Answer Sheets

SECTION 1

1 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	6 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	11 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	16 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
2 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	7 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	12 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	17 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
3 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	8 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	13 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	18 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
4 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	9 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	14 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	19 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
5 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	10 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	15 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	20 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

SECTION 2

1 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	7 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	12 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	17 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
2 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	8 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	13 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	18 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
3 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	9 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	14 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	19 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
4 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	10 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	15 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	20 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
5 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	11 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	16 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	21 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
6 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ			

SECTION 3

1 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	9 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	17 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	24 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
2 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	10 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	18 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	25 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
3 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	11 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	19 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	26 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
4 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	12 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	20 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	27 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
5 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	13 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	21 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	28 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
6 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	14 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	22 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	29 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
7 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	15 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	23 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	30 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
8 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	16 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ		

SECTION 4

1 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	8 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	15 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	22 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
2 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	9 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	16 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	23 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
3 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	10 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	17 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	24 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
4 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	11 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	18 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	25 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
5 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	12 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	19 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	26 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
6 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	13 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	20 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	27 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
7 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	14 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	21 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	

SECTION 5

1 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	7 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	12 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	17 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
2 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	8 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	13 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	18 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
3 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	9 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	14 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	19 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
4 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	10 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	15 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	20 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
5 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	11 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	16 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	21 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
6 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ			

Answer Sheets

SECTION 6

1 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	5 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	9 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	13 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
2 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	6 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	10 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	14 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
3 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	7 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	11 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	15 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
4 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	8 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	12 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	16 Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

SECTION 7

For Questions 1–13:
Only answers entered in the ovals in each grid area will be scored.
You will not receive credit for anything written in the boxes above the ovals.

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12 

13 

Practice Test

2

Section 1

20 Questions ■ Time—25 Minutes

Directions: Read each of the passages carefully, then answer the questions that come after them. The answer to each question may be stated overtly or only implied. You will not have to use outside knowledge to answer the questions—all the material you will need will be in the passage itself. In some cases, you will be asked to read two related passages and answer questions about their relationship to one another. Mark the letter of your choice on your answer sheet.

A bill is the form used for most legislation in the United State Congress. Only constitutional amendments and procedural issues affecting the House and Senate are adopted by a resolution, rather than a bill. Bills can be written to be permanent or temporary, general or special. A bill originating in the House of Representatives is designated by the letters "H.R.," signifying "House of Representatives," followed by a number that it retains throughout all its parliamentary stages. The number on the bill is determined by the order in which it was submitted during a particular session. Bills are presented to the President for action when approved in identical form by both the House of Representatives and the Senate.

1. From the passage, it can be inferred that a bill that is designated as H.R. 1 is the first bill

(A) voted upon by the House of Representatives in a particular session of Congress.
(B) submitted to the House of Representatives in a particular session of Congress.
(C) sent to the Senate from the House of Representatives in a particular session of Congress.
(D) originating in the House of Representatives signed by the President in a particular session of Congress.
(E) debated on the floor of the House of Representatives in a particular session of Congress.

2. It is implied in the passage that once a bill is passed in the House of Representatives that it might be sent to which of the following two places?

(A) Senate, conference committee
(B) Senate, House committee
(C) Senate, President
(D) President, Supreme Court
(E) President, Congress

Native American views of nature have important parallels in contemporary ecology. Through traditional customs and symbols like the medicine wheel, a circular arrangement of stones often interpreted as representing the relationship between Earth, air, water, and fire, Native Americans have long recognized and celebrated the connectedness among all natural things. Indeed, the Native American view of the world has always been consistent with that of Earth ecology—that Earth is a single system of interconnected parts.

3. The symbol of the medicine wheel is given as a(n)

(A) illustration of how Native Americans view the Earth as an interconnected system.
(B) example of the Native American understanding of the four elements.
(C) example of the interrelatedness of the four basic elements.
(D) critique of contemporary ecological understandings of the Earth.
(E) contrast to contemporary ecological understandings of the Earth.

4. Given what the passage states about Native American views of nature, which of the following scenarios most accords with a Native American view?

(A) Studying a microorganism removed from its habitat.
(B) Studying Earth through satellite images.
(C) Studying only animals and substances with spiritual symbolism.
(D) Studying a specific organism's interrelationships with its habitat.
(E) Studying a habitat as a whole.

Questions 5–12 are based on the following passage.

This passage is about Aaron Copland, one of the most celebrated American composers.

Line Copland's music of the late 1920s culminates in two key works, both uncompromising in their modernism: the *Symphonic Ode* of 1929 and the *Piano* (5) *Variations* of 1930. The fate of these compositions contrasts sharply. While the *Piano Variations* is not often performed in concert, it is well known to pianists because, although it does contain (10) virtuoso passages, even those of very modest ability can "play at" the work in private. It represents the twentieth-century continuation of the great tradition of keyboard variations—the (15) tradition that produced such works as the Bach *Goldberg Variations*, and Beethoven's *Diabelli Variations*. Copland's *Symphonic Ode*, on the other hand, remains almost unknown: An (20) intense symphonic movement, it was considered unperformable by the conductor Serge Koussevitzky, otherwise the most potent American champion of

Copland's work during the first half of the century. Koussevitzky did perform a revised version in 1932; but even with a second, more extensive revision in 1955, the *Ode* is seldom played. It is Copland's single longest orchestral movement.

Perhaps as a reaction to the performance problems of the *Symphonic Ode*, Copland's next two orchestral works deal in shorter units of time: the *Short Symphony* of 1933 requires fifteen minutes for three movements and the six *Statements* for orchestra of 1935 last only nineteen minutes. Yet, in fact, these works were more complex than the *Ode*; in particular, the wiry, agile rhythms of the opening movement of the *Short Symphony* proved too much for both the conductors Serge Koussevitzky and Leopold Stokowski. In the end it was Carlos Chávez and the Orquesta Sinfónica de México who gave the *Short Symphony* its premiere.

It may have been partly Copland's friendship with Carlos Chávez that drew him to Mexico. Copland first visited Mexico in 1932 and returned frequently in later years. His initial delight in the country is related in his letter of January 13, 1933, to Mary Lescaze, in which he glowingly describes the Mexican people and the Mexican landscape. His interest in Mexico is also reflected in his music, including *El Salón México* (1936) and the *Three Latin American Sketches* (1972).

Mexico was not Copland's only Latin American interest. A 1941 trip to Havana suggested his *Danzón Cubano*. By the early 1940s he was friends with South American composers such as Jacobo Ficher, and in 1947 he toured South America for the State Department. (Some of the folk music he heard in Rio de Janeiro on this trip appears in his later works.) Copland in fact envisioned "American music" as being music of the Americas as a whole. His own use of Mexican material in the mid-1930s helped make his style more accessible to listeners not willing to accept the challenges of modern symphonic music.

5. What is the author's tone toward Copland's music?

(A) Strident skepticism
(B) Clinical objectivity
(C) Respectful description
(D) Qualified enthusiasm
(E) Unqualified praise

6. The word "virtuoso" in line 10 could best be replaced with

(A) ostentatious.
(B) intricate
(C) raucous.
(D) abstruse.
(E) publicized.

7. In the first paragraph the author states that *Symphonic Ode* and *Piano Variations* had different fates in that

(A) one was largely ignored while the other was almost universally praised.
(B) one, a simpler piece, won popular acclaim, while the other, a more complex piece, won critical acclaim.
(C) one, a simpler piece, became widely known by pianists, but the other, a more complex piece, remained largely unknown.
(D) one, featuring Mexican influences, was popular in Latin America, and the other, a modernist piece, was popular in the United States.
(E) both were initially acclaimed but only one became part of Copland's corpus of beloved works.

8. Koussevitzky is mentioned as an example of a(n)

(A) American conductor who admired Copland's work, but nonetheless found some pieces too difficult to perform.
(B) friend of Copland's who agreed to perform his less popular works.
(C) European composer who took issue with the difficulty of Copland's early work.
(D) musician who appreciated Copland's work but was unable to play it.
(E) European conductor who performed Copland's work.

9. The author of the passage believes that Copland's works immediately subsequent to the *Symphonic Ode* were possibly written

(A) for Copland's new relationship with Carlos Chávez and the Orquesta Sinfónica de México.
(B) to be simpler than the *Symphonic Ode*, on account of its difficulty in being performed.
(C) to be shorter than the *Symphonic Ode*, because the *Ode* was not being performed.
(D) to demand even more of conductors and musicians attempting to play Copland's music.
(E) to reflect Copland's new interest in Latin America.

10. In the sentence beginning "Yet, in fact, these works. . ." in lines 37–43 [second paragraph], the author suggests that

(A) parts of the *Short Symphony* simply weren't melodic enough to engage audiences.
(B) the *Statements* were too brief to warrant a formal performance.
(C) even those who admired Copland's work lost patience with the *Short Symphony* and *Statements*.
(D) the *Statements* and *Short Symphony* determined which performers were truly excellent and which were mediocre.
(E) the *Short Symphony* had melodies that were too quick to be played even by famous musicians.

11. The author suggests that Copland believed Latin American music

(A) was unfamiliar enough to a North American audience that he needed to introduce them to it.
(B) was different enough from North American music that incorporating aspects of it would make his music unique and exciting.
(C) influenced and was influenced by North American music.
(D) primarily originated in Mexico and Cuba.
(E) embodied the polar opposite of modernist aesthetics.

12. The sentence beginning "His own use of Mexican material. . . " in lines 71–75 suggests that the modernist music which also influenced Copland's compositions was

(A) superior in quality to his Latin American influences.
(B) dry and passionless.
(C) technically more challenging to perform.
(D) inaccessible but rewarding.
(E) outmoded by the 1930s.

Questions 13–20 are based on the following passage.

