



Chapter 19

Practice Test 1



SECTION 1

ESSAY

Time — 25 minutes

Turn to Section 1 of your answer sheet to write your essay.

The essay gives you an opportunity to show how effectively you can develop and express ideas. You should, therefore, take care to develop your point of view, present your ideas logically and clearly, and use language precisely.

Your essay must be written on the lines provided on your answer sheet—you will receive no other paper on which to write. You will have enough space if you write on every line, avoid wide margins, and keep your handwriting to a reasonable size. Remember that people who are not familiar with your handwriting will read what you write. Try to write or print so that what you are writing is legible to those readers.

You have twenty-five minutes to write an essay on the topic assigned below. **DO NOT WRITE ON ANOTHER TOPIC.**
AN OFF-TOPIC ESSAY WILL RECEIVE A SCORE OF ZERO.

Think carefully about the issue presented in the following excerpt and the assignment below.

No great man lives in vain. The history of the world is but the biography of great men.

Adapted from Thomas Carlyle, “The Hero as Divinity”

In historic events, the so-called great men are labels giving names to events, and like labels they have but the smallest connection with the event itself.

Adapted from Leo Tolstoy, *War and Peace*

Assignment: Can the daily actions of average people have a significant impact on the course of history? Plan and write an essay in which you develop your point of view on this issue. Support your position with reasoning and examples taken from your reading, studies, experience, or observations.

DO NOT WRITE YOUR ESSAY IN YOUR TEST BOOK. You will receive credit only for what you write on your answer sheet.

BEGIN WRITING YOUR ESSAY ON PAGE 3 OF THE ANSWER SHEET
(FOUND AT THE BACK OF THE BOOK).

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.



SECTION 2

Time — 25 minutes

20 Questions

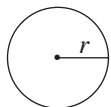
Turn to Section 2 of your answer sheet to answer the questions in this section.

Directions: For this section, solve each problem and decide which is the best of the choices given. Fill in the corresponding circle on the answer sheet. You may use any available space for scratchwork.

Notes

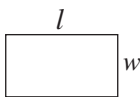
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not drawn to scale. All figures lie in a plane unless otherwise indicated.
4. Unless otherwise specified, the domain of any function f is assumed to be the set of all real numbers x for which $f(x)$ is a real number.

Reference Information

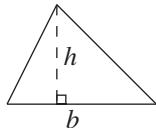


$$A = \pi r^2$$

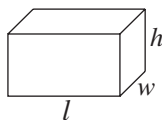
$$C = 2\pi r$$



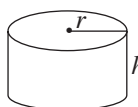
$$A = lw$$



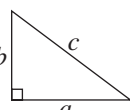
$$A = \frac{1}{2}bh$$



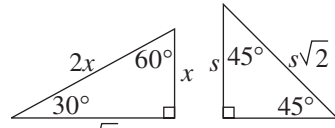
$$V = lwh$$



$$V = \pi r^2 h$$



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



Special Right Triangles

The number of degrees of arc in a circle is 360.

The sum of the measures in degrees of the angles of a triangle is 180.

1. Andrea subscribed to four publications that cost \$12.90, \$16.00, \$18.00, and \$21.90 per year, respectively. If she made an initial payment of one-half of the total yearly subscription cost, and paid the rest in four equal monthly payments, how much was each of the four monthly payments?

- (A) \$8.60
(B) \$9.20
(C) \$9.45
(D) \$17.20
(E) \$34.40

2. If $\frac{2x}{x^2 + 1} = \frac{2}{x + 2}$, what is the value of x ?

- (A) $-\frac{1}{4}$
(B) $\frac{1}{4}$
(C) $\frac{1}{2}$
(D) 0
(E) 2

GO ON TO THE NEXT PAGE



3. A survey of Town X found an average (arithmetic mean) of 3.2 persons per household and a mean of 1.2 televisions per household. If 48,000 people live in Town X, how many televisions are in Town X ?

(A) 15,000
(B) 16,000
(C) 18,000
(D) 40,000
(E) 57,600

If I do not have any flour, I am not able to make cookies.

4. If the statement above is true, which of the following statements must be true?
- (A) If I did not make cookies, I must not have had flour.
(B) If I made cookies, I must have had flour.
(C) If I have flour, I must be able to make cookies.
(D) If I was able to make cookies, I must not have had any flour.
(E) If I am not able to make cookies, I must not have any flour.

5. Let the function f be defined such that $f(x) = x^2 - c$, where c is a constant. If $f(-2) = 6$, what is the value of c ?

(A) -10
(B) -2
(C) 0
(D) 2
(E) 6

-
6. If $9b = 81$, then $\sqrt{b} \times \sqrt[3]{3b} =$

(A) 9
(B) 27
(C) 81
(D) 243
(E) 729

GO ON TO THE NEXT PAGE 



7. What is the diameter of a circle with a circumference of 5 ?

(A) $\frac{5}{\pi}$
(B) $\frac{10}{\pi}$
(C) 5
(D) 5π
(E) 10π

8. If the product of $(1 + 2)$, $(2 + 3)$, and $(3 + 4)$ is equal to one-half the sum of 20 and x , what is the value of x ?

(A) 10
(B) 85
(C) 105
(D) 190
(E) 1,210

9. If $\sqrt{x} = 2^2$, then $x =$

(A) 1
(B) 2
(C) 4
(D) 8
(E) 16

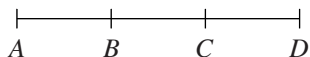
MERCHANDISE SALES

Type	Amount of Sales	Percent of Total Sales
Shoes	\$12,000	15%
Coats	\$20,000	25%
Shirts	x	40%
Pants	y	20%

10. According to the table above, $x + y =$

(A) \$32,000
(B) \$48,000
(C) \$60,000
(D) \$68,000
(E) \$80,000

GO ON TO THE NEXT PAGE 



Note: Figure not drawn to scale.

11. If $AB > CD$, which of the following must be true?

- I. $AB > BC$
- II. $AC > BD$
- III. $AC > CD$

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

12. If $f(x) = \left(|x| - 3\right|$, what is the value of $f(1)$?

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

13. A researcher found that the number of bacteria in a certain sample doubles every hour. If there were 6 bacteria in the sample at the start of the experiment, how many bacteria were there after 9 hours?

- (A) 54
- (B) 512
- (C) 1,536
- (D) 3,072
- (E) 6,144

14. If $f(x) = x^2 + 2$, which of the following could be a value of $f(x)$?

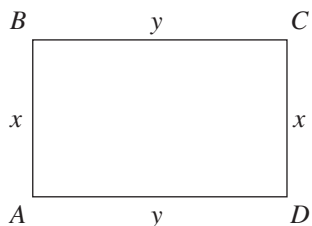
- (A) -2
- (B) -1
- (C) 0
- (D) 1
- (E) 2

GO ON TO THE NEXT PAGE



15. How many numbers from 1 to 200 inclusive are equal to the cube of an integer?

(A) One
(B) Two
(C) Three
(D) Four
(E) Five



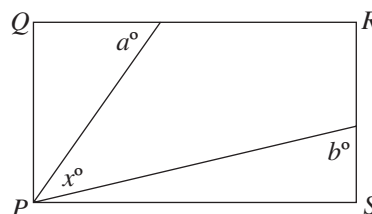
16. If the perimeter of rectangle $ABCD$ is equal to p , and

$x = \frac{2}{3}y$, what is the value of y in terms of p ?

(A) $\frac{p}{10}$
(B) $\frac{3p}{10}$
(C) $\frac{p}{3}$
(D) $\frac{2p}{5}$
(E) $\frac{3p}{5}$

17. A basketball team had a ratio of wins to losses of 3:1. After the team won six games in a row, its ratio of wins to losses became 5:1. How many games had the team won before winning six games in a row?

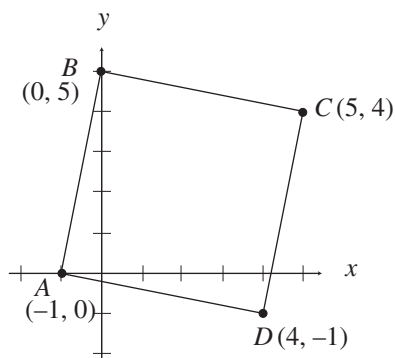
(A) 3
(B) 6
(C) 9
(D) 15
(E) 24



18. In rectangle $PQRS$ above, what is $a + b$ in terms of x ?

(A) $90 + x$
(B) $90 - x$
(C) $180 + x$
(D) $270 - x$
(E) $360 - x$

GO ON TO THE NEXT PAGE



19. What is the area of square $ABCD$?

- (A) 25
- (B) $18\sqrt{2}$
- (C) 26
- (D) $25 + \sqrt{2}$
- (E) 36

20. A square is inscribed in a circle with radius r . What is the probability that a randomly selected point within the circle will NOT be within the square?

- (A) $\frac{\pi - 2}{\pi r^2}$
- (B) $\frac{\pi - 2}{\pi}$
- (C) $\frac{\pi - \frac{1}{2}}{\pi}$
- (D) $\frac{1 - r}{\pi}$
- (E) $\frac{r}{\pi}$

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.



SECTION 3

Time — 25 minutes

24 Questions

Turn to Section 3 of your answer sheet to answer the questions in this section.

Directions: For each question in this section, select the best answer from among the choices given and fill in the corresponding circle on the answer sheet.

Each sentence below has one or two blanks, each blank indicating that something has been omitted. Beneath the sentence are five words or sets of words labeled A through E. Choose the word or set of words that, when inserted in the sentence, best fits the meaning of the sentence as a whole.

Example:

Desiring to ----- his taunting friends, Mitch gave them taffy in hopes it would keep their mouths shut.

