- (G) $\frac{2}{5}$
- (H) $\frac{4}{2}$
- (J) 5:2

3. Three of these statements are true. Which statement is false?

- (A) The ratio of triangles to circles is 5 to 11.
- (B) For every 1 circle, there are 2 squares.
- (C) The ratio of triangles to squares can be written as 5 to 4, 5:4, and $\frac{5}{4}$.
- (D) For every 2 circles, there are 9 shapes that are not circles.

Directions: For numbers 4–6, choose the best answer for each question.

4. To make 24 muffins, Max’s recipe calls for 2 cups of flour and 3 cups of bran cereal. He plans to use 3 cups of flour instead.

How many cups of bran cereal should Max use?

- (F) $4\frac{1}{2}$ cups
- (G) 6 cups
- (H) 8 cups
- (J) 9 cups

5. Use the story about Max. How many muffins can Max make?

- (A) 8
- (B) 12
- (C) 36
- (D) 48

6. Dante has read 180 pages of a book. This is 40% of the book. How many pages are in the book?

- (F) 72
- (G) 108
- (H) 300
- (J) 450



MATHEMATICS

● Part 1: Ratios and Proportional Relationships (cont.)

Directions: Choose the best answer for each question.

7. Mrs. Womack uses 21 apples to make 3 pies. Which table shows the relationship between apples and pies?

(A)

Apples	19	20	21	22	23	24
Pies	1	2	3	4	5	6

(B)

Apples	1	2	3	4	5	6
Pies	11	16	21	26	31	36

(C)

Apples	3	6	21	12	15	18
Pies	1	2	3	4	5	6

(D)

Apples	7	14	21	28	35	42
Pies	1	2	3	4	5	6

8. Arianna reads 4 pages in 6 minutes. What are two unit rates she can write with this information?

Pages						
Minutes						

- (F) 4 pages:6 minutes and 6 minutes:4 pages
 (G) 2 pages:3 minutes and 3 minutes:2 pages
 (H) $\frac{2}{3}$ page / 1 minute and $1\frac{1}{2}$ minutes / 1 page
 (J) $\frac{2}{3}$ minute / 1 page and $1\frac{1}{2}$ pages / 1 minute

9. In the sixth grade, 135 students participate in after-school activities. This is 60% of the total number of students. How many students are in the sixth grade?

- (A) 54
 (B) 81
 (C) 225
 (D) 810

10. It is 420 miles to Abbie’s grandparents’ house. Her dad drove the first 180 miles in 3 hours. At that rate of speed, how much longer will it take to get there?

- (F) 3 hours
 (G) 4 hours
 (H) 6 hours
 (J) 7 hours

11. Two friends bought tickets for rides at the carnival. Gavin bought 12 tickets for \$18. Wyatt only has \$12 to spend. How many tickets can he buy?

- (A) 6 tickets
 (B) 8 tickets
 (C) 12 tickets
 (D) 18 tickets

12. At Newton Middle School, 32% of the 675 students walk to school. How many students walk to school?

- (F) 216
 (G) 320
 (H) 459
 (J) 643



MATHEMATICS

● Part 1: Ratios and Proportional Relationships (cont.)

Directions: Choose the best answer for each question.

13. Mr. Ngyuen can buy 4 hamburgers for \$7.00, 8 hot dogs for \$10.00, or 6 tacos for \$9.00. Which shows the choices for one of each item from least expensive to most expensive?

- (A) hamburger, taco, hot dog
- (B) taco, hot dog, hamburger
- (C) hot dog, hamburger, taco
- (D) hot dog, taco, hamburger

14. Joshua skateboards 12 blocks in 6 minutes. What is his speed in blocks per minute?



- (F) $\frac{1}{6}$ block
1 minute
- (G) $\frac{1}{2}$ block
1 minute
- (H) $\frac{2 \text{ blocks}}{1 \text{ minute}}$
- (J) $\frac{6 \text{ blocks}}{1 \text{ minute}}$