The following passage was written by Ed Lu, an astronaut, while a crew member of the International Space Station.

Line Whenever I get a chance, I spend time just observing the planet below. It turns out you can see a lot more from up here than you might expect. First off, we (5) aren't as far away as some people think—our orbit is only about 240 miles above the surface of the Earth. While this is high enough to see that the Earth is round, we are still just barely skimming (10) the surface when you consider that the diameter of the Earth is over 8,000 miles.

So how much of the Earth can we see at one time? When you are standing on the ground, the horizon is a few miles (15) away. When in a tall building, the horizon can be as far as about 40 miles. From the International Space Station, the distance to the horizon is over 1,000 miles. So from horizon to horizon, the (20) section of the Earth you can see at any one time is a patch about 2,000 miles across, almost enough to see the entire United States at once. It isn't exactly seeing the Earth like a big blue marble, (25) it's more like having your face up against a big blue beach ball. When I look out a window that faces straight down, it is actually pretty hard to see the horizon—you need to get your face very close to (30) the window. So what you see out a window like that is a moving patch of ground (or water).

From the time a place on the ground comes into view until it disappears over (35) the horizon is only a few minutes, since we are traveling 300 miles per minute. When looking out a sideward facing window, you can see the horizon of the Earth against the black background of (40) space. The horizon is distinctly curved. The edge of the Earth isn't distinct but rather is smeared out due to the atmosphere. Here you can get a feel for how relatively thin the atmosphere is compared to the Earth as a whole. I can see (45) that the width of the atmosphere on the horizon is about 1 degree in angular size, which is about the width of your index finger held out at arms length. There (50) really isn't a sharp boundary to the atmosphere, but it gets rapidly thinner

the higher you go. Not many airplanes can fly higher than about 10 miles, and the highest mountains are only about 6 miles high. Above about 30 miles there is very little air to speak of, but at night you can see a faint glow from what little air there is at that height.

Since we orbit at an altitude about 40 times higher than the tallest mountain, the surface of the Earth is pretty smooth from our perspective. A good way to imagine our view is to stand up and look down at your feet. Imagine that your eyes are where the International Space Station is orbiting, and the floor is the surface of the Earth. The atmosphere would be about 6 inches high, and the height of the tallest mountain is less than 2 inches, or about the height of the tops of your feet. Almost all of the people below you would live in the first one quarter of an inch from the floor. The horizon of the Earth is a little over 20 feet away from where you are standing. If you are standing on top of Denver, then about 15 feet to one side you can see San Francisco, and about 15 feet to the other side you can see Chicago.

13. The primary purpose of this passage is to

(A) provide a layperson's account of the Space Station's motion over the Earth.
(B) explain the relationship between the diameter of the Earth and the thickness of the Earth's atmosphere.
(C) answer the imagined question, "What do astronauts see from space?"
(D) give a glimpse of some of the daily activities of astronauts in space.
(E) discuss the thickness and composition of the atmosphere.

14. The second half of the second paragraph is primarily concerned with

(A) how one's location affects one's visual horizon.
(B) the thickness and density of the atmosphere.
(C) the speed of the International Space Station.
(D) the visual horizon from atop a tall building.
(E) being able to see all the Earth at once.

15. The author compares the view of the Earth from a downward-facing window in the International Space Station to

(A) holding a blue marble at arm's length.
(B) having your face up-close to a big blue beach ball.
(C) looking at the tips of your shoes when standing up.
(D) looking at an object that is on the ground fifteen feet away when you are standing up.
(E) the view from a high-flying plane.

16. In the passage, the author contrasts the view from a window looking "straight down" with the view from

(A) the observational deck.
(B) a sideward-facing window.
(C) a passenger airliner.
(D) a window looking "straight up."
(E) the circular windows on the space station.

17. The "faint glow" at night that the author speaks of in the passage comes from

(A) low-lying atmosphere.
(B) the outer edges of the atmosphere.
(C) the eastern horizon of the Earth just before sunrise.
(D) haze from foreign particulates in the atmosphere.
(E) the sun reflecting off aircraft in the high atmosphere.

18. In the last paragraph the author provides the thought exercise with the reader's height primarily to

(A) demonstrate the distance from Denver to San Francisco.
(B) give the reader a concrete sense of the proportions involved in looking down from the space station.
(C) point out that most humans live at a low altitude relative to the height of the atmosphere.
(D) illustrate the expansion of one's horizon at high altitudes.
(E) provide visual details of his activities in space.

19. The tone of the passage is best described as

(A) fairly technical.
B. highly professional.
(C) refreshingly irreverent.
(D) engagingly conversational.
(E) lyrically impassioned.

20. From the passage as a whole, it can be inferred that the astronauts' training

(A) did not prepare them for their free time in space.
(B) included a great deal of zero-gravity exercises.
(C) was more physical than technical.
(D) involved a strong background in math.
(E) focused on the astronauts' communication procedures and abilities.

STOP Do not proceed to the next section until time is up.

Section 2

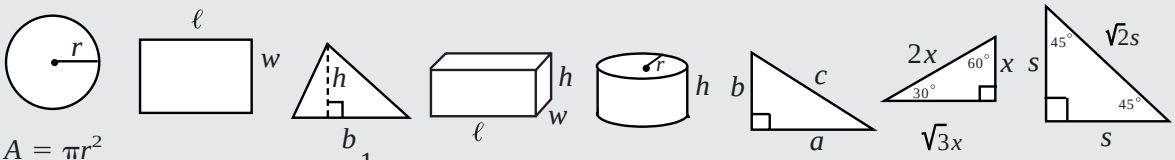
21 Questions ■ Time—25 Minutes

Directions: Solve the following problems using any available space on the page for scratchwork. Mark the letter of your choice on the answer sheet that best corresponds to the correct answer.

Notes:

1. You may use a calculator. All of the numbers used are real numbers.
2. You may use the figures that accompany the problems to help you find the solution. Unless the instructions say that a figure is not drawn to scale, assume that it has been drawn accurately. Each figure lies in a plane unless the instructions say otherwise.

Reference Information



$A = \pi r^2$
$C = 2\pi r$ $A = \ell w$ $A = \frac{1}{2}bh$ $V = \ell wh$ $V = \pi r^2 h$ $c^2 = a^2 + b^2$ Special Right Triangles

The number of degrees of arc in a circle is 360.
The measure in degrees of a straight angle is 180.
The sum of the measures in degrees of the angles of a triangle is 180.

1. If $x + 4y = 3$ and $x = -y$, then $y =$

(A) -1
(B) 0
(C) 1
(D) 2
(E) 3

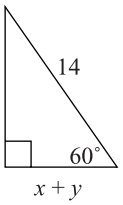
2. It takes Michael three hours to mow $2d$ acres. If Michael mows d acres at the same rate, how many minutes would it take?

(A) 75
(B) 90
(C) 100
(D) 120
(E) 150

3. If $3f + 15 = 27$, then $3f - 6 =$

(A) 6
(B) 10
(C) 12
(D) 17
(E) 20

4.



What is the value of $x + y$?

(A) 7
(B) $7\sqrt{2}$
(C) $7\sqrt{3}$
(D) 14
(E) It cannot be determined.

5. Steve bought a snack and a drink for \$1.30. If the snack costs twenty cents less than the drink, how much does the drink cost?

(A) \$0.50
(B) \$0.55
(C) \$0.65
(D) \$0.75
(E) \$0.80

6. If $f(x) = x + x^x$, when $x = 2$, $f(2x) =$

(A) 6
(B) 20
(C) 200
(D) 260
(E) 4096

7. If $\sqrt{x^2} = 2x + 3$, then $x =$

(A) $-x$
(B) -3
(C) x
(D) -1
(E) 4

8. If $|x + 1| > |y|$ then which of the following expresses the relationship between x and y?

(A) $x + 1 > y$
(B) $x + 1 > y$
(C) $x < y$
(D) $x > y$
(E) It cannot be determined.

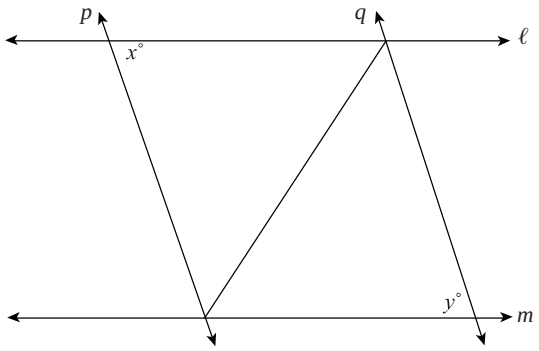
9. 75% of 104 is the same value as 60% of what number?

(A) 130
(B) 133
(C) 136
(D) 140
(E) 144

10. If $3y - x = 12$ is the equation of a line, what is twice the value of this line's y-intercept?

(A) -2
(B) 2
(C) 4
(D) 8
(E) 24

11.



Given the figure above, which of the following must be a true statement?

(A) $x > y$
(B) $x < y$
(C) $x = y$
(D) $x + y = 90$
(E) $x - y = 90$

Questions 12–14 refer to the following definition.

Let $\in m$ be defined for any positive integer m as the number obtained when the first and last digit of m switch places.

For example $\in 4 = 4$, $\in 35 = 53$, and $\in 2003 = 3002$.