- (A) eliminate (B) satisfy (C) overcome
(D) ridicule (E) silence

A B C D ●

- To prevent household fires, all flammable liquids, oily rags, and other ----- materials should be properly disposed of.
(A) combustible (B) unctuous (C) restricted
(D) diluted (E) extinguishable
- Mark was intent on maintaining his status as first in his class; because even the smallest mistakes infuriated him, he reviewed all his papers ----- before submitting them to his teacher.
(A) explicitly (B) hastily (C) honestly
(D) unconsciously (E) meticulously
- Because Jenkins neither ----- nor defends either side in the labor dispute, both parties admire his journalistic -----.
(A) criticizes . . vitality
(B) attacks . . neutrality
(C) confronts . . aptitude
(D) dismisses . . flair
(E) protects . . integrity
- It is ironic that the ----- insights of the great thinkers are voiced so often that they have become mere -----.
(A) original . . clichés
(B) banal . . beliefs
(C) dubious . . habits
(D) philosophical . . questions
(E) abstract . . assessments
- Some anthropologists claim that a few apes have been taught to communicate using rudimentary sign language, but skeptics argue that the apes are only ----- their trainers.
(A) emulating (B) condoning (C) instructing
(D) acknowledging (E) belaboring
- Most people imagine organ fugues to be ----- and -----, due to their technical difficulty and challenging counterpoint.
(A) diminutive . . uplifting
(B) harmonious . . petrifying
(C) daunting . . esoteric
(D) cacophonous . . enchanting
(E) inscrutable . . classical
- Since many disadvantaged individuals view their situations as ----- as well as intolerable, their attitudes can best be described as -----.
(A) squalid . . obscure
(B) unpleasant . . bellicose
(C) acute . . sanguine
(D) inalterable . . resigned
(E) political . . perplexed
- Only when one actually visits the ancient ruins of marvelous bygone civilizations does one truly appreciate the sad ----- of human greatness.
(A) perspicacity (B) magnitude (C) artistry
(D) transience (E) quiescence

GO ON TO THE NEXT PAGE



Directions: Each passage below is followed by questions based on its content. Answer the questions on the basis of what is stated or implied in each passage and in any introductory material that may be provided.

Questions 9–10 are based on the following passage.

- Many of the techniques recommended to relieve writer's block actually involve writing. Exercises such as brainstorming and clustering are meant to loosen up the writer and unstop pent-up creativity. But what if the root of the problem were neurological? Recent research on the antipodal condition of hypergraphia has shown that the overwhelming desire to write is a side effect of temporal lobe epilepsy. Located in the area near the ear on both sides of the brain, the temporal lobes control hearing, speech, and memory—all crucial to the task of communicating. Writer's block is usually accompanied by depression, which is said to mimic frontal lobe impairment.
9. The question posed by the author in lines 4–5 serves to
- (A) criticize traditional therapies for writer's block
 - (B) reflect on the information provided earlier in the passage
 - (C) transition into a new perspective on understanding writer's block
 - (D) introduce more information on neurological disorders
 - (E) highlight the contrast between the two problems
10. The author's primary purpose in the passage is to
- (A) compare two problems faced by writers
 - (B) present a possible cause of writer's block
 - (C) provide detailed information about the temporal lobe
 - (D) question current therapeutic techniques for writing problems
 - (E) describe the side effects of epilepsy

Questions 11–12 are based on the following passage.

- Paris is a circular city divided into 20 sectors called *arrondissements*, which spiral out from the center of the city. Romans inhabited the islands that make up the heart of Paris in the first century A.D. and built a wall to protect their territory. New walls were built in concentric circles as the city expanded, the sites of which were transformed into some of today's streets. The first twelve *arrondissements* were laid out by 1795 and the surrounding suburban areas were annexed in 1860 to add eight more.
11. The tone and content of the passage is most appropriate for which of the following?
- (A) An urban planning proposal
 - (B) A traveler's guidebook
 - (C) A satire magazine
 - (D) An art history textbook
 - (E) A book of Roman history
12. According to the passage, which of the following has most influenced the layout of Paris?
- (A) The decreasing population of the city
 - (B) The ritual importance of the spiral symbol
 - (C) A need for defense
 - (D) Roman experiments in solid geometry
 - (E) The desire to improve upon Roman architectural styles

GO ON TO THE NEXT PAGE



Questions 13–24 are based on the following passage.

The following passage is an excerpt from nineteenth-century British explorer David Livingston's memoirs of his journeys to Africa.

The Expedition left England on the 10th of March, 1858, in Her Majesty's Colonial Steamer "Pearl," commanded by Captain Duncan; and, after enjoying the generous hospitality of our friends at Cape Town, with the obliging attentions of Sir George Grey, and receiving on board Mr. Francis Skead, R.N., as surveyor, we reached the East Coast in the following May.

Our first object was to explore the Zambesi, its mouths and tributaries, with a view to their being used as highways for commerce and Christianity to pass into the vast interior of Africa. When we came within five or six miles of the land, the yellowish-green tinge of the sea in soundings was suddenly succeeded by muddy water with wrack, as of a river in flood. The two colours did not intermingle, but the line of contact was as sharply defined as when the ocean meets the land. It was observed that under the wrack—consisting of reeds, sticks, and leaves—and even under floating cuttlefish bones and Portuguese "men-of-war" (Physalia), numbers of small fish screen themselves from the eyes of birds of prey, and from the rays of the torrid sun.

The Zambesi pours its waters into the ocean by four mouths, namely, the Milambe, which is the most westerly, the Kongone, the Luabo, and the Timbwe (or Muselo). After the examination of three branches by the able and energetic surveyor, Francis Skead, R.N., the Kongone was found to be the best entrance. The immense amount of sand brought down by the Zambesi has in the course of ages formed a sort of promontory, against which the long swell of the Indian Ocean, beating during the prevailing winds, has formed bars, which, acting against the waters of the delta, may have led to their exit sideways. The Kongone is one of those lateral branches, and safest, inasmuch as the bar has nearly two fathoms on it at low water, and the rise at spring tides is from twelve to fourteen feet. The bar is narrow, the passage nearly straight, and, were it buoyed and a beacon placed on Pearl Island, would always be safe to a steamer. When the wind is from the east or north, the bar is smooth; if from the south and south-east, it has a heavy break on it, and is not to be attempted in boats. A strong current setting to the east when the tide is flowing, and to the west when ebbing, may drag a boat or ship into the breakers. If one is doubtful of his longitude and runs east, he will soon see the land at Timbwe disappear away to the north; and coming west again, he can easily make out East Luabo from its great size; and Kongone follows several miles west. East Luabo has a good but long bar, and not to be attempted unless the wind be north-east or east. It has sometimes been called "Barra Catrina," and was used in the embarkations of slaves. This may have been the "River of Good Signs," of Vasco de Gama, as the mouth is more easily seen from the seaward than any other; but the absence of the pillar dedicated by that navigator to "St. Raphael," leaves the matter in doubt. No Portuguese live within eighty miles of any mouth of the Zambesi.

The Kongone is five miles east of the Milambe, or western branch, and seven miles west from East Luabo, which again is five miles from the Timbwe. We saw but few natives, and these, by escaping from their canoes into the mangrove thickets the moment they caught sight of us, gave unmistakable indications that they did not have a very favourable opinion of white men. They were probably fugitives from Portuguese slavery. In the grassy glades buffaloes, wart-hogs, and three kinds of antelope were abundant, and the latter easily obtained. A few hours' hunting usually provided venison enough for a score of men for several days.

13. The passage provides the most information about which aspect of Livingston's journey?

- (A) The people he met
- (B) The colors of the surrounding environment
- (C) The time he spent in Africa
- (D) The river system on which he traveled
- (E) The type of food available

14. According to the passage, Livingston explored the Zambesi primarily in order to

- (A) map the course of the river and its tributaries
- (B) attempt to make contact with the Portuguese settlers that live along it
- (C) find a safe route along the coast of Africa
- (D) determine whether the waterway could be used for trade
- (E) be the first to survey a new land

15. As used in the passage, the word "torrid" (line 20) most nearly means

- (A) pleasant
- (B) frightening
- (C) hurried
- (D) hidden
- (E) scorching

GO ON TO THE NEXT PAGE



16. It may be inferred from the discussion of the bar in the Kongone River that
- (A) under certain wind conditions, a ship traveling over the bar would most likely pass safely
 - (B) a beacon will soon be built on Pearl Island to help guide ships over the bar
 - (C) if the wind comes from the east or south, the bar in the Kongone River will be smooth
 - (D) of all the rivers in Africa, the Kongone is the best way of reaching the interior of Africa
 - (E) ships should not attempt to travel the Kongone unless the wind is from the northeast
17. According to the passage, a strong current on the Kongone
- (A) may, depending on the tide, increase the danger to a boat traveling along the river
 - (B) will make the river impassable to most ships
 - (C) increases the water level from two fathoms to twelve to fourteen feet
 - (D) led de Gama to name the river the “Barra Catrina”
 - (E) caused an immense amount of sand to form a promontory in the river
18. The author most likely mentions Vasco de Gama (line 49) in order to
- (A) indicate that other explorers have already charted the course of the river
 - (B) refer to a previous navigator that Livingston admires
 - (C) demonstrate a possible connection between Livingston’s expedition and that of another navigator
 - (D) explain why no Portuguese live within eighty miles of the river
 - (E) reveal why there is a pillar dedicated to St. Raphael at the mouth of the river
19. The tone of the passage may best be described as
- (A) disinterested
 - (B) enthusiastic
 - (C) passionate
 - (D) personally revealing
 - (E) objective
20. The mention of the natives in the final paragraph suggests that
- (A) most of the inhabitants of Africa do not have a favorable view of Livingston
 - (B) the people Livingston encountered had little interest in making contact with him
 - (C) there were not many people living along the rivers that Livingston explored
 - (D) the Portuguese had enslaved a great many of the native inhabitants of Africa
 - (E) the native inhabitants were upset by the arrival of Livingston
21. The primary function of the first paragraph is to
- (A) give the reader a glimpse into Livingston’s private life
 - (B) establish Livingston’s personal characteristics and skills as an explorer
 - (C) provide a brief prelude to the later details in the passage
 - (D) emphasize the lackadaisical nature of Livingston and his companions
 - (E) explain why Livingston was in Africa



22. The passage lists which of the following as a factor in Livingston's designation as Kongone as the "best" entrance to the Zambesi for boat travel?
- (A) The ease with which a boat can travel on the river, regardless of the current or the wind direction
 - (B) The abundant food, including antelope and buffalo, that can be found along the banks of the river
 - (C) The lack of native inhabitants living near the river
 - (D) The presence of prominent land features that make it easy for a navigator to find the Kongone
 - (E) The beacon placed on Pearl Island
23. Based on the passage, which of the following may be properly inferred about the Kongone?
- (A) The waters of the Kongone are home to a large variety of cuttlefish and small fish.
 - (B) The water levels in the Kongone change significantly with the tides.
 - (C) The Kongone is the most westerly of the four mouths of the Zambesi.
 - (D) The Kongone has the smoothest bar of any of the mouths of the Zambesi.
 - (E) The Kongone was often used by the Portuguese for the disembarkation of slaves.
24. The passage states that East Luabo offers which advantage to navigators?
- (A) Of the tributaries of the Zambesi, it is the most prominent to a viewer approaching from the sea.
 - (B) No Portuguese live within eighty miles of East Luabo.
 - (C) Its bar is safe to boaters under most conditions.
 - (D) East Luabo is more familiar to European navigators than the other mouths of the Zambesi.
 - (E) It is the only tributary of the Zambesi that had previously been charted.