15. Felix makes a fruit salad using 6 bananas and 10 peaches. How many peaches does he use for each banana?

- (A) $\frac{3}{5}$
- (B) $1\frac{2}{3}$
- (C) 2
- (D) 10

16. Mr. Miller’s car used 15 gallons of gas to travel 540 miles. What is the car’s gas mileage in miles per gallon?

- (F) $\frac{1}{36}$ miles per gallon
- (G) 36 miles per gallon
- (H) 525 miles per gallon
- (J) 8,100 miles per gallon

17. Rylee practices 20 minutes every day. How many hours does she practice in 15 days?

- (A) 5 hours
- (B) 12.5 hours
- (C) 20 hours
- (D) 300 hours

18. Each box of crackers weighs 14 ounces. How many pounds do 8 boxes weigh?

- (F) 7 pounds
- (G) 14 pounds
- (H) 28 pounds
- (J) 112 pounds



MATHEMATICS**● Part 2: The Number System**

Directions: Use the number line to answer numbers 1–4. Choose the best answer for numbers 5–6.



1. Which statement is true?

- (A) $-4 > -2$
 (B) $1 < -3$
 (C) $-3 > -1$
 (D) $-4 < 3$

2. Which points are three units to the right of 0 and three units to the left of 0?

- (F) 3, 3
 (G) 0, 3
 (H) 3, -3
 (J) 1.5, -1.5

3. Three of these statements are true. Which is false?

- (A) $|2| = |-2|$
 (B) $|-2| > -2$
 (C) $|2| = -2$
 (D) $2 = |-2|$

4. Which point is the opposite of -2 ?

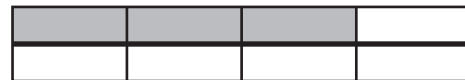
- (F) 0
 (G) 4
 (H) -2
 (J) 2

5. $67 \overline{)37,592}$

- (A) 561 r 5
 (B) 641 r 45
 (C) 658 r 46
 (D) 5,511 r 5

6. Vanessa and Antonia have $\frac{3}{4}$ pound of peanuts that they want to share evenly. Which diagram illustrates the amount each will get?

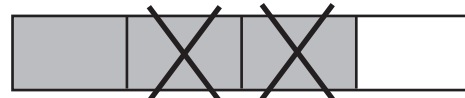
(F) Each will receive $\frac{3}{8}$ pound.



(G) Each will receive $\frac{6}{8}$ pound.



(H) Each will receive $\frac{1}{4}$ pounds.



(J) Each will receive $1\frac{3}{4}$ pounds.



MATHEMATICS**● Part 2: The Number System (cont.)****Directions:** Choose the best answer for each question.

7. Two numbers are relatively prime, or co-prime, if they have no common factors other than 1. Choose the numbers that are not relatively prime.

(A) 3, 22
 (B) 17, 19
 (C) 4, 36
 (D) 6, 11

8. What is the prime factorization of 42?

(F) $2 \times 3 \times 7$
 (G) 6×7
 (H) $2 \times 3 \times 3 \times 3$
 (J) $2 \times 3 \times 6$

9. Three of these would be described by -5 . Which one would not?

(A) 5° below zero
 (B) spending \$5.00
 (C) losing 5 pounds
 (D) scoring 5 goals in a soccer game

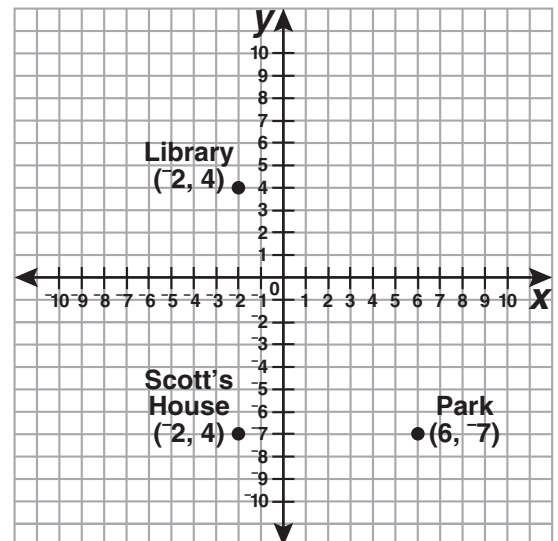
10. Mr. Larsen ran out of gas 10 kilometers from the nearest gas station. He walked 4.2 km and stopped to rest. Then, he walked 2.1 km before resting again. How much farther does he have to walk?