12. $\in 2323 - \in 2321 =$

(A) 2
(B) 20
(C) 200
(D) 2000
(E) 20,000

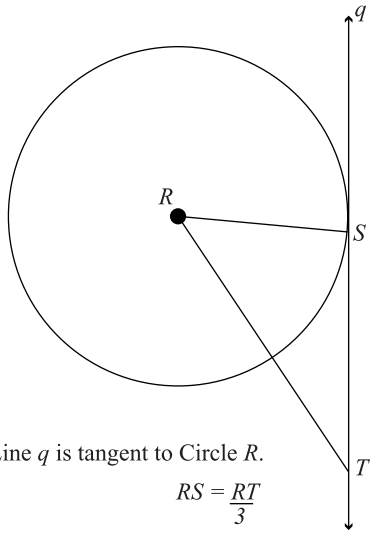
13. If A is a two-digit number between 10 and 20 and $(\in A)^2 = \in(A^2)$, then $A =$

(A) 11
(B) 13
(C) 14
(D) 16
(E) 18

14. If A > B > C > D > E, and each is a digit 1 through 9, then $ABCD - \in (ABCD)$ is

(A) less than zero.
(B) between zero and 100.
(C) between 100 and 500.
(D) between 500 and 1000.
(E) more than 1000.

15.



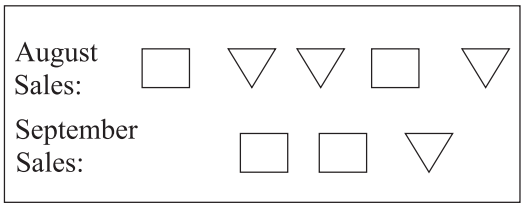
Line q is tangent to Circle R.

$RS = \frac{RT}{3}$

If $RT = 18$, what is the area of the above circle?

(A) 6π
(B) 12π
(C) 36π
(D) 81π
(E) 324π

16. August and September Bassonet Sales



□ – 1,000 bassonets sold

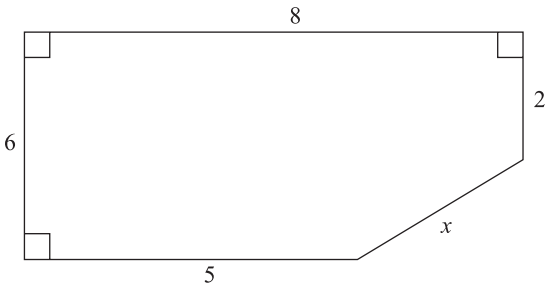
▽ – 50 bassonets sold and returned

Total Sales = □ – ▽

According to the above table, which of the following statements is true?

(A) September total sales are 3.5% greater than August total sales.
(B) September total sales are 2.5% less than August total sales.
(C) September total sales are 2.5% greater than August total sales.
(D) September total sales are 5.4% less than August total sales.
(E) September total sales are 5.4% greater than August total sales.

17.



What is the perimeter of the above figure?

(A) 24
(B) 25
(C) 26
(D) 27
(E) 28

18. Which of the following is the product of two prime numbers whose difference is twenty one?

(A) 46
(B) 51
(C) 55
(D) 57
(E) 58

19. What is the distance from the midpoint of $\overline{DE}$ to the origin, if $D(0,12)$ and $E(5,0)$?

(A) 5
(B) 6.5
(C) 8.2
(D) 12
(E) 13

20. If $-b^2 = (b - 7)(b + 3) - (2b + 2)(b + 5)$, then b equals

(A) $-1\frac{15}{16}$
(B) $1\frac{3}{8}$
(C) 2
(D) $2\frac{10}{11}$
(E) $5\frac{1}{3}$

21. Between 1950 and 2000, the population of Cree County tripled every ten years, except for the decade of the 1980s when the population of the country fell by one-half. If the population of Cree country was 1000 people in 1950, what is the population now?

(A) 40,500
(B) 72,900
(C) 121,500
(D) 218,700
(E) 243,000

STOP Do not proceed to the next section until time is up.

Section 3

30 Questions ■ Time—25 Minutes

Identifying Sentence Errors

Directions: Mark the letter of your choice on the answer sheet that best corresponds to the correct answer.

Notes:

1. The following questions test your knowledge of the rules of English grammar, as well as word usage, word choice, and idioms.
2. Some sentences are correct, but others contain a single error. No sentence contains more than one error.
3. Any errors that occur will be found in the underlined portion of the sentence. Choose the letter underneath the error to indicate the part of the sentence that must be changed.
4. If there is no error, pick answer choice (E).
5. There will be no change in any parts of the sentence that are not underlined.

1. The scientists found that there were less (A) strands of (B) the mold they were studying (C) than they needed (D) to conduct the experiment. No error (E)

2. The painter gave (A) a fantastic demonstration for Ada and I (B) and we vowed to utilize (C) the new technique in our own work (D). No error (E)

3. The team, which is composed (A) of four cyclists, compete (B) against other cycling teams from around (C) the nation and around (D) the world. No error (E)

4. Depending on (A) which historian you read (B), the *Pax Romana* was either (C) as long as five centuries or as short as three (D). No error (E)

5. Because they have extensively surveyed (A) the Lower Ohio Valley, (B) Louis and Clark were well prepared (C) to navigate uncharted territory along (D) the Missouri River. No error (E)

6. The administrator suggested that the staff first focus (A) on contacting prospective participants (B) for the upcoming seminar and then (C) on follow-up (D) with previous speakers. No error (E)

7. The Ottoman Empire initiated (A) better (B) trade relations with the Austrian Empire when its (C) border disputes with Russia were resolved (D). No error (E)

8. The census statistics was (A) a complex source of information, in that (B) the demographers knew that certain groups of people were (C) more likely to respond than others (D). No error (E)

9. Because (A) of the large traffic jam, scarcely no one (B) from the group made (C) it to the airport in time (D) to catch the flight to the conference in San Antonio. No error (E)

10. Even though (A) he had the title of Vice-President (B) of Operations, his duties and responsibilities were (C) not much greater than a midlevel manager (D). No error (E)

Improving Sentences

Directions:

1. The following questions test your knowledge of English grammar, word usage, word choice, sentence construction, and punctuation.
2. Every sentence contains a portion that is underlined.
3. Any errors that occur will be found in the underlined portion of the sentence. If you believe there is an error, choose the answer choice that corrects the original mistake. Answer choices (B), (C), (D), and (E) contain alternative phrasings of the underlined portion. If the sentence contains an error, one of these alternate phrasings will correct it.
4. Choice (A) repeats the original underlined portion. If you believe the underlined portion does not contain any errors, select answer choice (A).
5. There will be no change in any parts of the sentence that are not underlined.

11. In an effort to make the Constitution both more accessible and understandable to the public, the House of Representatives has authorized the publication of a series of pamphlets about the Constitution.

(A) both more accessible and understandable to the public
(B) more both accessible and understandable to the public
(C) more accessible to the public and more understandable for it
(D) both more accessible and more understandable to the public
(E) accessible to the public and understandable

12. Widely considered one of the most original poets of all time, Gerard Manley Hopkins's poems display utterly nonconventional systems of rhyme.

(A) Gerard Manley Hopkins's poems display utterly nonconventional systems of rhyme.
(B) Gerard Manley Hopkins's poems displayed utterly nonconventional systems of rhyme.
(C) Gerard Manley Hopkins's poems have systems of rhyme that are utterly nonconventional.
(D) Gerard Manley Hopkins wrote poems using utterly nonconventional systems of rhyme.
(E) Gerard Manley Hopkins had written poems that were displaying utterly nonconventional systems of rhyme.

13. Eleanor Roosevelt, the wife of President Franklin D. Roosevelt, made an active contribution to many political organizations, this included the Human Rights Commission.

(A) organizations, this included the Human Rights Commission.
(B) organizations, being included the Human Rights Commission.
(C) organizations, whose participation included the Human Rights Commission.
(D) organizations; this including the Human Rights Commission.
(E) organizations, including the Human Rights Commission.

14. Sputnik was the first artificial satellite successfully propelled into orbit and began the space race between the United States and the Soviet Union, in 1957 it was launched by the Soviets.

(A) Sputnik was the first artificial satellite successfully propelled into orbit and began the space race between the United States and the Soviet Union, in 1957 it was launched by the Soviets.
(B) In 1957, the first satellite and space race were beginning when Sputnik was launched.
(C) Launched by the Soviets in 1957, Sputnik was the first artificial satellite successfully propelled into orbit, beginning the space race between the United States and the Soviet Union.
(D) The launching of Sputnik was in 1957, the first artificial satellite was successfully propelled and the space race between the United States and the Soviet Union was begun.
(E) The first artificial satellite successfully propelled into orbit was when Sputnik was launched in 1957, and the space race between the United States and the Soviet Union was begun as well.

15. The newly hired CEO stated clearly in her opening address to the company that her plans for reinvigorating the company were to cut back on discretionary spending, refinance the company's largest loans, and her plans of keeping the company's holdings in the stock market.

(A) her plans of keeping the company's holdings in the stock market.
(B) keep the company's holdings in the stock market.
(C) to get the company to keep its holdings in the stock market.
(D) her plans to keep the company's holdings in the stock market.
(E) keeping the company's holdings in the stock market.

16. Typically, a restaurant's kitchen is divided into a number of sections, each with a particular aspect of food preparation performed there.

(A) each with a particular aspect of food preparation performed there.
(B) each corresponding to a particular aspect of food preparation.
(C) where they each have their particular aspect of food preparation to perform.
(D) which has a particular aspect of food preparation performed there.
(E) they each correspond to a particular aspect of food preparation.

17. Domesticated over 5,000 years ago, the camel is a useful pack animal because of its tolerance for hot sand, extreme temperatures, and it needs little drinking water.

(A) of its tolerance for hot sand, extreme temperatures, and it needs little drinking water.
(B) of its tolerance for hot sand and extreme temperatures and its need for water is very small.
(C) it can tolerate hot sand, extreme temperatures, and a lack of drinking water.
(D) it can tolerate hot stand, withstanding extreme temperatures, and needs little water.
(E) it can tolerate hot sand and extreme temperatures, and needs little water.