STOP

**If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.**



NO TEST MATERIAL ON THIS PAGE.



SECTION 4
Time — 25 minutes
20 Questions

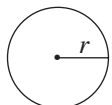
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Directions: For this section, solve each problem and decide which is the best of the choices given. Fill in the corresponding circle on the answer sheet. You may use any available space for scratchwork.

Notes

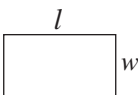
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2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not drawn to scale. All figures lie in a plane unless otherwise indicated.
4. Unless otherwise specified, the domain of any function f is assumed to be the set of all real numbers x for which $f(x)$ is a real number.

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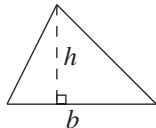


$$A = \pi r^2$$

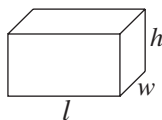
$$C = 2\pi r$$



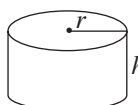
$$A = lw$$



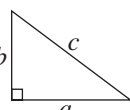
$$A = \frac{1}{2}bh$$



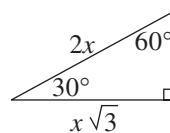
$$V = lwh$$



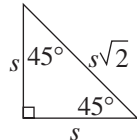
$$V = \pi r^2 h$$



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



Special Right Triangles



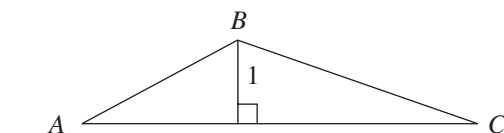
The number of degrees of arc in a circle is 360.

The sum of the measures in degrees of the angles of a triangle is 180.

1. If $2 + a = 2 - a$, what is the value of a ?

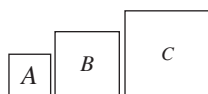
- (A) -1
 (B) 0
 (C) 1
 (D) 2
 (E) 4

2. If $AC = 4$, what is the area of ABC above?



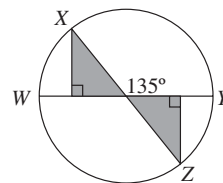
- (A) $\frac{1}{2}$
 (B) 2
 (C) $\sqrt{7}$
 (D) 4
 (E) 8

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3. In the figure above, the perimeter of square A is $\frac{2}{3}$ the perimeter of square B , and the perimeter of square B is $\frac{2}{3}$ the perimeter of square C . If the area of square A is 16, what is the area of square C ?
- (A) 24
(B) 36
(C) 64
(D) 72
(E) 81

4. A bakery uses a special flour mixture that contains corn, wheat, and rye in the ratio of 3:5:2. If a bag of the mixture contains 5 pounds of rye, how many pounds of wheat does it contain?
- (A) 2
(B) 5
(C) 7.5
(D) 10
(E) 12.5



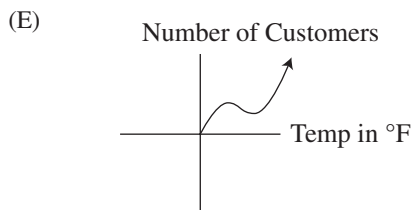
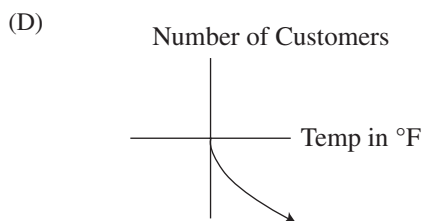
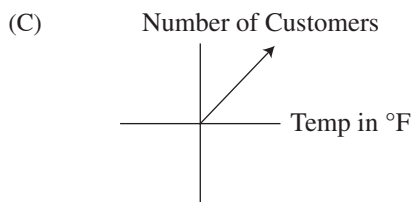
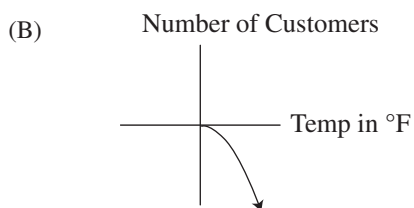
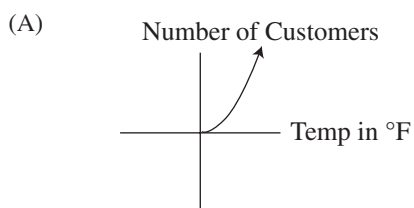
5. If \overline{WY} and \overline{XZ} are diameters with lengths of 12, what is the area of the shaded region?
- (A) 36
(B) 30
(C) 18
(D) 12
(E) 9
6. If the product of x and y is 76, and x is twice the square of y , which of the following pairs of equations could be used to determine the values of x and y ?
- (A) $xy = 76$
 $x = 2y^2$
(B) $xy = 76$
 $x = (2y)^2$
(C) $x + y = 76$
 $x = 4y^2$
(D) $x + y = 76$
 $x = 4y$
(E) $xy = 76$
 $x = 2y$

GO ON TO THE NEXT PAGE



Temperature in °F	Number of Customers
10	4
20	9
30	37
40	66
50	100

7. A coffee shop noticed that the outside temperature affected the number of customers who came to the shop that day, as shown in the table above. Which of the following graphs best represents the relationship between the outside temperature and the number of customers, as indicated by the table?



8. If c is positive, what percent of $3c$ is 9?

(A) $\frac{c}{100}\%$

(B) $\frac{c}{3}\%$

(C) $\frac{9}{c}\%$

(D) 3%

(E) $\frac{300}{c}\%$

$D(-6, 3)$

$E(-1, -1)$

$F(-1, 3)$

9. The coordinates of points D , E , and F in the xy -plane are given above. What is the perimeter of $\triangle DEF$?

(A) 12

(B) 20

(C) $9 + \sqrt{17}$ (approximately 13.12)

(D) $9 + \sqrt{41}$ (approximately 15.40)

(E) $\sqrt{150}$ (approximately 12.25)

GO ON TO THE NEXT PAGE



10. Fifteen percent of the coins in a piggy bank are nickels and five percent are dimes. If there are 220 coins in the bank, how many are not nickels or dimes?

(A) 80
(B) 176
(C) 180
(D) 187
(E) 200

11. At the beginning of 1999, the population of Rockville was 204,000 and the population of Springfield was 216,000. If the population of each city increased by exactly 20% in 1999, how many more people lived in Springfield than in Rockville at the end of 1999 ?

(A) 2,400
(B) 10,000
(C) 12,000
(D) 14,400
(E) 43,200

12. If $x + y = z$ and $x = y$, then all of the following are true EXCEPT

(A) $2x + 2y = 2z$

(B) $x - y = 0$

(C) $x - z = y - z$

(D) $x = \frac{z}{2}$

(E) $z - y = 2x$

13. In a list of seven integers, 13 is the lowest member, 37 is the highest member, the mean is 23, the median is 24, and the mode is 18. If the numbers 8 and 43 are then included in the list, which of the following will change?

I. The mean
II. The median
III. The mode

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

GO ON TO THE NEXT PAGE 



14. If $|x| \neq 0$, which of the following statements must be true?

(A) x is positive.
(B) $2x$ is positive.
(C) $\frac{1}{x}$ is positive.
(D) x^2 is positive.
(E) x^3 is positive.

15. Rock climbing routes are rated on a numbered scale with the highest number representing the most difficult route. Sally tried a range of shoe sizes on each of several routes of varying difficulty and found that when she wore smaller shoes, she could climb routes of greater difficulty. If D represents the difficulty rating of a route Sally successfully climbed and s represents the size of the shoes she wore on such a route, then which of the following could express D as a function of s ?

(A) $D(s) = s^2$
(B) $D(s) = \sqrt{s}$
(C) $D(s) = 4s$
(D) $D(s) = s - 3.5$
(E) $D(s) = \frac{45}{s}$

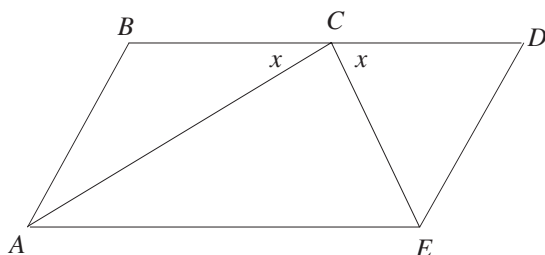
16. If $a^2b = 12^2$, and b is an odd integer, then a could be divisible by all of the following EXCEPT

(A) 3
(B) 4
(C) 6
(D) 9
(E) 12

17. An equilateral triangle has sides of length x . If a second equilateral triangle has sides of length $2x$, what is the ratio of the area of the first triangle to the area of the second?

(A) 1 : 16
(B) $\sqrt{3} : 2$
(C) 1 : 2
(D) 1 : 4
(E) 1 : $\sqrt{3}$

GO ON TO THE NEXT PAGE 



Note: Figure not drawn to scale.

18. In the figure above, $\overline{BD} \parallel \overline{AE}$. If the length of \overline{CE} is 3, what is the length of \overline{AC} ?

(A) 3
 (B) 4
 (C) 5
 (D) $3\sqrt{3}$
 (E) It cannot be determined from the information given.

20. The value of the n th term of a sequence is given by the expression $a^{3n} - 3$. If the second term of the sequence is 61, which of the following could be the value of a ?

I. -2
 II. 2
 III. 4

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

19. If $(a - 5)(b + 5) < 0$, then which of the following must be true?

(A) $a < 5$
 (B) $a \neq -5$
 (C) $b \neq -5$
 (D) $b > -5$
 (E) $a > 5$

STOP

If you finish before time is called, you may check your work on this section only.
 Do not turn to any other section in the test.



SECTION 5

Time — 25 minutes

35 Questions

Turn to Section 5 of your answer sheet to answer the questions in this section.**Directions:** For each question in this section, select the best answer from among the choices given and fill in the corresponding circle on the answer sheet.