(F) 1.1 km
 (G) 3.7 km
 (H) 4.7 km
 (J) 5.3 km

11. Three of these expressions are equivalent to 60. Which one is not?

(A) $4(10 + 5)$
 (B) $12(2 + 3)$
 (C) $3(15 + 5)$
 (D) $6(6 + 5)$

12. How much farther is it from Scott's house to the library than it is from his house to the park?



□ = 1 block

(F) 1 block
 (G) 3 blocks
 (H) 5 blocks
 (J) 7 blocks



MATHEMATICS

● Part 3: Expressions and Equations

Directions: Choose the best answer for each question.

1. Which expression represents the volume of a cube with a side length of 5 cm?

- (A) $(3 \times 5)^2 \text{ cm}^2$
- (B) 5^2 cm^2
- (C) $(3 \times 5)^3 \text{ cm}^3$
- (D) 5^3 cm^3

2. Three of these statements about $6x^2$ are true. Which one is false?

- (F) The coefficient of x^2 is 6.
- (G) The letter x is a variable.
- (H) The number 2 is an exponent.
- (J) The term $6x^2$ is the sum of 6 and x^2 .

3. Three of these statements will help you solve the equation below. Which one will not?

$$n - 5 = 10$$

- (A) I know that $10 + 5 = 15$, so $15 - 5 = 10$.
- (B) Adding 5 is the inverse of subtracting 5, so I would add 5 to both sides.
- (C) The -5 means to subtract 5 from 10.
- (D) If I had 10 of something after I lost 5, I must have had 5 more than 10 to begin with.

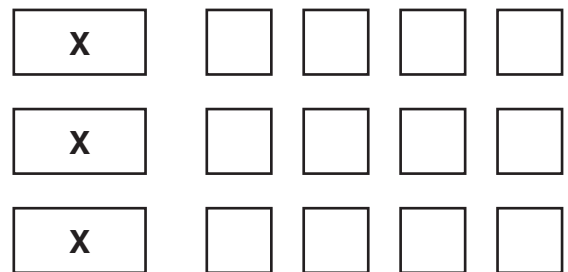
4. Nicole buys several packages of blue pens. Each package has 2 blue pens. She also buys 4 green pens. She buys 12 pens in all. Which equation could be used to find how many packages of blue pens Nicole buys?

- (F) $2b + 4 = 12; b = 2$
- (G) $2(b + 4) = 12; b = 2$
- (H) $2b + 4 = 12; b = 4$
- (J) $2(b + 4) = 12; b = 8$

5. Evaluate $2n^2 - 4$ for $n = 3$.

- (A) 8
- (B) 14
- (C) 32
- (D) 426

6. Which equation describes the diagram below?



- (F) $3(x + 4) = 3x + 4$
- (G) $3(x + 4) = 3x + 12$
- (H) $3x(4) = 12x$
- (J) $3x + 4x = 12x$



MATHEMATICS**● Part 3: Expressions and Equations (cont.)****Directions:** Choose the best answer for each question.

7. Which equation shows the correct application of the distributive property?

(A) $5(n - 7) = ^{-}35n$
(B) $5(n - 7) = 5n - 2$
(C) $5(n - 7) = 5n - 7$
(D) $5(n - 7) = 5n - 35$

8. Which expression is equivalent to $3(a - 5) - 2a$?

(F) $a - 15$
(G) $a - 5$
(H) $^{-}17a$
(J) $3a - 17a$

9. Which expression is equivalent to $4(n + 3) + 2(n - 6)$?

(A) $6n - 18$
(B) $6n - 3$
(C) $6n$
(D) $6n + 24$

10. Vans taking students on a field trip can carry at most 10 students. Which statement is true if x is the capacity of each van?