18. Legally, an agreement among two people to commit a crime or concealing it constitutes a criminal conspiracy.

(A) among two people to commit a crime or concealing it
(B) among two people to commit a crime or agreeing to conceal it
(C) among two people committing a crime or concealing it
(D) between two people to commit a crime or conceal it
(E) between two people in the committing of a crime or the concealment of it

19. Not only was Sir Isaac Newton famous for his pioneering work in Physics, he was also a talented and well-respected economic advisor to the king.

(A) he was also a talented and well-respected economic advisor to the king.
(B) he had also been a talented and well-respected economic advisor to the king.
(C) but he was also a talented and well-respected economic advisor to the king.
(D) as he also was a talented and well-respected economic advisor to the king.
(E) but he had also been a talented and well-respected economic advisor to the king.

20. If the high levels of stock market investment are to continue it will depend upon both how long the stock market remains stable and its long-term durability.

(A) If the high levels of stock market investment are to continue it will depend
(B) If the high levels of stock market investment are to continue, depending upon
(C) If the high levels of stock market investment continue, it will depend
(D) Whether the high levels of stock market investment continue will depend
(E) Whether the high levels of stock market investment continue it will depend

Improving Paragraphs

Directions:

1. The following questions test your knowledge of paragraph and sentence construction.
2. The following passage is a rough draft of an essay. This rough draft contains various errors.
3. Read the rough draft and then answer the questions that follow. Some questions will focus on specific sentences and ask if there are any problems with that sentence's word choice, word usage, or overall structure. Other questions will ask about the paragraph itself. These questions will focus on paragraph organization and development.
4. Select the answer that best reflects the rules of English grammar and proper essay and paragraph writing.

Questions 21–25 are based on the following passage.

The following passage is part of an essay about the different meanings of the word "modern."

Line (1) The word *modern* is a curious word (2) It is curious for all its different meanings. (3) If you take a freshman class in philosophy, for instance, your (5) professor might tell you about Rene Descartes. (4) Descartes was a French philosopher from the seventeenth century. (5) Many consider him as the first figure in modern philosophy. (6) So (10) if you are talking to a philosophy professor the word *modern* denotes anytime between about 1615 and now. (7) (Of course, some philosophers think that modern times ended a few decades (15) back and that we are already in to postmodern times.) (8) Other academics have a different timeline for the birth of modern times, or modernity. (9) And some historians point to the Industrial (20) Revolution in England as the beginning of modernity. (10) This dating technique puts the beginning of modernity at least a century after when the philosophers reckon the beginning of modern times. (25) (11) The philosophers and the historians have a bit of a discrepancy here.

(12) Of course, you might think both the philosophers and the historians are a bit off on this whole modernity thing. (30) (13) Who thinks of the mud and cobblestone streets of Paris in the early decades of the seventeenth century as modern? (14) Then again, London a century later with the power of steam harnessed does (35) not strike most as the picture of modern times. (15) Most of us, when we think of what modern means, we are thinking about computers and cell phones and wireless networks. (16) We are not (40) thinking about some philosophical discourse that a Frenchman wrote four centuries back.

21. Which of the following is the best combination of sentences 1 and 2 (reproduced below)?

The word *modern* is a curious word. It is curious for all its different meanings.

(A) The word *modern* is a curious word. It is curious for all its different meanings.
(B) *Modern* is a curious word because it has all its different meanings.
(C) It is curious that the word *modern* has various different meanings.
(D) Curiously, the word *modern* has many different meanings.
(E) *Modernity* is a curious word for all its various different meanings.

22. Which of the following is the best way to revise sentences 4 and 5 (reproduced below) so that they are condensed into one sentence?

Descartes was a French philosopher from the seventeenth century. Many consider him as the first figure in modern philosophy.

(A) Descartes was a French philosopher from the seventeenth century, considering him the first figure in modern philosophy.
(B) Descartes was a French philosopher from the seventeenth century, whom many consider the first figure in modern philosophy.
(C) Descartes was a French philosopher from the seventeenth century, and many consider him the first figure in modern philosophy.
(D) Descartes was a French philosopher from the seventeenth century, so he was the first figure in modern philosophy.
(E) Descartes was a French philosopher from the seventeenth century and figuring him the first figure in modern philosophy.

23. Which of the following would be the best replacement for "And" at the beginning of sentence 9 (reproduced below)?

And some historians point to the Industrial Revolution in England as the beginning of modernity.

(A) However,
(B) Moreover,
(C) Even so,
(D) Considering this,
(E) For example,

24. Which of the following is the best revision of the underlined portions of sentence 10 (reproduced below)?

This dating technique puts the beginning of modernity <u>at least a century after when the philosophers reckon the beginning of modern times.</u>

(A) As it is now.
(B) at least a century after when the philosophers reckon it.
(C) at least a century after when the philosopher's date modernity's inception.
(D) at least one century after when the philosophers had reckoned the inception of modernity.
(E) at least a century after its having been reckoned by the philosophers.

25. Which of the following is the best revision of sentence 15 (reproduced below)?

Most of us, when we think of what modern means, we are thinking about computers and cell phones and wireless networks.

(A) As it is now.
(B) Most of us, when we think of what modern means, computers and cell phones and wireless networks coming to mind.
(C) When we think of what modern means, think about computers and cell phones and wireless networks.
(D) Most of us, when we think of what modern means, we are thinking about computers, cell phones, wireless networks.
(E) Most of us, when we think of what modern means, think about computers and cell phones and wireless networks.

Questions 26–30 are based on the following passage.

The following is a first draft of an essay about the growth of the department store industry in the 1920s.

Line (1) Automobiles and radios became far more affordable in the 1920s. (2) By 1925 there was one automobile for every six people in the United States, by 1930 (5) this had increased to one for every 4.6 people. (3) Also by 1930, about 4 in 10 American families owned radios. (4) The popularity of automobiles and radios led to the spread of chain stores of all kinds. (10) (5) Automobiles allowed consumers to travel further in search of the right item for the right price, while radios allowed businesses to advertise their products to a larger group of people. (6) Those people (15) could be potential consumers.

(7) Many of our most famous department store chains first expanded during this time. (8) These include Sears, Roebuck; Woolworth's; the Great (20) Atlantic and Pacific Tea Company (the A&P); and Walgreen Drug. (9) Among the most successful department stores was Filene's in Boston and Macy's in New York. (10) Initially, department (25) stores were more like the malls of today. (11) Each department was leased to an individual owner. (12) Nowadays, virtually all departments are run by the larger company, including restaurants.

(30) (13) Also, with their radio campaigns, the new department stores of the 1920s put on extravagant advertising spectacles. (14) Sometimes, they even hosted entertainment events to attract (35) consumers. (15) The Macy's Thanksgiving Day Parade, an attempt to capture the children's toy market, is one example of popular merchandising. (16) Bloomingdale's posted ads on all New York (40) public transit, pronouncing, "All Cars Transfer to Bloomingdale's."

26. Which of the following is the best revision of the underlined portions of sentences 5 and 6 (reproduced below)?

Automobiles allowed consumers to travel further in search of the right item for the right price, while radios allowed businesses to advertise their products to a larger group of people. Those people could be potential consumers.

(A) As it is now.
(B) a larger group of people, who could be potential consumers.
(C) a larger group of people, being potential consumers.
(D) a larger group of people, whom they made into potential consumers.
(E) a larger group of people, having the potential to become consumers.

27. "This time" in sentence 7 (reproduced below) is best made more specific. Which of the following phrases is the best revision?

Many of our most famous department store chains first expanded during this time.

(A) these years
(B) the twentieth century
(C) the same when automobile sales and radio sales were also on the rise
(D) the years described in the previous paragraph
(E) the 1920s

28. If you were to combine sentences 10 and 11 (reproduced below), which would be the most appropriate and precise punctuation mark to use?

Initially, department stores were more like the malls of today. Each department was leased to an individual owner.

(A) today 'each. . . owner.'
(B) today; each
(C) today: each
(D) today (each. . . owner).
(E) today, each

29. Which of the following is the best revision of the underlined portion of sentence 13 (reproduced below)?

Also, with their radio campaigns, the new department stores of the 1920s put on extravagant advertising spectacles.

(A) Moreover
(B) Too
(C) What's more to their radio campaigns
(D) In addition to their radio campaigns
(E) The radio campaigns being included

30. Which of the following sentences, if added at the end of paragraph 3, is the best concluding sentence for the passage?

(A) In the 20s, shopping and advertising started to look a lot like they do now.
(B) Other stores also had extravaganzas.
(C) So now get in your car and drive to a department store!
(D) Department Stores having become huge successes.
(E) Macy's Thanksgiving Day Parade was always a big hit.

STOP Do not proceed to the next section until time is up.

Section 4

27 Questions ■ Time—25 Minutes

Directions: Each sentence below has either one or two blanks in it and is followed by five choices, labeled (A) through (E). These choices represent words or phrases that have been left out. Choose the word or phrase that, if inserted into the sentence, would best fit the meaning of the sentence as a whole.

Example:

Canine massage is a veterinary technique for calming dogs that are extremely _____.

(**A**) inept
(**B**) disciplined
(**C**) controlled
(**D**) stressed
(**E**) restrained

Ⓐ Ⓑ Ⓒ ● Ⓔ

1. Jerome is a true _____ ; he rarely buys anything other than food, and even his food is plain and minimal.

(A) hermit
(B) teetotaler
(C) gourmand
(D) ascetic
(E) fanatic

2. The property tax hike in Colson County was not just _____ by the county residents; a series of protests were even _____.

(A) disliked..organized
(B) espoused..planned
(C) discouraged..theorized
(D) bolstered..analyzed
(E) detested..negotiated

3. There was criticism that the councilman was _____ when he seized the ceremony _____ by the girl's tragic death to speak out against his opponent.

(A) militaristic.. negated
(B) opportunistic..afforded
(C) unreceptive..preempted
(D) passive.. created
(E) defeatist..overshadowed

4. The computer expert underscored that the new software would _____ the prior version; users could simply _____ the old one.