The following sentences test correctness and effectiveness of expression. Part of each sentence or the entire sentence is underlined; beneath each sentence are five ways of phrasing the underlined material. Choice A repeats the original phrasing; the other four choices are different. If you think the original phrasing produces a better sentence than any of the alternatives, select choice A; if not, select one of the other choices.

In making your selection, follow the requirements of standard written English; that is, pay attention to grammar, choice of words, sentence construction, and punctuation. Your selection should result in the most effective sentence—clear and precise, without awkwardness or ambiguity.

EXAMPLE:

Bobby Flay baked his first cake and he was thirteen years old then.

- (A) and he was thirteen years old then
- (B) when he was thirteen
- (C) at age thirteen years old
- (D) upon the reaching of thirteen years
- (E) at the time when he was thirteen

A ● C D E

1. Laura Southworth, a children's author who is beginning to attract the notice of critics and librarians alike, wrote and illustrated her first story *Tika* and she was only seven years old then.
 - (A) and she was only seven years old then
 - (B) at age seven years old only
 - (C) when she was only seven years old
 - (D) upon the reaching of only seven years
 - (E) at the time when she was only seven
2. Many building technologies are changing significantly in the last two thousand years, but today's concrete is still similar to the concrete of Roman times.
 - (A) are changing
 - (B) have changed
 - (C) had changed
 - (D) are going to change
 - (E) change
3. The video class that meets on Thursdays makes use of the innovative software MAYA, which enables students to design and build a virtual stage set, a home, or even a city in three dimensions.
 - (A) makes use of the innovative software MAYA, which enables students to design and build
 - (B) using the innovative software MAYA and enabling students to design and build
 - (C) besides making use of the innovative software MAYA, enables students to design and build
 - (D) because it makes use of the innovative software MAYA, it enables students to design and build
 - (E) not only making use of the innovative software MAYA, but also enabling students in the design and building of
4. The ancient belief of all matter being in continuous motion seems borne out by modern discoveries about atomic structure.
 - (A) of all matter being in continuous motion
 - (B) is that all matter is in continuous motion
 - (C) which is that all matter is in continuous motion
 - (D) that all matter is in continuous motion
 - (E) of all matter that is in continuous motion
5. If Marcel Proust's memory had not been felicitously stirred by the taste of a madeleine, he might never have been moved to write *Remembrance of Things Past*.
 - (A) had not been felicitously stirred by the taste of a madeleine
 - (B) had not been stirred by means of the felicitous taste of a madeleine
 - (C) were not to be felicitously stirred by the taste of a madeleine
 - (D) were not to be stirred by the taste of a felicitous madeleine
 - (E) should not be stirred by the felicitous taste of a madeleine

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6. The game hadn't ended yet, but Sarin knows that his chances of winning are slipping away by the second and he needs a miracle.
- (A) knows that his chances of winning are slipping away by the second and he needs a miracle
 (B) knew that he had no chance of winning and in a second he would need a miracle
 (C) knows that winning is a long shot and that he needs a miracle
 (D) knew that his chances to win were slipping away by the second and a miracle is what he needed
 (E) knew that his chances of winning were slipping away by the second and he needed a miracle
7. When preparing to write a research paper, you should gather information from books, periodicals, and the Internet, and your documenting of sources should be carefully done.
- (A) and your documenting of sources should be carefully done
 (B) and document your sources carefully
 (C) and you should document your careful sources
 (D) because your sources need to be documented carefully
 (E) yet you need to carefully document your sources
8. Because it has rich limestone similar to the Rhine Valley, Pennsylvania's Lehigh Valley attracted many German settlers who had brought traditional farming methods with them from home.
- (A) the Rhine Valley
 (B) the Rhine Valley did
 (C) it has the Rhine Valley
 (D) the Rhine Valleys
 (E) that of the Rhine Valley
9. Catherine II of Russia died at 67, and her reputation still surviving as one of the forward-looking, enlightened monarchs of Europe.
- (A) 67, and her reputation still surviving as one of the forward-looking, enlightened monarchs of Europe
 (B) 67, however her reputation is surviving as one of the forward-looking, enlightened monarchs of Europe
 (C) 67, her reputation as one of the forward-looking, enlightened monarchs of Europe still surviving
 (D) 67; her reputation as one of the forward-looking, enlightened monarchs of Europe still survives
 (E) 67; and her reputation as being one of the more forward-looking, enlightened monarchs of Europe will always survive
10. You may not realize that it is still possible to pick one's own fruit from an orchard; the supermarket is not the only place where fruit is available today.
- (A) You may not realize that it is still possible to pick one's own fruit from an orchard
 (B) One may not realize that it is still possible to pick your own fruit from an orchard
 (C) Picking your own fruit from the orchard
 (D) Although many don't realize it, picking fruit from the orchard is still an option
 (E) Picking your own fruit from the orchard can be a possibility
11. The Bauhaus school of design, craft, and architecture held many theories in common with the De Stijl movement; however, it instigated a paradigm shift in design.
- (A) however, it instigated a paradigm shift in design
 (B) however, they instigated a paradigm shift in design
 (C) however, the Bauhaus school instigated a paradigm shift in design
 (D) and the Bauhaus school instigated a paradigm shift in design
 (E) and a paradigm shift was instigated by the Bauhaus school



The following sentences test your ability to recognize grammar and usage errors. Each sentence contains either a single error or no error at all. No sentence contains more than one error. The error, if there is one, is underlined and lettered. If the sentence contains an error, select the one underlined part that must be changed to make the sentence correct. If the sentence is correct, select choice E. In choosing answers, follow the requirements of standard written English.

EXAMPLE:

The other players and her significantly improved
A B C

the game plan created by the coaches. No error
D E

(A) ● (C) (D) (E)

12. Two of Charles Dickens' most famous characters, Oliver
A

Twist and David Copperfield, were an orphan who
B

fell upon hard luck as children, but found happiness later
C D

in life. No error
E

13. A number of horticultural arts, including bonsai and
A B

ikebana, began in Japan. No error
C D E

14. When my sister and me visited the eulogized city of Troy,
A B

we noticed it was much smaller than the epic tales had
C D

suggested. No error
E

15. Complete exhausted from a hard day at work, Evelyn fell
A B

asleep on the bus and, when she finally awoke, found that
C

she had missed her stop. No error
D E

16. There is many benefits to biking; it is both a rigorous
A B

form of exercise and an environmentally sustainable,
C D

conscious mode of transportation. No error
E

17. Despite having had no formal training, Jackie was
A

nonetheless able to master the piano by listening
B

to recordings, reading instructional books, and
C

she practiced on her own. No error
D E

18. Of all the jingoists in the country, that politician,
A B

known for fanatical patriotism, appears to be the more
C D

dangerous. No error
E

19. Many scholars consider *Ulysses* James Joyce's greatest
A B

work; however, many readers find *Dubliners* more
C D

accessible. No error
E

20. Dentists agree that brushing your teeth three times a day
A B

promote good dental health and a more attractive smile.
C D

No error
E

GO ON TO THE NEXT PAGE



21. Two current television trends, the home improvement show craze and the “hot rod” automobile fad, seem to show a dissatisfaction with our domestic spaces and indicating a desire for something riskier and more exciting. No error
- A B C D E
22. Before handing in her assignment, Michelle checked all of her sources twice; her greatest fear being receiving any grade lower than a B. No error
- A B C D E
23. Species of monkeys living among a variety of creatures in the rainforest come in contact with predators and prey alike as it swings through the trees. No error
- A B C D E
24. The pitch of the note that a stringed instrument makes depends on the length, weight, and tension of the string: highest notes are produced by shorter, lighter, or tighter strings. No error
- A B C D E
25. When his daughter asked him hundreds of questions about the blue whale model suspended in the American Museum of Natural History, the father had exercised patience and answered every query. No error
- A B C D E
26. I choose to carry my necessities in my pockets, and most other women prefer to use purses. No error
- A B C D E
27. Saif knew that the other applicants weren’t as good as him, so he wasn’t surprised when the company offered him the lucrative position. No error
- A B C D E
28. Noelle and Natalie argued at great length about the authenticity of the painting; finally Noelle decided that she was right. No error
- A B C D E
29. Not everyone would agree that Lawrence Olivier’s performance in *Henry V* was superior to Kenneth Branagh. No error
- A B C D E

GO ON TO THE NEXT PAGE



Directions: The following passage is an early draft of an essay. Some parts of the passage need to be rewritten.

Read the passage and select the best answers for the questions that follow. Some questions are about particular sentences or parts of sentences and ask you to improve sentence structure or word choice. Other questions ask you to consider organization and development. In choosing answers, follow the requirements of standard written English.

Questions 30–35 are based on the following passage.

(1) Many laws seem to be created for the purpose of protecting people from themselves. (2) Some examples are age limits for off-road vehicles, seatbelt requirements for cars, and wearing a helmet when riding a motorcycle. (3) Opponents of these laws feel that their rights are being restricted. (4) If it doesn't hurt anyone else, why should there be a law? (5) But if they become injured, it can raise insurance rates for everyone.

(6) In another context, consider people putting aside money for their retirement. (7) Suppose they work for a fast-growing company, the hot new stock pick. (8) Many employees invest heavily in the stock. (9) The stock price plummets, their savings disappear.

(10) Laws preventing people from having too much company stock in their retirement accounts could protect them from financial disaster. (11) It isn't easy to find the proper balance between individual rights and the common good. (12) Some people will think that the new law goes too far. (13) Others complaining that it doesn't go far enough. (14) If it is too much, we can stand up and fight it. (15) Although we may not agree with every law, some minor inconveniences are part of living in our society.

30. Which of the following is the best revision of the underlined portion of sentence 1 (reproduced below) ?

Many laws seem to be created for the purpose of protecting people from themselves.

- (A) (as it is now)
- (B) in order to protect people
- (C) as a result of protecting people
- (D) so that people will have protection
- (E) that let people be protected

31. What is the best way to deal with sentence 6 ?

- (A) Replace "another context" with "a similar vein."
- (B) Replace the word "context" with "way."
- (C) Insert the words "you could" before "consider."
- (D) Delete the word "another."
- (E) Omit the entire sentence.

32. In which of the following ways could sentences 8 and 9 (reproduced below) best be written?

Many employees invest heavily in the stock. The stock price plummets, their savings disappear.