(F) $x < 10$
(G) $x \leq 10$
(H) $x > 10$
(J) $x \geq 10$

11. Children must be at least 10 years old to see a scary movie. Which statement is true if x is the allowed age?

(A) $x \leq 10$
(B) $x > 10$
(C) $x < 10$
(D) $x \geq 10$

12. Which of these is a correct way to read $5 - n$?

(F) the product of 5 and n
(G) the quotient of 5 and n
(H) 5 less than n
(J) n less than 5



MATHEMATICS**● Part 3: Expressions and Equations (cont.)****Directions:** Choose the best answer for each question.

13. What whole numbers could make this inequality true?

$$4n - 1 < 15$$

- (A) {0, 1, 2, 3}
 (B) {4}
 (C) {0, 1, 2, 3, 4}
 (D) {5, 6, 7, 8, ...}
14. Isabel has an envelope containing several \$5 bills as well as 7 \$1 bills. Which expression represents the amount of money she has in the envelope?

- (F) $5n + 1$
 (G) $5n + 7$
 (H) $5n + 7n$
 (J) $5(n + 7)$

15. Which situation could be modeled by the expression $10 - n$?

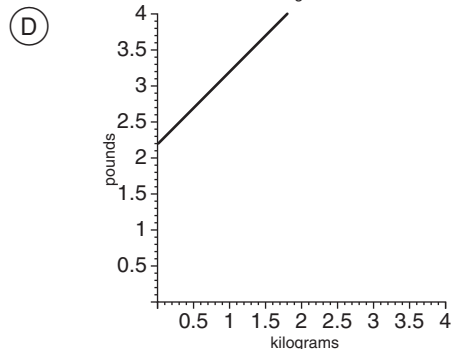
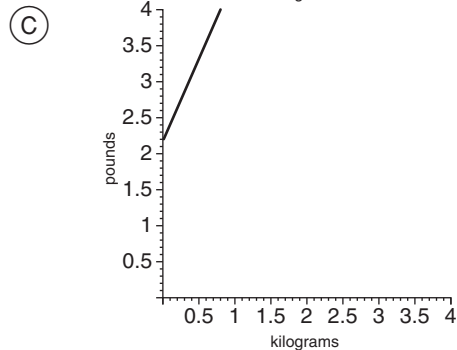
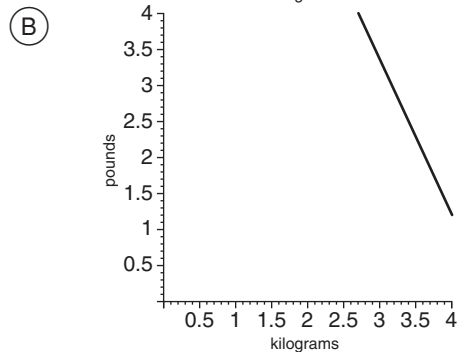
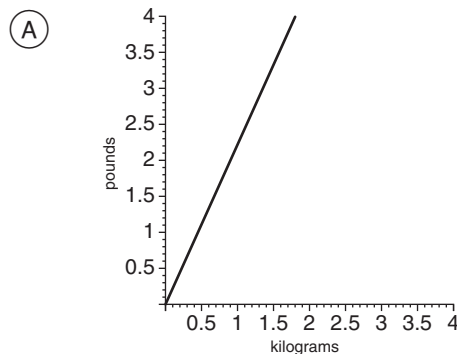
- (A) \$10 less than the amount Nathaniel has
 (B) 10° less than the normal temperature
 (C) the amount remaining from a \$10 bill after buying a notebook
 (D) the age a 10-year-old was last year

16. Simplify the expression.

$$2 \times 3^3$$

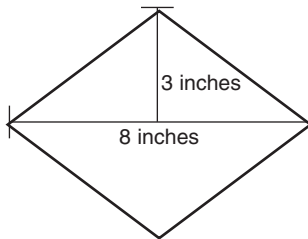
- (F) 18
 (G) 24
 (H) 54
 (J) 216

17. One kilogram is approximately equivalent to 2.2 pounds. Which graph shows the relationship between kilograms and pounds?