(A) preclude..destroy
(B) outdo..implement
(C) infect..disregard
(D) undermine..detach
(E) supercede..discard

5. Romania has a long and _____ tradition of activist-poets, who through poetry have _____ the dignity and equality of humanity.

(A) reputable..initiated
(B) storied..articulated
(C) tenuous..supported
(D) tactile..decried
(E) exemplary..countered

6. Dr. Patel expected the surgery to be _____ and laborious, but it turned out to be speedy and _____.

(A) fragile..simple
(B) compelling..forthcoming
(C) intricate..straightforward
(D) complicated..locatable
(E) hard..mechanical

7. Despite the longstanding _____ between the clans, both clans _____ each other in the aftermath of the disaster.

(A) feud..assisted
(B) grudge..maligned
(C) detente..withstood
(D) skirmish.. ameliorated
(E) alliance.. discounted

8. The oral tradition of the Bambara people of West Africa is rich with humor and _____, characteristics which are evident in the merriment of their everyday life.

(A) irony
(B) mirth
(C) cynicism
(D) history
(E) mystery

9. Although *Astropithicus* has more subspecies than *Pthicalitius,* the latter populates the Earth with _____ numbers and in more _____ geographic regions.

(A) greater..diverse
(B) lesser..secluded
(C) milder..remote
(D) scanter..familiar
(E) larger..ominous

10. It is generally _____ by medical practitioners that the last few weeks of a pregnancy are crucial in the _____ of the fetus.

(A) acknowledged..progression
(B) hedged..health
(C) endorsed..birthing
(D) accepted..development
(E) negated..vitality

11. Though the organization espoused outward-focused ideals, in practice, it was quite _____.

(A) gregarious
(B) vigilant
(C) insular
(D) hermetic
(E) idiosyncratic

12. The prosecuting attorney described the defendant's character as _____ and base, but the defense attorney rejoined that the prosecution was _____ the testimonials about the defendant.

(A) dark..misunderstanding
(B) nefarious..misconstruing
(C) lackluster..misinterpreting
(D) blustery..misapplying
(E) motley..misrepresenting

13. Many believe that the new drug regime will be a _____ for helping cure diverse ailments related to spinal dysfunctions.

(A) bane
(B) panacea
(C) module
(D) fledgling
(E) pariah

14. The executive charged that the whistle-blower's actions were so self-centered that they were not just _____ but even _____.

(A) self-involved..altruistic
(B) ill-tempered..narcissistic
(C) egocentric..solipsistic
(D) unduly..respectable
(E) erratic..destructive

15. Technology, instead of alleviating the demands upon our time, has made the pace of modern-day life increase to a near _____ pace.

(A) elicit
(B) frenetic
(C) lethargic
(D) dilatory
(E) cavalier

Questions 16–27 are based on the following passage.

The following passage tells the story of Juan Bautista Rael, an Hispanic-American scholar. It is adapted from a biography written by Enrique R. Lamadrid.

Line
Linguist and folklorist Juan Bautista Rael was a highly regarded academic pioneer. His major contribution to linguistics was collecting and documenting the *Hispano* folk stories, plays, and religious traditions of northern New Mexico and southern Colorado.

Rael was born on August 14, 1900, in Arroyo Hondo, New Mexico. Famous for its spectacular setting north of Taos, the village lies in a deep, narrow valley between Taos mountain and the gorge of the Rio Grande to the west. His family prospered in sheep and cattle ranching and owned a mercantile business that served surrounding *Hispano* communities as well as nearby Taos Pueblo.

Juan's parents, José Ignacio Rael and Soledad Santistevan, raised a family of four sons and a daughter. José Ignacio had the foresight to recognize the changes that were coming with the increasing Americanization of New Mexico and realized that a fluent knowledge of English and a good education would be necessary for his

family to excel. Since local schools were rudimentary at best, the family relied upon its own resources to get the best possible education for the children. Juan was a dedicated student from his earliest years, and his father's ambition was for him to become a lawyer and tend to the family lands and business. Juan's elementary schooling was at Saint Michael's College in Santa Fe, and his high school studies were at the Christian Brothers' College in St. Louis, Missouri. The boy's semester-long absences from his family led him to treasure the simple pleasures of village life. Summers are especially beautiful in Arroyo Hondo, and Christmas and Easter vacations were filled with colorful festivities and solemn ceremony. Rael later reminisced about how much the *Pastores*, or Shepherds' plays, impressed him as a child. Undoubtedly, the instincts and sympathies of Rael the folklorist can be traced to these beginnings—watching rehearsals and performances depicting shepherds, hermits, and the rich ensemble of pastoral characters.

What became clear in his post-secondary studies is that he was much more attracted to literature, philology, and the emerging disciplines of linguistics and folklore. His Bachelor's degree, from St. Mary's College in Oakland in 1923, led to a Master's degree from the University of California at Berkeley in 1927. In the meantime, in 1923, he married Quirina Espinoza of Antonito, Colorado. Rael's first inclination was to become an English teacher, but his bride helped convince him that his opportunities and strengths would be as an Hispanist. After deciding on a university career of teaching and research, Rael relinquished his family inheritance in land, cattle, and sheep to his three brothers and his sister.

Rael realized that the wealth in northern New Mexico that interested him was the vast repertory of folk narrative, song, and custom that had scarcely been documented. While teaching at the University of Oregon, he returned to Arroyo Hondo in the summer of 1930 to begin compiling his famous collection of over five hundred *Nuevo Mexicano* folk tales.

By then his work had attracted the attention of pioneer *Hispano* folklorist Aurelio Espinosa who invited Rael to Stanford in 1933. Rael completed his doctoral studies in 1937 there with a dissertation on the phonology and morphology of New Mexico Spanish that amplified the work of Espinosa with the huge corpus of folk tales, later published as, *Cuentos Españoles de Colorado y Nuevo Mexico: Spanish Folk Tales of Colorado and New Mexico*.

Well versed in the historic-geographic theory of transmission and diffusion of motifs, tale types, and genres, Dr. Rael set out on the formidable, almost quixotic task of gathering all the possible versions and texts of the tales, hymns, and plays he was studying. The vast majority of tales are of European provenance, with only minimal local references. He meticulously traced the shepherds' plays to several root sources in Mexico, and his study, *The Sources and Diffusion of the Mexican Shepherds' Plays*, is a standard reference on the subject. His ground-breaking study of the *alabado* hymn, *The New Mexican Alabado*, is also a prime resource. But inevitably the historic-geographic

approach led more to collection building than to analysis. Later generations of
(115) scholars would develop interests in performance-centered studies, but the collections of Rael continue to be an indispensable landmark in the field.

16. The author's attitude towards Dr. Rael's work can best be described as

(A) laudatory.
(B) engaged.
(C) ambivalent.
(D) disinterested.
(E) condescending.

17. The passage primarily

(A) analyzes the academic contributions of Dr. Rael.
(B) contrasts Dr. Rael's work with the work of Dr. Espinosa.
(C) tells the story of Dr. Rael's life and work.
(D) discusses the basic assumptions of *Hispano* scholarship.
(E) relates the story of the Rael family.

18. The passage implies that Rael decided that he would have more opportunity as a Hispanist than as an English teacher because

(A) Hispanics weren't often hired to teach English.
(B) Hispanic folklore would soon vanish.
(C) he would have to live far from his family to teach English.
(D) his English skills were mediocre.
(E) becoming an Hispanist was a nearer match to his educational background.

19. The author probably uses the word "relinquished" in line 70 to emphasize that

(A) Rael had had friction with his siblings.
(B) Rael's family was very wealthy.
(C) Rael had tried to be a rancher for some time.
(D) Rael was relieved to be free of his family duties.
(E) Rael's career path was difficult and not lucrative.

20. It can be inferred from the passage that northern New Mexico in the early decades of the twentieth century

(A) had a ranch-driven economy.
(B) was suffering severe economic depression.
(C) was economically booming because of a newly opened southern railroad route to California.
(D) had a strong public education system.
(E) was not a primarily English-speaking region.

21. Which of the following best describes Dr. Espinosa's relationship to Dr. Rael?

(A) Boss
(B) Critic
(C) Mentor
(D) Pastor
(E) Father

22. The word "corpus" in line 91 most closely means

(A) religious text.
(B) oeuvre.
(C) published collection.
(D) dissertation.
(E) dialect.

23. According to the passage, which of the following of Dr. Rael's activities as a young man was most important for the development of his later academic interests?

(A) Working on his family's ranch
(B) Watching *Pastores* as a young man
(C) Studying in a religious school
(D) Reading books on the shepherds of northern New Mexico
(E) Struggling to retain his Spanish when his schooling was in English

24. The phrase "diffusion of motifs" in lines 96–97 refers to

(A) variations in the same stories that occur over time or by region.
(B) adherence to standard literary structures.
(C) variations in language use by region.
(D) the surprising similarity of stories in different cultures.
(E) the loss of folklore in more industrialized societies.

25. The word "provenance," line 103, could best be replaced with which of the following words?

(A) Authority
(B) Origin
(C) Location
(D) Destiny
(E) Ethos

26. The main criticism the author offers of Dr. Rael's work is that it

(A) focuses too much on the *Pastores*.
(B) privileges Spanish-language stories over English-language stories.
(C) focuses too much on European stories and not enough on Mexican stories.
(D) doesn't offer enough analysis of the folklore.
(E) includes too many materials, without differentiating between good and bad.

27. The passage suggests, in lines 97–101 that Dr. Rael

(A) was mistaken about how much folklore was circulating.
(B) traveled extensively as he gathered folklore.
(C) was disorganized but intelligent in his methods.
(D) had an historic insight about the source of New Mexican folklore.
(E) developed an excessively technical model for the development of folklore.