- (A) (As they are now)
- (B) Employees can invest heavily in the stock; then the stock price plummets, their savings will disappear.
- (C) After the employees invest heavily in the stock, the plummeting stock price causes their savings to disappear.
- (D) When employees invest heavily in the stock, it is then that the stock price can plummet and their savings disappear.
- (E) If employees invest heavily in the stock and the stock price plummets, their savings will disappear.

33. What should be done with sentence 10 ?

- (A) Insert "On the other hand" at the beginning.
- (B) Switch it with sentence 7.
- (C) Move it to the end of the second paragraph.
- (D) Change "their" to "his."
- (E) Change "accounts" to "account."

34. Which of the following most effectively revises the underlined portions of sentences 12 and 13 (reproduced below) in order to combine the sentences?

Some people will think that the new law goes too far. Others complaining that it doesn't go far enough.

- (A) far: some others complaining
- (B) far, others complain
- (C) far; others are complaining
- (D) far; others have complained
- (E) far, while others will complain

35. Which of the following sentences could best be deleted without detracting from the flow of the passage?

- (A) Sentence 3
- (B) Sentence 7
- (C) Sentence 11
- (D) Sentence 14
- (E) Sentence 15

STOP

**If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.**

NO TEST MATERIAL ON THIS PAGE.

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SECTION 6

Time — 25 minutes

18 Questions

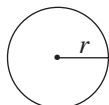
Turn to Section 6 of your answer sheet to answer the questions in this section.

Directions: For this section, solve each problem and decide which is the best of the choices given. Fill in the corresponding circle on the answer sheet. You may use any available space for scratchwork.

Notes

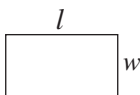
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not drawn to scale. All figures lie in a plane unless otherwise indicated.
4. Unless otherwise specified, the domain of any function f is assumed to be the set of all real numbers x for which $f(x)$ is a real number.

Reference Information

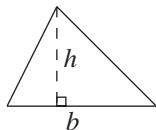


$$A = \pi r^2$$

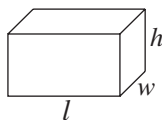
$$C = 2\pi r$$



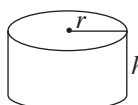
$$A = lw$$



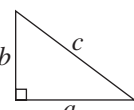
$$A = \frac{1}{2}bh$$



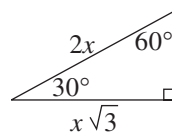
$$V = lwh$$



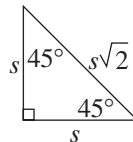
$$V = \pi r^2 h$$



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



Special Right Triangles



The number of degrees of arc in a circle is 360.

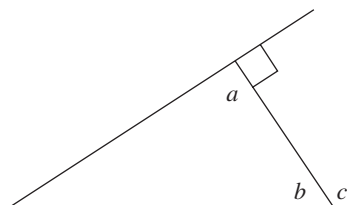
The sum of the measures in degrees of the angles of a triangle is 180.

1. When k is subtracted from 10, and the difference is divided by 2, the result is 3. What is the value of k ?

- (A) 3
(B) 4
(C) 6
(D) 10
(E) 16

2. In the figure above, what is the value of $a + b + c$?

- (A) 180
(B) 240
(C) 270
(D) 360
(E) It cannot be determined from the information given.



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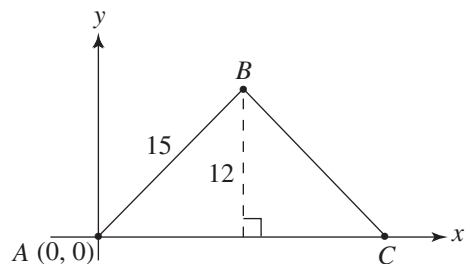


3. Steve ran a 12-mile race at an average speed of 8 miles per hour. If Adam ran the same race at an average speed of 6 miles per hour, how many minutes longer did Adam take to complete the race than did Steve?

(A) 9
(B) 12
(C) 16
(D) 24
(E) 30

4. Which of the following is equivalent to $\frac{4a}{3} \cdot 6a$?

(A) $\frac{8a^2}{3}$
(B) $\frac{10a^2}{3}$
(C) $\frac{24a}{3}$
(D) $8a^2$
(E) $24a^2$



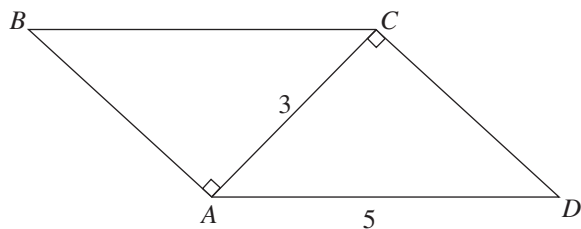
5. In the figure above, side \overline{AB} of $\triangle ABC$ contains which of the following points?

(A) (3, 2)
(B) (3, 5)
(C) (4, 6)
(D) (4, 10)
(E) (6, 8)

6. A college student bought 11 books for fall classes. If the cost of his anatomy textbook was three times the mean cost of the other 10 books, then the cost of the anatomy textbook was what fraction of the total amount he paid for the 11 books?

(A) $\frac{2}{13}$
(B) $\frac{3}{13}$
(C) $\frac{3}{11}$
(D) $\frac{3}{10}$
(E) $\frac{10}{13}$

GO ON TO THE NEXT PAGE



Note: Figure not drawn to scale.

7. In parallelogram $ABCD$ above, $AC = 3$ and $AD = 5$. What is the area of $ABCD$?
- (A) 12
 (B) 15
 (C) 18
 (D) 20
 (E) It cannot be determined from the information given.

8. The recipe for a pie recommends that the pie be baked for at least 50 minutes, but not more than 60 minutes. If b is the number of minutes a pie, baked within the recommended time, is baked, which of the following represents all possible values of b ?

- (A) $|b - 55| = 5$
 (B) $|b + 55| < 5$
 (C) $|b + 55| > 5$
 (D) $|b - 55| < 5$
 (E) $|b - 55| > 5$

GO ON TO THE NEXT PAGE 



Directions: For Student-Produced Response questions 9–18, use the grids to the right of the answer document page on which you have answered questions 1–8.

Each of the remaining 10 questions requires you to solve the problem and enter your answer by marking the circles in the special grid, as shown in the examples below. You may use any available space for scratch work.

Answer: $\frac{7}{12}$

Write answer in boxes. →

7	/	1	2
•	•	•	•
1	0	0	0
2	2	2	•
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
•	7	7	7
8	8	8	8
9	9	9	9

Grid in result. →

Fraction line

Answer: 2.5

	2	.	5
•	•	•	•
1	1	0	0
2	•	2	2
3	3	3	3
4	4	4	4
5	5	5	•
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

Decimal point

Answer: 201
Either position is correct.

	2	0	1
•	•	•	•
1	0	0	0
2	•	2	2
3	3	3	3
4	4	4	4
5	5	5	5

	2	0	1
•	•	•	•
1	1	0	0
2	•	2	2
3	3	3	3
4	4	4	4
5	5	5	5

Note: You may start your answers in any column, space permitting. Columns not needed should be left blank.

- Mark no more than one circle in any column.
- Because the answer document will be machine-scored, **you will receive credit only if the circles are filled in correctly.**
- Although not required, it is suggested that you write your answer in the boxes at the top of the columns to help you fill in the circles accurately.
- Some problems may have more than one correct answer. In such cases, grid only one answer.
- No question has a negative answer.
- **Mixed numbers** such as $3\frac{1}{2}$ must be gridded as

3.5 or 7/2. (If

3	1	/	2
•	•	•	•
1	1	1	1
2	•	2	2
3	3	3	•
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

 is gridded, it will be interpreted as $\frac{31}{2}$, not $3\frac{1}{2}$.)

- **Decimal Answers:** If you obtain a decimal answer with more digits than the grid can accommodate, it may be either rounded or truncated, but it must fill the entire grid. For example, if you obtain an answer such as 0.6666..., you should record your result as .666 or .667. **A less accurate value such as .66 or .67 will be scored as incorrect.**

Acceptable ways to grid $\frac{2}{3}$ are:

	2	/	3
•	•	•	•
1	0	0	0
2	•	2	2
3	3	3	•
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

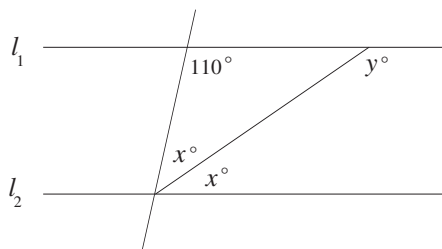
.	6	6	6
•	•	•	•
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	•	6	6
7	7	7	7
8	8	8	8
9	9	9	9

.	6	6	7
•	•	•	•
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	•	6	6
7	7	7	•
8	8	8	8
9	9	9	9

9. If $\frac{x+2x+3x}{2} = 6$, what is the value of x ?

10. When n is divided by 5, the remainder is 4. When n is divided by 4, the remainder is 3. If $0 < n < 100$, what is one possible value of n ?

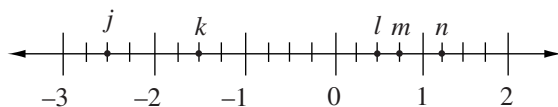
GO ON TO THE NEXT PAGE



11. If l_1 is parallel to l_2 in the figure above, what is the value of y ?

12. If $x^2 = 16$ and $y^2 = 4$, what is the greatest possible value of $(x - y)^2$?

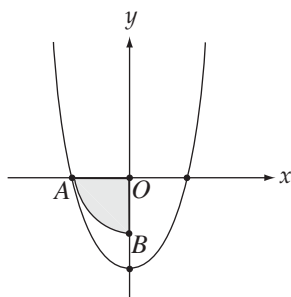
13. There are 250 students in 10th grade at Northgate High School. All 10th graders must take French or Spanish, but not both. If the ratio of males to females in 10th grade is 2 to 3, and 80 of the 100 French students are male, how many female students take Spanish?



14. On the number line above, j , k , l , m , and n are coordinates of the indicated points. What is the value of $\frac{jk}{lmn}$?



15. Hanna is arranging tools in a toolbox. She has one hammer, one wrench, one screwdriver, one tape measure, and one staple gun to place in 5 empty spots in her toolbox. If all of the tools will be placed in a spot, one tool in each spot, and the hammer and screwdriver fit only in the first 2 spots, how many different ways can she arrange the tools in the spots?



16. In the figure above, AB is the arc of the circle with center O . Point A lies on the graph of $y = x^2 - b$, where b is a constant. If the area of shaded region AOB is π , then what is the value of b ?