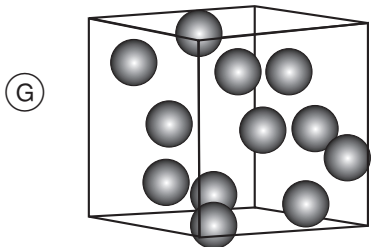
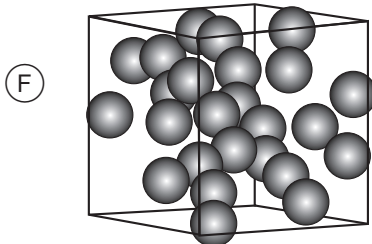
MATHEMATICS**● Part 4: Geometry****Directions:** Choose the best answer for each question.

1. What is the area of the rhombus?



- (A) 11 in²
 (B) 12 in²
 (C) 24 in²
 (D) 48 in²

2. Each box has the same volume. If each ball has the same mass, which box would weigh more?



3. What shapes make up the faces of a triangular prism?

- (A) 2 triangles and 3 rectangles
 (B) 2 triangles and 4 rectangles
 (C) 3 triangles and 2 rectangles
 (D) 6 triangles

4. Cathy plans to use 40 feet of fencing to make a rectangular dog pen. She cannot decide whether to make it 6 feet wide or 8 feet wide. Which would result in a pen with the greatest area and how much more would the greater area be?

- (F) The pen that is 6 feet wide would have 2 more square feet than the other pen.
 (G) The pen that is 8 feet wide would have 12 more square feet than the other pen.
 (H) The pen that is 8 feet wide would have 52 more square feet than the other pen.
 (J) The areas will be the same.

5. Judy needs a box that will hold at least 0.2 cubic meters of popcorn. The dimensions of 4 boxes are shown below. Which is the smallest box that will hold the popcorn?

- (A) 0.5 m by 0.6 m by 0.6 m
 (B) 0.6 m by 0.8 m by 0.5 m
 (C) 0.7 m by 0.5 m by 0.6 m
 (D) 0.9 m by 0.4 m by 0.5 m

6. The circumference of a circle is 26.3 millimeters. What is its radius? (Hint: Use 3.14 for
- π
- .)

- (F) 8.38 millimeters
 (G) 16.75 millimeters
 (H) 4.19 millimeters
 (J) 13.15 millimeters



MATHEMATICS

Part 4: Geometry (cont.)

Directions: Choose the best answer for each question.

7. The relationship of mass (m) to volume (v) is a property known as density (D). Use this formula to calculate density: $D=m/v$.

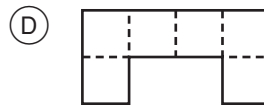
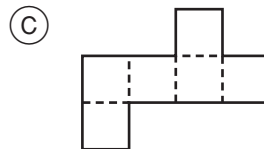
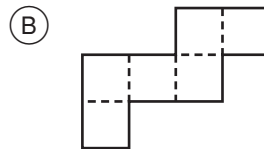
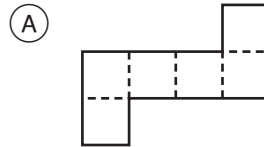
What is the density of an object with a mass of 75.2 grams and a volume of 27.6 cubic centimeters?

- (A) 2.7 grams per cm^3
- (B) .37 grams per cm^3
- (C) 2,075.5 grams per cm^3
- (D) 102.8 grams per cm^3

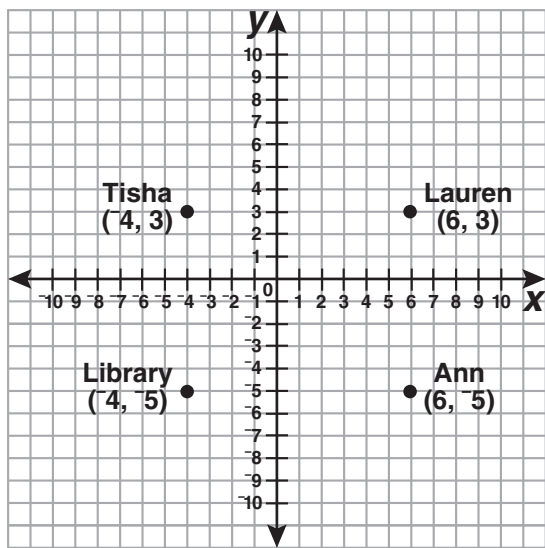
8. A telescope lens has a diameter of 16 millimeters. What is its area?