STOP Do not proceed to the next section until time is up.

Section 5

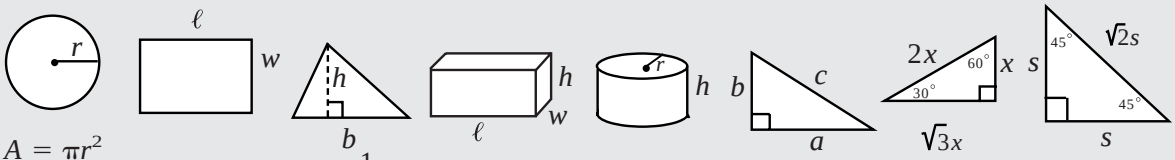
21 Questions ■ Time—25 Minutes

Directions: Solve the following problems using any available space on the page for scratchwork. Mark the letter of your choice on the answer sheet that best corresponds to the correct answer.

Notes:

1. You may use a calculator. All of the numbers used are real numbers.
2. You may use the figures that accompany the problems to help you find the solution. Unless the instructions say that a figure is not drawn to scale, assume that it has been drawn accurately. Each figure lies in a plane unless the instructions say otherwise.

Reference Information



$A = \pi r^2$
$C = 2\pi r$ $A = \ell w$ $A = \frac{1}{2}bh$ $V = \ell wh$ $V = \pi r^2 h$ $c^2 = a^2 + b^2$ Special Right Triangles

The number of degrees of arc in a circle is 360.
The measure in degrees of a straight angle is 180.
The sum of the measures in degrees of the angles of a triangle is 180.

1. At full capacity, Thompson Paper Factory produces 200 sheets of paper per second. If the factory is operating at a quarter of its full capacity, how many sheets of paper will the factory produce in twelve seconds?

(A) 600
(B) 900
(C) 1200
(D) 2000
(E) 2400

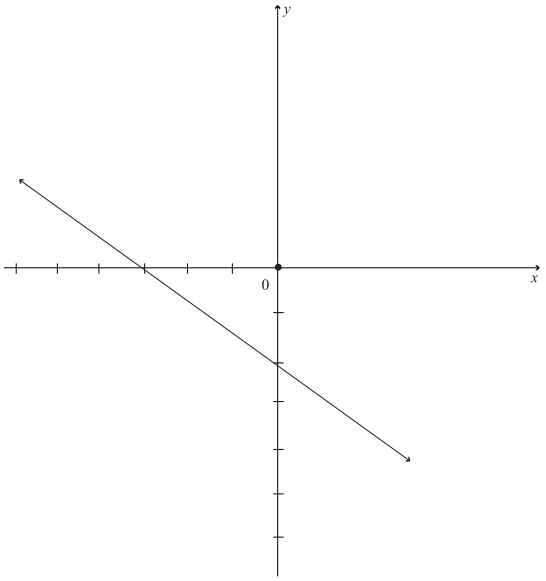
2. If $Z = \frac{2x}{5}$ and $Z = 3$, then $x =$

(A) $\frac{5}{3}$
(B) 2
(C) 5
(D) $\frac{19}{3}$
(E) $\frac{15}{2}$

3. Which of the following is the greatest common factor of 32 and 42?

(A) 2
(B) 3
(C) 6
(D) 8
(E) 12

4.



What is the slope of the above line?

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

B. $-\frac{2}{3}$

C. $\frac{2}{3}$

D. 1

E. $\frac{3}{2}$

Questions 5–6 refer to the following table.

5.

3rd and 4th Graders at Hyde Park Elementary

	Boys	Girls	Total
3rd	16	14	
4th			32
Total			

According to the table, how many students are there in 3rd and 4th grade at Hyde Park Elementary?

(A) 30
(B) 32
(C) 50
(D) 60
(E) 62

6. If there are 18 girls in 4th grade, how many boys are there in 3rd and 4th grade at Hyde Park Elementary?

(A) 18
(B) 22
(C) 26
(D) 30
(E) 32

7. Which of the following is the value of the exponent when the expression $\frac{\left(m^{\frac{3}{4}}\right)^{-2}}{m^{\frac{5}{4}}}$ is simplified?

(A) $-\frac{11}{4}$

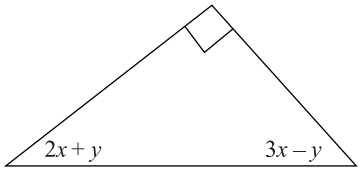
(B) $-\frac{29}{16}$

(C) $-\frac{3}{4}$

(D) $\frac{11}{4}$

(E) $\frac{29}{6}$

8.



In the right triangle above, what is the value of x?

(A) 15
(B) 16
(C) 18
(D) 24
(E) 30

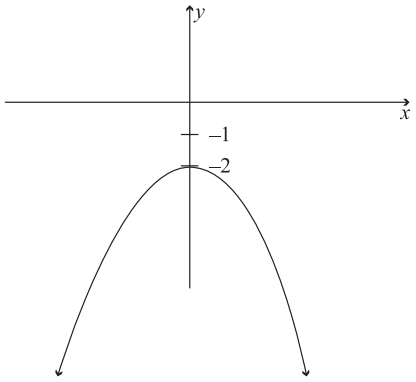
9. Taking the highway from Easton to Bethsaida is 7 miles longer than taking surface streets from Easton to Bethsaida. It is 31 miles total if you travel from Easton to Bethsaida via highway and return via surface streets. How many miles then, is the highway route?

(A) 12
(B) 13
(C) 15
(D) 17
(E) 19

10. If $f(x) = \frac{3x^2}{x^2 + 3x - 18}$, for what values of x is the function undefined?

(A) 0
(B) $-3,6$
(C) $-3,3$
(D) $2,5$
(E) $3,-6$

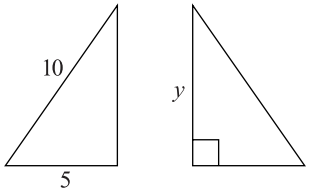
11.



If $f(x)$ is graphed above, then $f(x) =$

(A) $x^2 + 2$
(B) $x^2 - 2$
(C) $-x^2 + 2$
(D) $-(x^2 + 2)$
(E) $-(x + 2)^2$

12.



If the above triangles are congruent, what is the value of y?

(A) 5
(B) $\sqrt{50}$
(C) 8
(D) $\sqrt{75}$
(E) 9

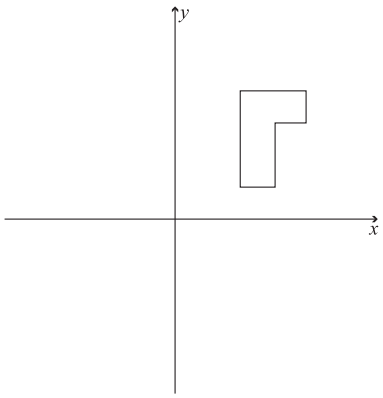
13. $(y + 2)^2 = (y - 4)^2$ is true when y equals

(A) 1 only
(B) 1 and -1
(C) 2 and -2
(D) 1 and 2
(E) 2 and 4

14. Z is the set of numbers 1 through 50 inclusive. How many members of Z are evenly divisible by 2 and 3?

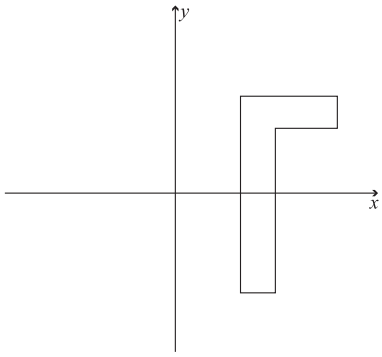
(A) 6
(B) 8
(C) 14
(D) 16
(E) 25

15.

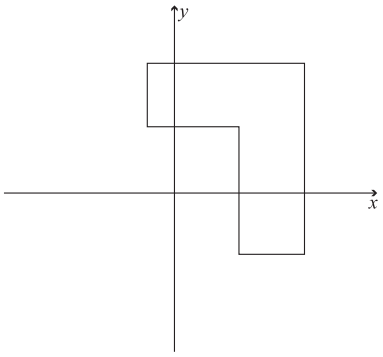


Which of the following figures is similar to the shape shown above?

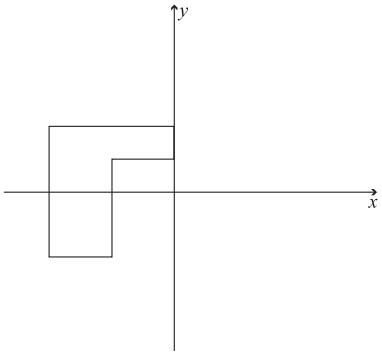
(A)



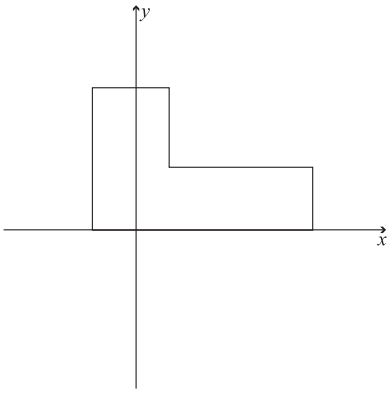
(B)



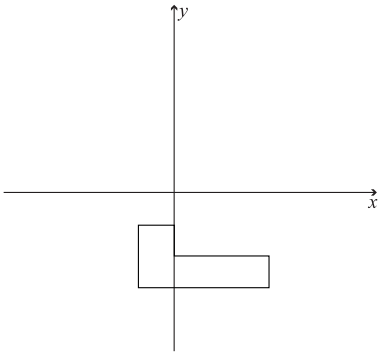
(C)



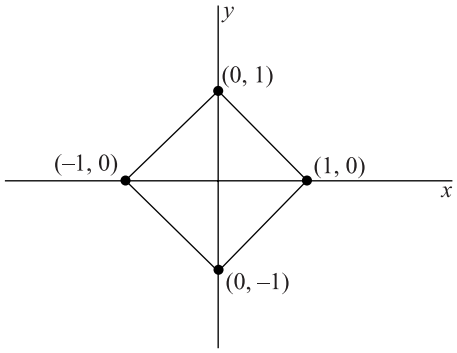
(D)



(E)



16.