17. \overline{AB} is perpendicular to \overline{BD} and \overline{AB} and \overline{CD} bisect each other at point X . If $AB = 8$ and $CD = 10$, what is the length of \overline{BD} ?

18. A researcher found that the amount of sleep that she allowed her mice to get was inversely proportional to the number of errors the mice made, on average, in a maze test. If mice that got 2 hours of sleep made 3 errors in the maze test, how many errors, on average, do mice with 5 hours of sleep make?

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.



SECTION 7

Time — 25 minutes

24 Questions

Turn to Section 7 of your answer sheet to answer the questions in this section.

Directions: For each question in this section, select the best answer from among the choices given and fill in the corresponding circle on the answer sheet.

Each sentence below has one or two blanks, each blank indicating that something has been omitted. Beneath the sentence are five words or sets of words labeled A through E. Choose the word or set of words that, when inserted in the sentence, best fits the meaning of the sentence as a whole.

Example:

Desiring to ----- his taunting friends, Mitch gave them taffy in hopes it would keep their mouths shut.

- (A) eliminate (B) satisfy (C) overcome
(D) ridicule (E) silence

A B C D ●

4. The stoic former general led his civilian life as he had his military life, with simplicity and ----- dignity.
(A) benevolent (B) informal (C) austere
(D) aggressive (E) succinct
5. Although bound to uphold the law, a judge is free to use his discretion to ----- the cruel severity of some criminal penalties.
(A) mitigate (B) understand (C) condone
(D) provoke (E) enforce
1. If it is true that morality cannot exist without religion, then does not the erosion of religion herald the ----- of morality?
(A) regulation (B) basis (C) belief
(D) collapse (E) value
2. Shaken by two decades of virtual anarchy, the majority of people were ready to buy ----- at any price.
(A) stability (B) emancipation (C) prosperity
(D) liberty (E) enfranchisement
3. Certain animal behaviors, such as mating rituals, seem to be -----, and therefore ----- external factors such as climate changes, food supply, or the presence of other animals of the same species.
(A) learned . . immune to
(B) innate . . unaffected by
(C) intricate . . beleaguered by
(D) specific . . confused with
(E) memorized . . controlled by

GO ON TO THE NEXT PAGE



Directions: Each passage below is followed by questions based on its content. Answer the questions on the basis of what is stated or implied in each passage and in any introductory material that may be provided.

Questions 6–9 are based on the following passages.

Passage 1

Geological Evolutionary theory, the idea of scientifically dating Earth, is a relatively recent concept. Seventeenth-century scientists began to use geological evidence to bolster the idea that Earth evolved over time. In the eighteenth century, British scientist James Hutton posited his theory of Uniformity. According to this theory, processes that changed the Earth in the past are still at work today. In the nineteenth century, Charles Darwin expanded the idea of geological evolution to include biological evolution. Combining Hutton and Darwin's theories, scientists then used fossil evidence to begin dating the Earth. Compared to other geological sciences, Geological Evolutionary theory is still relatively new, and many of its fundamental assumptions are constantly challenged.

Passage 2

Geological Evolutionary theory is based on a simple assumption: older rock strata came first and hence, should lie underneath younger rock strata. While distinct layers or “strata” of rock of varying ages are a commonly observed phenomenon, the order of the layers does not necessarily correlate to the presumed age of the rocks themselves. The Heart Mountain Thrust in Wyoming is one such thorn in the side of evolutionary geologists. At Heart Mountain, 50 separate blocks of Paleozoic strata are resting horizontally on top of Eocene beds which are supposed to be 250 million years younger. Numerous theories for this seeming anomaly have been put forth; however, none has yet emerged as an intuitive truth.

6. It can be inferred from Passage 1 that

- (A) theories of the Earth's age evolved from the work of more than one scientist
- (B) there is general agreement on theories of geological evolution
- (C) geologists used biological evolution to disprove the theory of Uniformity
- (D) geology is a new, and therefore inexact, science
- (E) attempts to scientifically date the Earth began with Hutton's work

7. Passage 1 is unlike Passage 2 in that Passage 1

- (A) attempts to prove a theory while Passage 2 attempts to disprove it
- (B) places a theory in time while Passage 2 offers an example to contradict it
- (C) proves a new geological theory while Passage 2 offers a counterexample
- (D) contradicts an existing theory while Passage 2 proves one
- (E) criticizes a popular theory while Passage 2 defends it

8. Which of the following statements about Geological Evolutionary theory is supported by both passages?

- (A) Geological Evolutionary theory has not yet been proven to be true.
- (B) Geological Evolutionary theory cannot yet explain the placement of Paleozoic strata.
- (C) Geological Evolutionary theory is not yet old enough to be true.
- (D) Geological Evolutionary theory is a commonly observed phenomenon.
- (E) Geological Evolutionary theory is not as old as the theory of Uniformity.

9. Passage 2 is best described as

- (A) a confirmation of a firmly established theory
- (B) an exception to a generally accepted truth
- (C) an itemization of the flaws of newly established theory
- (D) a discussion of an intuitively plausible hypothesis
- (E) a potential exception to an observable theory

GO ON TO THE NEXT PAGE



Questions 10–15 are based on the following passage.

The following passage is an excerpt from a book by novelist Gregor von Rezzori.

Line *Skushno* is a Russian word that is difficult to translate. It means more than dreary boredom; a spiritual void that sucks you in like a vague but intensely urgent longing. When I was thirteen, at a phase that educators used to call “the awkward age,” my parents were at their wits’ end. We lived in the Bukovina, today an almost astronomically remote province in southeastern Europe. The story I am telling seems as distant— not only in space but also in time—as if I’d merely dreamed it. Yet it begins as a very ordinary story.

10 I had been expelled by a *consilium abeundi*—an advisory board with authority to expel unworthy students—from the schools of the then kingdom of Rumania, whose subjects we had become upon the collapse of the Austro-Hungarian Empire after the first great war. An attempt to harmonize the imbalances in my character by means of strict discipline at a boarding school in Styria (my people still regarded Austria as our cultural homeland) nearly led to the same ignominious end, and only my pseudo-voluntary departure from the institution in the nick of time prevented my final ostracism from the privileged ranks of those for whom the path to higher education was open. Again in the jargon of those assigned the responsible task of raising children to become “useful members of society,” I was a “virtually hopeless case.” My parents, blind to how the contradictions within me had grown out of the highly charged difference between their own natures, agreed with the schoolmasters; the mix of neurotic sensitivity and a tendency to violence, alert perception and inability to learn, tender need for support and lack of adjustability, would only develop into something criminal.

30 One of the trivial aphorisms my generation owes to Wilhelm Busch’s *Pious Helene* is the homily “Once your reputation’s done / You can live a life of fun.” But this optimistic notion results more from wishful thinking than from practical experience. In my case, had anyone asked me about my state of mind, I would have sighed and answered, “*Skushno!*” Even though rebellious thoughts occasionally surged within me, I dragged myself, or rather I let myself be dragged, listlessly through my bleak existence in the snail’s pace of days. Nor was I ever free of a sense of guilt, for my feeling guilty was not entirely foisted upon me by others; there were deep reasons I could not explain to myself; had I been able to do so, my life would have been much easier.

10. It can be inferred from the passage that the author’s parents were
- (A) frustrated by the author’s performance in school
 - (B) oblivious to the author’s inability to do well in school
 - (C) wealthy, making them insensitive to the needs of the poor
 - (D) schoolmasters who believed in the strict disciplining of youth
 - (E) living in Russia while their son lived in Bukovina

11. Lines 14–23 are used by the author to demonstrate that
- (A) the author posed an imminent danger to others
 - (B) the schools that the author attended were too difficult
 - (C) the tactics used to make the author more obedient were failing
 - (D) the author was often criticized by both his schoolmasters and classmates
 - (E) the author’s academic career was nearing an end
12. In lines 16–17, the author implies that Styria
- (A) belongs to his people
 - (B) is in Austria
 - (C) does not belong to Austria
 - (D) is not a lenient boarding school
 - (E) belongs to Hungary rather than Austria
13. The word “ignominious” in line 17 means
- (A) dangerous
 - (B) harsh
 - (C) unappreciated
 - (D) disreputable
 - (E) discriminating
14. The passage as a whole suggests that the author felt
- (A) happy because he was separated from his parents
 - (B) upset because he was unable to maintain good friendships
 - (C) melancholy and unsettled in his environment
 - (D) suicidal and desperate because of his living in Russia
 - (E) hopeful because he’d soon be out of school
15. The passage indicates that the author regarded the aphorism mentioned in the last paragraph with
- (A) relief because it showed him that he would eventually feel better
 - (B) dissatisfaction because he found it unrealistic
 - (C) contempt because he saw it working for others
 - (D) bemusement because of his immunity to it
 - (E) sorrow because his faith in it nearly killed him

GO ON TO THE NEXT PAGE

Questions 16–24 are based on the following passage.

The following passage, published in 1986, is from a book written by a zoologist.

Line The domestic cat is a contradiction. No other animal has
developed such an intimate relationship with humanity, while
at the same time demanding and getting such independent
movement and action. The cat manages to remain a tame
5 animal because of the sequence of its upbringing. By living
both with other cats (its mother and littermates) and with
humans (the family that has adopted it) during its infancy and
kittenhood, the cat becomes attached to and considers that
it belongs to both species. It is like a child that grows up in
10 a foreign country and, as a consequence, becomes bilingual.
The young cat becomes bicultural. It may be a cat physically,
but mentally it is both feline and human. Once it is fully adult,
however, most of its responses are feline ones, and it has only
one major reaction to its human owners. It treats them as
15 pseudoparents. The reason is that they took over from the real
mother at a sensitive stage of the kitten's development and
went on giving it milk, solid food, and comfort as it grew up.

This is rather different from the kind of bond that
develops between human and dog. The dog sees its human
20 owners as pseudoparents, as does the cat. On that score the
process of attachment is similar. But the dog has an additional
link. Canine society is group-organized; feline society is not.
Dogs live in packs with tightly controlled status relationships
among the individuals. There are top dogs, middle dogs, and
25 bottom dogs, and under natural circumstances they move
around together, keeping tabs on one another the whole
time. So the adult pet dog sees its human family both as
pseudoparents and as the dominant members of the pack,
hence the dog's renowned reputation for obedience and its
30 celebrated capacity for loyalty. Cats do have a complex social
organization, but they never hunt in packs. In the wild, most
of their day is spent in solitary stalking. Going for a walk
with a human, therefore, has no appeal for them. And as for
"coming to heel" and learning to "sit" and "stay," they are
35 simply not interested. Such maneuvers have no meaning for
them.