- (F) 50.24 square millimeters
- (G) 200.96 square millimeters
- (H) 803.84 millimeters
- (J) 803.84 square millimeters

9. Three of the figures could be folded to make a cube. Which one could not?



Directions: Use the graph to answer numbers 10–11.



□ = 1 block

10. Tisha walked from her house to the library and then to Ann's house. How many blocks did she walk in all?

- (F) 4 blocks
- (G) 9 blocks
- (H) 10 blocks
- (J) 18 blocks

11. Does Ann or Tisha live closer to Lauren? How much closer?

- (A) Ann lives 2 blocks closer.
- (B) Ann lives 8 blocks closer.
- (C) Tisha lives 10 blocks closer.
- (D) They live the same distance from Lauren.



MATHEMATICS**Part 5: Statistics and Probability****Directions:** Choose the best answer for each question.

1. Students in Miss Chang's class earn up to 10 points for each homework assignment. Jasmine's homework grades are as follows: 4, 8, 9, 0, 9, 8, 7, 9, 0, 10, 8, and 9. What is the mean of Jasmine's homework grades rounded to the nearest tenth?

- (A) 6.8
 (B) 8.0
 (C) 8.1
 (D) 9.0

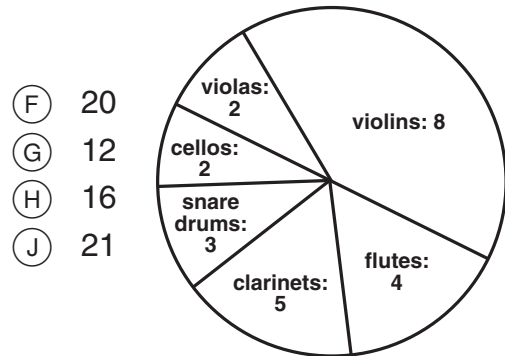
2. Look at Jasmine's grades from number 1. Suppose that Jasmine turns in two assignments late and the 0s are replaced with 4 points and 5 points. Which statistical measures will change?

- (F) mean and range
 (G) median and mode
 (H) median, range, and mode
 (J) mean, median, mode, and range

3. Which of these questions would yield the best data for a statistics project?

- (A) How did the states get their names?
 (B) Which states were in the Confederacy during the Civil War?
 (C) How many states have I been in?
 (D) How many states have each of my classmates visited?

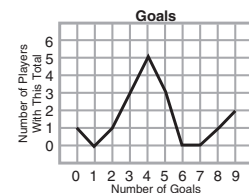
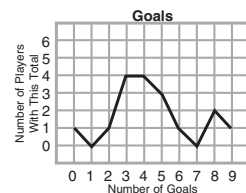
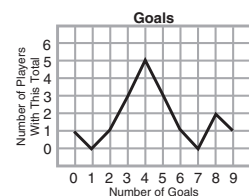
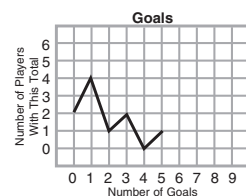
4. Use the circle graph that shows members of the sixth grade orchestra. How many students play an instrument other than snare drum?