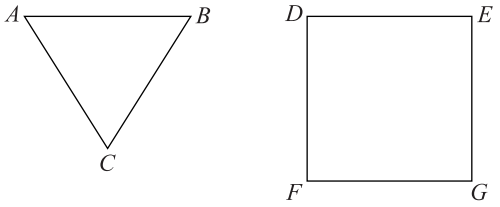
What is the area of the above figure?

(A) 1
(B) $\sqrt{2}$
(C) 2
(D) $1\sqrt{2}$
(E) 4

17. The sum of eight positive even integers is 50. If no integer can appear more than twice in the set, what is the greatest possible value of one of the integers.

(A) 8
(B) 18
(C) 22
(D) 24
(E) 32

18.



ABC is an equilateral triangle and *DEFG* is a square. If $\overline{AB} = \overline{DE}$, how many different ways can *ABC* be placed in *DEFG* such that two vertices of the triangle coincide with two corners of the square?

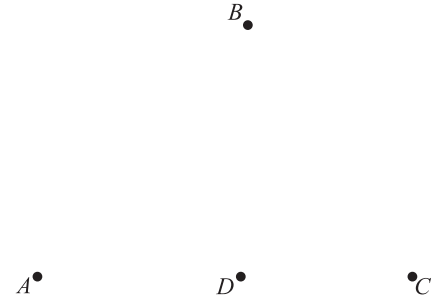
(A) 4
(B) 6
(C) 8
(D) 10
(E) 12

19. *G*, *S*, and *T* are three points that lie on a plane. If the distance between *G* and *S* is 9, and the distance between *S* and *T* is 5, which of the following are possible distances between *G* and *T*?

I. 3
II. 5
III. 14

(A) I only
(B) II only
(C) I and II only
(D) II and III only
(E) I, II, and III

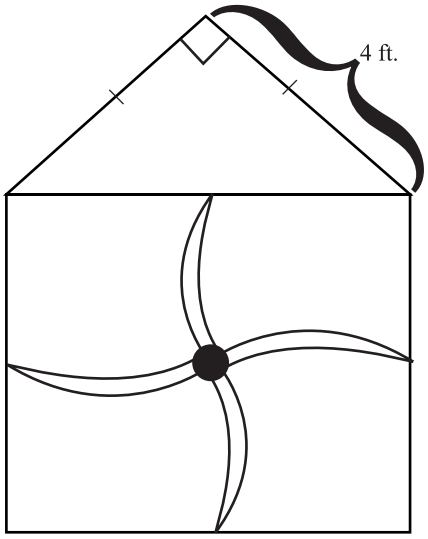
20.



If $\overline{AB} = \overline{BC} = \overline{AC} = 6$, and D is the halfway between A and C, then $\overline{BD} =$

(A) $2\sqrt{3}$
(B) 3
(C) $3\sqrt{3}$
(D) $4\sqrt{2}$
(E) $4\sqrt{3}$

21.



The figure above is the diagram of an industrial fan blade. If the fan's maximum blade speed is 100 revolutions per 10 seconds, what is the greatest distance (in feet) that any point on the blade could travel in 30 seconds?

(A) $100\sqrt{2\pi}$
(B) $200\sqrt{3\pi}$
(C) $600\sqrt{2\pi}$
(D) $600\sqrt{3\pi}$
(E) $1200\sqrt{2\pi}$

STOP Do not proceed to the next section until time is up.

Section 6

16 Questions ■ Time—20 Minutes

Directions: Each passage below is followed by a set of questions. Read each passage, then answer the accompanying questions, basing your answers on what is stated or implied in the passage and any introductory material provided. Mark the letter of your choice on the answer sheet that best corresponds to the correct answer.

Line Frederic Remington (1861–1909) has long been celebrated as one of the most gifted interpreters of the American West. Initially, his western images appeared as (5) illustrations in popular journals. As he matured, however, Remington turned his attention away from illustration, concentrating instead on painting and sculpture. About 1900 he began a series (10) of paintings that took as their subject the color of night. Before his premature death in 1909 at age 48, Remington completed more than seventy paintings in which he explored the technical and (15) aesthetic difficulties of painting darkness.

1. The passage suggests Remington's major artistic accomplishments were

(A) magazine illustrations.
(B) sculptures.
(C) paintings of nocturnal cityscapes.
(D) paintings of nocturnal landscapes.
(E) color studies.

Line The question of what counts as literature has been strongly debated over the last few decades both in and out of academia. Some argue that only the test of time (5) ultimately vindicates a fictional work's claim to the status of literature. Their argument runs like this: if people still read, still reference, still care about a work of fiction decades or even centuries (10) after its original publication, then that work clearly rises to the auspicious status of literature. Critics of this view, though, point out that this method of determining what is and is not literature by definition (15) excludes contemporary works from consideration. We do not know, they rightfully contend, if a novel published in the last few years will be read in a hundred years or not. And so they ask, (20) does this mean we cannot meaningfully discuss whether the work is important, or influential, or of great merit?

2. The author uses the word "vindicates" to emphasize that

(A) all works of fiction claim to be literature.
(B) all works of fiction are, in some sense, literature.
(C) literature is a much more prestigious category than fiction.
(D) the debate regarding what is literature is excessively erudite.
(E) for a work to establish itself as literature is an incredible feat.

3. The argument, given in the passage, against the "test of time" approach is that

(A) it excludes by definition all writing that is not fictional.
(B) it does not take trends in critical interest into account.
(C) it excludes contemporary fiction from the discussion.
(D) it allows contemporary works to be considered alongside the great works of centuries past.
(E) it gives too much weight to popular opinion.

Line Since the sixteenth century, astronomers have recognized Mars for what it is—a relatively nearby planet not so unlike our own. The fourth planet from the sun and (5) Earth's closest neighbor, Mars has been the subject of modern scientists' careful scrutiny with powerful telescopes, deep space probes, and orbiting spacecraft. In 1976, Earth-bound scientists were (10) brought significantly closer to their subject of investigation when two Viking probes touched down on that red soil. The possibility of life on Mars, clues to the evolution of the solar system, (15) fascination with the chemistry, geology, and meteorology of another planet—these were considerations that led the National Aeronautics and Space Administration to Mars. Project Viking's goal, (20) after making a soft landing on Mars, was to execute a set of scientific investigations that would not only provide data on the physical nature of the planet but also make a first attempt at determining if (25) detectable life forms were present.

4. Which of the following does the paragraph most emphasize as the motivation for the Viking trip to Mars?

(A) Fascination with chemistry on another planet.
(B) Four-century-old interest in the planet.
(C) The advancement of space exploration.
(D) Possibility of a space station on Mars.
(E) Possibility of life on Mars.

Questions 5–16 are based on the following two passages.

The following two passages discuss the English and Metric systems of measurement.

Passage 1

Line It is an oft-repeated tale that the English measurement of the yard was standardized when an English royal stepped into disputes about the measurement's length (5) and declared the distance from his shoulder to the tip of his fingers as the standard yard. Unlike many colorful anecdotes from history, this one is true. Early in the twelfth century, the English (10) king Henry I established the length of the yard as the distance from the tip of his nose to the tip of his outstretched thumb.

In our scientific age such stories seem earthy at best and ridiculous at worst.

But not all ancient units of measure have such arbitrary origins. The mile is a good example of this. Though the mile is today counted as part of the English system of measurement, the unit dates back to ancient Rome. The English word mile derives from the Latin term *mille*, which means one thousand. For the Romans, the *mille* was one thousand paces. A pace was two steps, or five feet roughly. This meant the *mille* was 5,000 feet. In medieval Europe, however, the 220-yard furlong became the dominant measurement used. To reconcile the two measurements, the mile was lengthened to be eight furlongs. This made the mile 5,280 feet. A sixteenth-century act of Parliament fixed this measurement for the mile.

It is true that the English system of measurement, the system that includes the mile, the yard, the foot, and the inch, has a certain quirkiness to it because it has evolved through human history. This quirkiness might irritate scientists, but it is part and parcel of the tradition that has been bequeathed, in its accumulated form, to the English-speaking world.

Passage 2

The metric system was conceived by twelve French scientists during the French Revolution. Like many innovations during the French Revolution, the metric system was formulated as a scientific system that would replace traditional ways of ordering society. The revolutionaries did not see it as a coincidence that length was meted in measures based on the size of a medieval king. Instead of these arbitrary standards, the metric system's basic unit of measure, the meter, was based upon the circumference of the Earth. For the meter to be a manageable size, it was defined as one one-forty-millionth of the Earth's circumference. They employed the word *meter* to harken back to the ancient Greek word *metron*, meaning measure.

The rest of the metric system is even less arbitrary in origin. The other metric units of length were generated by either multiplying or dividing the meter by a factor of ten. Thus a kilometer is 1000 meters, and a centimeter is one one-hundredths of a meter. It is the great asset of the metric system, at least for scientists, that units for measuring weight and energy are also derived from the basic unit of the meter. For instance, weight is measured in grams, which are determined by the weight of one cubic centimeter of water.

France made use of the metric system compulsory in 1840. Other countries rapidly followed suit. The adoption of the metric system, also known as the international system, or S.I., coincided with great advances in science. By 1900, over 35 countries had officially adopted its use. In the United States, the system has been dubbed "voluntary" and "preferred," but has never been made compulsory.