So the moment a cat manages to persuade a human being
to open a door (that most hated of human inventions), it is
off and away without a backward glance. As it crosses the
40 threshold, the cat becomes transformed. The kitten-of-human
brain is switched off and the wildcat brain is clicked on. The
dog, in such a situation, may look back to see if its human
packmate is following to join in the fun of exploring, but not
the cat. The cat's mind has floated off into another, totally
45 feline world, where strange, bipedal* primates have no place.

Because of this difference between domestic cats and
domestic dogs, cat-lovers tend to be rather different from
dog-lovers. As a rule, cat-lovers have a stronger personality
bias toward working alone, independent of the larger group.

50 Artists like cats; soldiers like dogs. The much-
lauded "group loyalty" phenomenon is alien to both cats and
cat-lovers. If you are a company person, a member of the
gang, or a person picked for the squad, the chances are that

at home there is no cat curled up in front of the fire. The
ambitious Yuppie, the aspiring politician, the professional
55 athlete, these are not typical cat-owners. It is hard to picture
football players with cats in their laps—much easier to
envisage them taking their dogs for walks.

Those who have studied cat-owners and dog-owners as
60 two distinct groups report that there is also a gender bias. The
majority of cat lovers are female. This bias is not surprising
in view of the division of labor evident in the development
of human societies. Prehistoric males became specialized
as group-hunters, while the females concentrated on food-
65 gathering and childbearing. This difference contributed to
a human male "pack mentality" that is far less marked in
females. Wolves, the wild ancestors of domestic dogs, also
became pack-hunters, so the modern dog has much more in
common with the human male than with the human female.

70 The argument will always go on—feline self-sufficiency
and individualism versus canine camaraderie and good-
fellowship. But it is important to stress that in making a valid
point I have caricatured the two positions. In reality there are
many people who enjoy equally the company of both cats and
75 dogs. And all of us, or nearly all of us, have both feline and
canine elements in our personalities. We have moods when
we want to be alone and thoughtful, and other times we wish
to be in the center of a crowded, noisy room.

* bipedal: walking on two feet

16. The primary purpose of the passage is to

- (A) show the enmity that exists between cats and dogs
- (B) advocate dogs as making better pets than cats
- (C) distinguish the different characteristics of dogs and cats
- (D) show the inferiority of dogs because of their dependent nature
- (E) emphasize the role that human society plays in the personalities of domestic pets

17. In line 15, the word "pseudoparents" means

- (A) part-time parents who are only partially involved with their young
- (B) individuals who act as parents of adults
- (C) parents who neglect their young
- (D) parents who have both the characteristics of humans and their pets
- (E) adoptive parents who aren't related to their young

GO ON TO THE NEXT PAGE 



18. The passage as a whole does all of the following EXCEPT
- (A) use a statistic
 - (B) make parenthetical statements
 - (C) quote a knowledgeable individual
 - (D) restate an argument
 - (E) make a generalization
19. According to the passage, the domestic cat can be described as
- (A) a biped because it possesses the characteristics of animals with two feet
 - (B) a pseudopet because it can't really be tamed and will always retain its wild habits
 - (C) a contradiction because although it lives comfortably with humans, it refuses to be dominated by them
 - (D) untamed because it preserves its independence
 - (E) dominant because although it plays the part of a pet, it acquires obedience from humans
20. The author suggests that an important difference between dogs and cats is that, unlike dogs, cats
- (A) do not have complex social organizations
 - (B) obey mainly because of their obedient nature
 - (C) have a more creative nature
 - (D) do not regard their owners as the leader of their social group
 - (E) are not skilled hunters
21. It can be inferred from lines 18–36 that the social structure of dogs is
- (A) flexible
 - (B) hierarchical
 - (C) abstract
 - (D) male-dominated
 - (E) somewhat exclusive



22. The “ambitious Yuppie” mentioned in line 55 is an example of a person
- (A) who lacks the ability to be self-sufficient
 - (B) who seeks group-oriented status
 - (C) who is a stereotypical pet-owner
 - (D) who has a weak personality
 - (E) who cares little for cat lovers
23. The fifth paragraph (lines 59–69) indicates that human females
- (A) prefer the society of cats less than that of dogs
 - (B) developed independent roles that didn’t require group behavior
 - (C) had to gather food because they were not strong enough to hunt
 - (D) are not good owners for the modern dog
 - (E) were negatively affected by the division of labor of human societies
24. The author uses lines 70–73 (“The argument . . . positions.”) to
- (A) show that the argument stated in the passage is ultimately futile and thus not worth continuing
 - (B) disclaim contradictions that are stated in the passage
 - (C) qualify the generalizations used to make the author’s point
 - (D) ensure that the reader doesn’t underestimate the crux of the passage
 - (E) highlight a difference between individualism and dependency

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.



SECTION 8

Time — 20 minutes

16 Questions

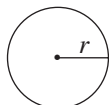
Turn to Section 8 of your answer sheet to answer the questions in this section.

Directions: For this section, solve each problem and decide which is the best of the choices given. Fill in the corresponding circle on the answer sheet. You may use any available space for scratchwork.

Notes

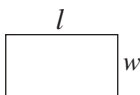
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not drawn to scale. All figures lie in a plane unless otherwise indicated.
4. Unless otherwise specified, the domain of any function f is assumed to be the set of all real numbers x for which $f(x)$ is a real number.

Reference Information

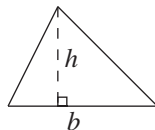


$$A = \pi r^2$$

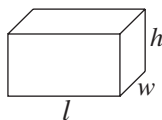
$$C = 2\pi r$$



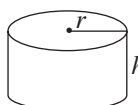
$$A = lw$$



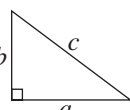
$$A = \frac{1}{2}bh$$



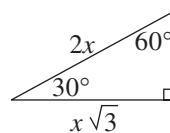
$$V = lwh$$



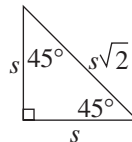
$$V = \pi r^2 h$$



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



Special Right Triangles



The number of degrees of arc in a circle is 360.

The sum of the measures in degrees of the angles of a triangle is 180.

1. If $3x - 5 = 4$, what is the value of $9x - 15$?

- (A) 3
(B) 4
(C) 9
(D) 12
(E) 15

Price of Buttons in Store

X

Color	Price
Black	\$2 per 5 buttons
Blue	\$2 per 6 buttons
Brown	\$3 per 8 buttons
Orange	\$4 per 12 buttons
Red	\$4 per 7 buttons

2. In Store X, which color costs the most per button?

- (A) Black
(B) Blue
(C) Brown
(D) Orange
(E) Red

GO ON TO THE NEXT PAGE



3. In the xy -coordinate plane, which of the following ordered pairs is a point on the line $y = 2x - 6$?

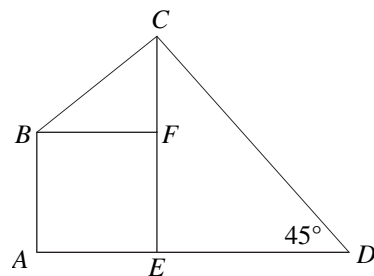
(A) (6, 7)
 (B) (7, 7)
 (C) (7, 8)
 (D) (8, 7)
 (E) (8, 8)

4. For which of the following values of x is $\frac{x^2}{x^3}$ the least?

(A) 1
 (B) -1
 (C) -2
 (D) -3
 (E) -4

5. If $(a + b)^2 = 49$, and $ab = 10$, which of the following represents the value of b in terms of a ?

(A) $\frac{\sqrt{29}}{a}$
 (B) $\sqrt{29 - a^2}$
 (C) $\sqrt{39 - a}$
 (D) $\sqrt[4]{\frac{49}{10}}$
 (E) $a^2\sqrt{49}$



6. If the area of square $ABFE = 25$, and the area of $BCF = 10$, what is the length of \overline{DE} ?
- (A) 7
 (B) 8
 (C) 9
 (D) 10
 (E) 14

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7. If $x + 2y = 20$, $y + 2z = 9$, and $2x + z = 22$, what is the value of $x + y + z$?

(A) 10
(B) 12
(C) 17
(D) 22
(E) 51

8. If the sum of two numbers is 10, and one of these numbers is equal to the sum of 6 and twice the other number, what is the value of the larger number minus the smaller number?

(A) 2
(B) $5\frac{1}{4}$
(C) 6
(D) $7\frac{1}{3}$
(E) $8\frac{1}{2}$

9. For a given year, a mayor has \$45,000 allotted to spend on the sanitation department, the police department, and the fire department. If $\frac{1}{5}$ of his money goes to the sanitation department, and $\frac{2}{3}$ of the remaining money goes to the police department, how much does the mayor have left for the fire department?

(A) \$36,000
(B) \$24,000
(C) \$21,000
(D) \$12,000
(E) \$6,000

10. If the average measure of two angles in a parallelogram is y , what is the average degree measure of the other two angles?

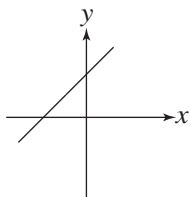
(A) $180 - y$
(B) $180 - \frac{y}{2}$
(C) $360 - 2y$
(D) $360 + y$
(E) y

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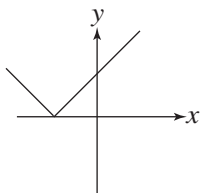


11. If $m > 0$ and $b > 0$, which of the following could be a graph of $y = mx^2 + b$?

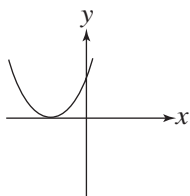
(A)



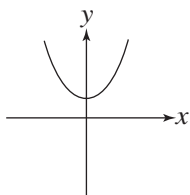
(B)



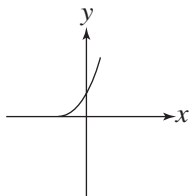
(C)



(D)



(E)



12. S is the set of all positive numbers n such that $n < 100$ and \sqrt{n} is an integer. What is the median value of the members of set S ?