- (F) 20
 (G) 12
 (H) 16
 (J) 21

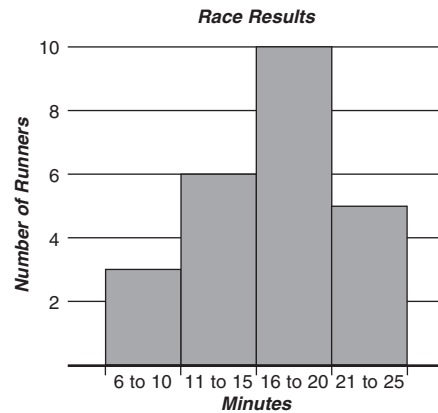
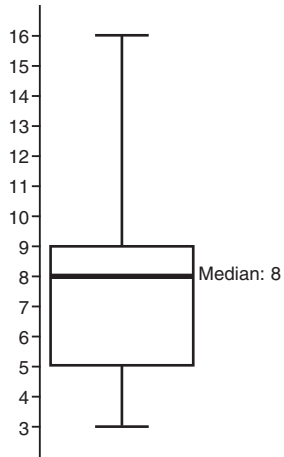
5. Which best describes the data below?

- (A) There is no pattern.
 (B) The number of goals players scored is between 0 and 4.
 (C) The data is symmetrical.
 (D) Clusters show most players scored about 4 goals, but a gap shows a few scored many more.



MATHEMATICS**● Part 5: Statistics and Probability (cont.)**

Directions: Use the box plot to answer numbers 6–8. Use the histogram to answer numbers 9–11.



6. Mrs. Parker recorded the number of books each student read. She made the box plot above to show the results. What is the range of the number of books read?
- (F) 5
(G) 13
(H) 14
(J) 16
7. Wilson read 10 books. In which quartile was his total?
- (A) 1st
(B) 2nd
(C) 3rd
(D) 4th
8. Three of the intervals represent half of the students. Which interval does not?
- (F) 3 to 8 books
(G) 5 to 9 books
(H) 9 to 16 books
(J) 8 to 16 books
9. How many more runners completed the race between 21 and 25 minutes than completed the race between 6 and 10 minutes?
- (A) 2
(B) 3
(C) 5
(D) 8
10. Which category had half as many runners as the 16 to 20 minutes category?
- (F) 6 to 10 minutes
(G) 6 to 15 minutes
(H) 11 to 15 minutes
(J) 21 to 25 minutes
11. How many runners completed the race in 15 or fewer minutes?
- (A) 6
(B) 9
(C) 15
(D) 19

STOP

ANSWER KEY

English Language Arts

Part 1: Reading Literature

• Page 2

1. C
2. J
3. A

• Page 3

4. G
5. D
6. F
7. C
8. J
9. D

• Page 4

10. G
11. D
12. H
13. A
14. G
15. C

Part 2: Reading Informational Text

• Page 6

1. C
2. H
3. D
4. F

• Page 7

5. A
6. H
7. C
8. H
9. B
10. G

• Page 8

11. C
12. F
13. A
14. G
15. C
16. F

Part 4: Language

• Page 10

1. A
2. H
3. B
4. J
5. C
6. J

• Page 11

7. A
8. J
9. C
10. F
11. B
12. G

• Page 12

13. D

14. H

15. B

16. J

17. B

18. H

19. B

• Page 13

20. J

21. B

22. H

23. D

24. F

25. C

26. J

27. C

Mathematics

Part 1: Ratios and Proportional

Relationships

• Page 14

1. C

2. J

3. A

4. F

5. C

6. J

• Page 15

7. D

8. H

9. C

10. G

11. B

12. F

• Page 16

13. D

14. H

15. B

16. G

17. A

18. F

Part 2: The Number System

• Page 17

1. D

2. H

3. C

4. J

5. A

6. F

• Page 18

7. C

8. F

9. D

10. G

11. D

12. G

Part 3: Expressions and Equations

• Page 19

1. D

2. J

3. C

4. H

5. B

6. G

• Page 20

7. D

8. F

9. C

10. G

11. D

12. J

• Page 21

13. A

14. G

15. C

16. H

17. A

Part 4: Geometry

• Page 22

1. C

2. F

3. A

4. G

5. C

6. H

• Page 23

7. A

8. G

9. D

10. J

11. A

Part 5: Statistics and Probability

• Page 24

1. A

2. F

3. D

4. J

5. D

• Page 25

6. G

7. D

8. H

9. A

10. J

11. B