The measure of the meter has been refined three times since its conception in 1791. The latest was in 1983 when the speed of light was employed to give the greatest precision for the measurement to date. The distance that light travels in a vacuum in 1/299,792,458 of a second is the internationally accepted definition of a meter.

5. What is the author of Passage 1's attitude towards the English system of measurement?

(A) Emphatic praise
(B) Qualified acceptance
(C) Neutrality
(D) Strong criticism
(E) Antipathy

6. In Passage 1, the story of Henry I is offered primarily to

(A) demonstrate that the reader's preconceptions about the English system are wrong.
(B) illustrate the role of the English monarchy in the development of the English system.
(C) reveal how far back in time the English system goes.
(D) provide a concrete example of how the arbitrariness of the English system developed.
(E) suggest the practicality of the English system.

7. The word "earthy" in line 14 most closely means

(A) unrefined.
(B) musky.
(C) impractical.
(D) old-fashioned.
(E) baffling.

8. By "reconcile the two measurements," (line 28–32) the author means

(A) determine which one was accurate.
(B) develop a new system of measurement without the inaccuracies of the old.
(C) settle the public's disagreement over which was better.
(D) find a metric equivalent.
(E) cease using two different systems.

9. The author refers to the English system's "accumulated form" line 40–41 primarily to emphasize that the system

(A) ceased to change once officially adopted.
(B) derives from a variety of sources.
(C) stretches back further than reliable written history.
(D) continues to evolve.
(E) was adopted wholesale.

10. The authors of the two passages would be most likely to agree that the metric system

(A) has a shorter but equally interesting history as the English system.
(B) has a history that reaches back as far as the English system's.
(C) has a longer history than the history of the English system.
(D) should not be thought of historically.
(E) has a history that is equally long but less colorful than the English system's.

11. According to Passage 2, the invention of the metric system was

(A) one of the greatest accomplishments of the French Revolution.
(B) in contradiction to many of the other goals of the French Revolution.
(C) a side-effect of the French Revolution's new calendar system.
(D) one of many anti-traditionalist undertakings of the French Revolution.
(E) left incomplete at the end of the French Revolution.

12. In the sentence beginning "In the United States. . ." (line 82) the writer suggests that the United States

(A) has never seriously attempted to implement the metric system.
(B) is likely to adopt the metric system fairly soon.
(C) has created official policies regarding use of the metric system.
(D) has attempted to require use of the metric system, but has been unable to enforce its policies.
(E) reflects a clear bias for the superiority of the English system.

13. The word "refined" in line 87 most closely means

(A) processed.
(B) renegotiated.
(C) made smaller.
(D) challenged.
(E) modified.

14. In Passage 2, the reason for the 1983 definition of the meter is probably that scientists

(A) have determined that the new meter is a more manageable length.
(B) have more sophisticated data on the circumference of the earth.
(C) needed a way to bring the meter's length closer to the yard's.
(D) have developed more accurate ways to calculate the original fraction.
(E) wanted to disassociate the meter with the French Revolution.

15. In at least one of the passages all of the following are mentioned EXCEPT

(A) the kings who ruled during the standardization of measurements.
(B) the contemporary standing of the measuring system discussed.
(C) terms from ancient languages.
(D) the refinement of measurement standards in recent years.
(E) the cultural heritage of each measuring system.

16. The author of Passage 2 conveys an implicit belief that the

(A) metric system facilitates scientific endeavors.
(B) United States has damaged its reputation in the international community by refusing to adopt the metric system.
(C) metric system is best confined to scientific use.
(D) French Revolution was a high point in the history of science.
(E) metric system is a more fitting system for a democratic society.

STOP Do not proceed to the next section until time is up.

Section 7

13 Questions ■ Time—20 Minutes

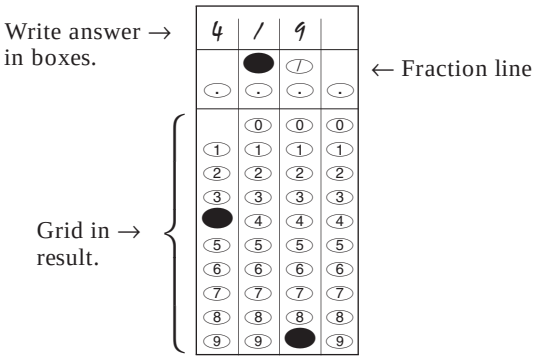
Notes:

1. All numbers used are real numbers.
2. All angle measurements can be assumed to be positive unless otherwise noted.
3. All figures lie in the same plane unless otherwise noted.
4. Drawings that accompany questions are intended to provide information useful in answering the question. The figures are drawn closely to scale unless otherwise noted.

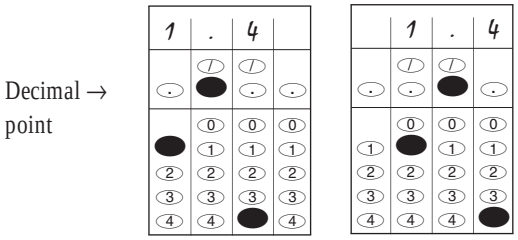
Directions for Student Produced Responses

Enter your responses to questions 1–13 in the special grids provided on your answer sheet. Input your answers as indicated in the directions below.

Answer: $\frac{4}{9}$ or 4/9



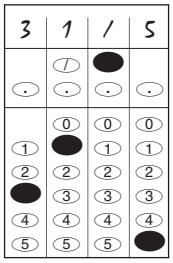
Answer: 1.4
Either position is correct.



Note: You may begin your answer in any column, space permitting. Leave blank any columns not needed.

- Writing your answer in the boxes at the top of the columns will help you accurately grid your answer, but it is not required. **You will only receive credit for an answer if the ovals are filled in properly.**
- Only fill in one oval in each column.

- If a problem has several correct answers, just grid in one of them.
- There are no negative answers.
- **Never grid in mixed numbers.** The answer $3\frac{1}{5}$ must be gridded as 16/5 or 3.2. If



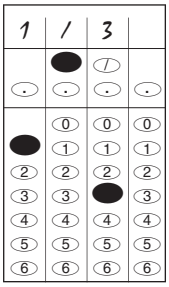
is gridded, it will be read as $\frac{31}{5}$, not $3\frac{1}{5}$.

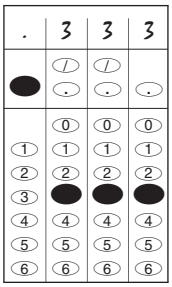
Decimal Accuracy

Decimal answers must be gridded as accurately as possible. The answer 0.3333 . . . must be gridded as .333.

Less accurate values, such as .33 are not acceptable.

Acceptable ways to grid $\frac{1}{3}$ = .3333 . . .



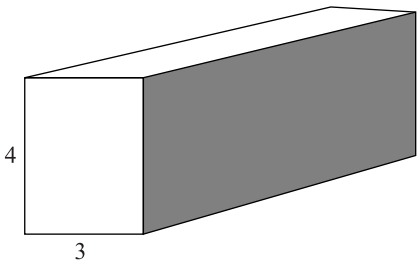


1. If $2\sqrt{x} + \sqrt{x} = y$ and $2y = 12$, then what does x equal?

2. What is the product of the first five even integers?

3. Rider High has 400 students. A student will be picked at random from the student body. If the probability that a senior would be picked is three-eighths, how many seniors are there?

4.



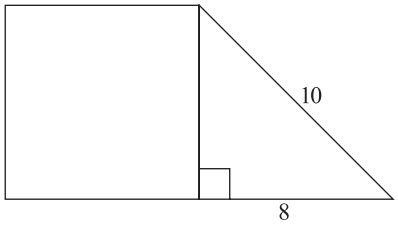
If the area of the striped side of the rectangular solid is 24, what is the volume of the box?

5. If the area of a circle is 16π, what is the diameter of the circle?

6. Lisa has three pizza toppings from which to choose: pepperoni, anchovies, and red peppers. If she can choose as many toppings as three and as few toppings as zero, how many different pizza orders are possible? (Lisa cannot order the same topping twice.)

7. The average (arithmetic mean) of five numbers is 16. If one number is taken from the set, the new average is 14. What number was taken from the set?

8.



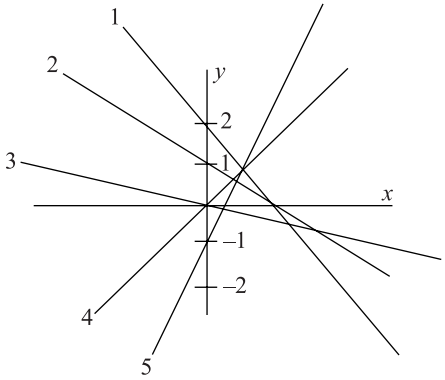
If the figure above is composed of a square and a triangle, what is the area of the square?

9. What is the slope a line that is defined by the following two points, $(-1, -2)$ and $(3,1)$?

10. Tom is twelve years older than Susan, and Susan is three times the age of Gina, and Gina is five years younger than Bo. If Bo is 15, how old is Tom?

11. For all positive integers, let m^* equal the greatest prime divisor of m. What does $(15^*)(12^*)$ equal?

12.



What is the sum of the y-intercepts in the above graph?

13. The sum of four positive distinct prime numbers is 21. What is the greatest possible value of one of those prime numbers?

STOP Do not proceed to the next section until time is up.

Section 8

Time—25 Minutes

Directions: Think carefully about the statement below and the assignment that follows it.

Consider the following statement.

Innovation is primarily accomplished by an individual, though groups often do work out the details of an individual's innovations.

Assignment: Write an essay in which you argue for or against the preceding statement. Develop your point of view on this statement and be sure to support your stance with sufficient details.

STOP When you are finished with your essay put your pencil down until the time allotted is over.