(A) 5
(B) 5.5
(C) 25
(D) 50
(E) 99

13. Point K lies outside the circle with center C such that $CK = 26$. \overline{JK} is tangent to the circle at point J , and the distance from J to K is 2 less than the distance from K to C . What is the circumference of the circle?

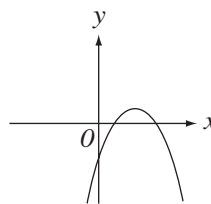
(A) 10π
(B) 15π
(C) 20π
(D) 22π
(E) 24π

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14. On a map, 1 centimeter represents 6 kilometers. A square on the map with a perimeter of 16 centimeters represents a region with what area?

(A) 64 square kilometers
(B) 96 square kilometers
(C) 256 square kilometers
(D) 576 square kilometers
(E) 8,216 square kilometers



16. The graph of $y = g(x)$ is shown in the figure above. If $g(x) = ax^2 + bx + c$ for constants a , b , and c , and if $abc \neq 0$, then which of the following must be true?

(A) $ac > 1$
(B) $c > 1$
(C) $ac < 0$
(D) $a > 0$
(E) $ac > 0$

15. If 0.1% of m is equal to 10% of n , then m is what percent of $10n$?

(A) $\frac{1}{1,000}\%$
(B) 1%
(C) 10%
(D) 100%
(E) 1,000%

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.

8



8



8

NO TEST MATERIAL ON THIS PAGE.



SECTION 9

Time — 20 minutes

19 Questions

Turn to Section 9 of your answer sheet to answer the questions in this section.

Directions: For each question in this section, select the best answer from among the choices given and fill in the corresponding circle on the answer sheet.

Each sentence below has one or two blanks, each blank indicating that something has been omitted. Beneath the sentence are five words or sets of words labeled A through E. Choose the word or set of words that, when inserted in the sentence, best fits the meaning of the sentence as a whole.

Example:

Desiring to ----- his taunting friends, Mitch gave them taffy in hopes it would keep their mouths shut.

- (A) eliminate (B) satisfy (C) overcome
(D) ridicule (E) silence

A B C D ●

- Max's grandmother seems -----; she is frequently observed behaving in an unconventional manner.
(A) ordinary (B) eccentric (C) chronological
(D) sociable (E) industrious
- The antibiotic ointment was so effective on the infection in Molly's swollen finger that after only one application, the finger was no longer -----.
(A) compressed (B) deflated (C) distended
(D) fractured (E) disintegrated
- Professor Cooligan told his class that since the Industrial Revolution, the global warming trend has been -----; human disregard for the environment precipitated many of the alterations in the earth's climate zones.
(A) inevitable (B) malevolent (C) reciprocal
(D) stagnant (E) guileless
- After just one hour of study, Tyler unrealistically expected a ----- rise in his test scores, and was reluctant to work longer hours for steady, ----- score improvements.
(A) repetitive . . swift
(B) sudden . . interminable
(C) trivial . . gradual
(D) steep . . incremental
(E) significant . . rapid
- When participating in a yoga class, Katarina attains a ----- state; the soothing music and soft lighting invoke a serenity that is otherwise lacking in her frenzied existence.
(A) euphonious (B) perspicuous (C) placid
(D) prolific (E) supple
- Dr. Schwartz's lecture on art, while detailed and scholarly, focused ----- on the pre-modern; some students may have appreciated his specialized knowledge, but those with more ----- interests may have been disappointed.
(A) literally . . medieval
(B) completely . . antediluvian
(C) prodigiously . . germane
(D) voluminously . . creative
(E) utterly . . eclectic

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Directions: Each passage below is followed by questions based on its content. Answer the questions on the basis of what is stated or implied in each passage and in any introductory material that may be provided.

Questions 7–19 are based on the following passages.

The two passages below discuss the causes of deviant behavior and strategies for deterring it. The first passage is taken from a discussion of the classical perspective on deviance, while Passage 2 recounts a more recent interpretation of behavior.

Passage 1

Early attempts to understand what caused deviant behavior in society always centered on supernatural causes. People were criminals, it was assumed, because of some otherworldly influence, a demonic presence that tempted
 5 and manipulated otherwise good individuals into performing antisocial actions. But the arrival of the Enlightenment in Europe marked the end of this so-called demonic perspective and ushered in a new conception of the roots of deviant behavior, a viewpoint that came to be called the classical
 10 perspective.

The Enlightenment brought numerous changes to European culture. Foremost among them was an increased reliance on human rationality. Philosophers moved away from theologically centered debates and focused on such
 15 intellectual exercises as empiricism and the limits of human reason. Thus, it is no coincidence that the classical perspective on deviance describes criminal behavior not as the result of some supernatural entity but as the fruit of human rationality. Classicists maintain that a person chooses deviant behavior
 20 based on an intellectual “risk/reward” evaluation. The classicists start from the assumption that each individual wishes to maximize pleasure and minimize pain. Deviance occurs when an individual decides that the reward to be gained from an action outweighs the potential risk associated
 25 with the behavior. Thus, a person who decides to rob a bank has determined that the potential profits from the heist are worth the risk of incarceration.

Not surprisingly, adherents of the classical perspective advocate punishment as the best deterrent to deviant behavior.
 30 In order to prevent individuals from engaging in criminal activities, the risk associated with each activity must outstrip the reward. One classicist, Cesare Beccaria, even went so far as to maintain that a precise, mathematical system could be devised that would calculate the exact type of punishment
 35 necessary. However, arbitrary, excessive, or tyrannical punishments are not encouraged by the classical perspective. Because each deviant act arises from a rational calculation of pleasure versus pain, the appropriate punishment must merely exceed the expected pleasure in order to serve as a deterrent.

Passage 2

40 Just as people are able to influence and change society, society affects the behavior of its charges. It would be remiss to ascribe the emergence of deviant behavior solely to the perpetrator of that behavior. No individual exists in a vacuum; in order to understand the actions of an individual
 45 one must examine the society that produces the individual. Only by gaining an understanding of the relationship between individual and society can we begin to understand the causes of social deviance.

One way to begin to understand the existence of deviance
 50 is to imagine a “perfect” society. In this perfect society, each member shares common values and internalizes the norms of the group. In such a setting, each person is at peace because his or her relationship to the society at large is in harmony. Furthermore, since each individual’s goals and values are
 55 shared by the rest of the community, each participant in this perfect society feels actualized and secure, content that the needs of the individual are also the needs of the whole. Surely, deviant behavior would have no role in this utopia. The entire society would be coordinated by the predominance
 60 of shared mores, and each member’s behavior would be bound by these common values. Unfortunately, perfect societies do not exist in the real world.

Consider now a realistic model of society. Change is constant; immigration brings new members to the society,
 65 urbanization uproots families, and technological advances offer new and different ways of living. Harmony and organization are not the norm. Instead, disorganization reigns supreme. With society in a state of flux, it is impossible for individuals to remain in harmony with the community, and
 70 it is this discord that breeds social deviance. Lacking the coordination of an overarching social consensus, individuals replace it with dissension. While in time particular changes in society might bring about new social norms, and thus new models of consensus, new changes will inevitably occur,
 75 giving rise to a new cycle of deviant behavior.

It follows, then, that in order to control deviant behavior, one must first look to stabilize the society that engenders it. When disorganization is replaced with organization and disparate values are supplanted by shared norms, deviant
 80 behavior will be eliminated.

7. The arrival of the Enlightenment in Europe shifted philosophers’ focus from

- (A) superstition to spirituality
- (B) demons to angels
- (C) criminals to law-abiding citizens
- (D) classicists to modernists
- (E) theology to intellectualism

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8. According to the classical perspective, deviant behavior is the result of
- (A) a criminal act
 - (B) a demonic presence
 - (C) a rational decision based on intellectual evaluation
 - (D) a concept developed by philosophers
 - (E) rationale that minimizes pleasure and maximizes pain
9. Classicists did not encourage harsh, despotic punishments because
- (A) risks must outstrip potential profits from a heist
 - (B) punishment can be meted out precisely and mathematically
 - (C) the demonic, otherworldly influence on actions will prevail
 - (D) the appropriate punishment must merely exceed the pain
 - (E) deviant acts arise from a reasoned assessment of pleasure versus pain
10. In line 42 of Passage 2, “ascribe” most nearly means
- (A) reveal
 - (B) attribute
 - (C) describe
 - (D) distinguish
 - (E) explain
11. In lines 43–44 of Passage 2 (“No individual exists in a vacuum”) suggests that
- (A) society plays a key role in determining an individual’s behavior
 - (B) an individual is accountable to those around him
 - (C) there is no relationship between individual behavior and society
 - (D) an individual can have a major impact on society
 - (E) without organized society, individuals would cease to exist
12. The author of Passage 2 uses the example of a “perfect” society to suggest that
- (A) common values are necessary for a successful society
 - (B) it is a reflection of today’s world
 - (C) society is obsessed with perfection
 - (D) people will never be happy in an imperfect society
 - (E) deviant behavior would not exist in such a society
13. In line 77, “engenders” most nearly means
- (A) sexualizes
 - (B) publicizes
 - (C) enables
 - (D) advocates
 - (E) causes
14. In Passage 2, the author describes the realistic model of society in a tone that is
- (A) nostalgic for the calmer days of society
 - (B) objectively summarizing a realistic society
 - (C) critical of disorganization in society
 - (D) reproachful of companies that promote technological growth
 - (E) approving of individuals who dissent from society
15. When change is constant, which of the following is LEAST likely to result, according to the author of the second passage?
- (A) Immigration augments a society.
 - (B) Organization and harmony become the rule.
 - (C) Technological advancement spurs innovations.
 - (D) Disorganization reigns supreme.
 - (E) Social fluctuation is the norm.



16. Both passages support which generalization about deviant behavior?
- (A) Acts of deviance are ultimately the decision of the individual.
 - (B) Society is the main cause of deviant behavior.
 - (C) Deviant behavior can be eliminated only through severe punishment.
 - (D) Societal adjustments are the only way to eradicate deviance.
 - (E) The arrival of the Enlightenment in Europe promoted social deviance.
17. Which aspect of deviant behavior seems to matter a great deal in Passage 1, but not in Passage 2?
- (A) The influence of demons on criminals
 - (B) The intellectual evaluation made by an individual
 - (C) The methods for calculating punishment
 - (D) The effects society has on the individual
 - (E) The act of robbing a bank
18. The passages differ in tone in that Passage 1 is
- (A) enthusiastic while Passage 2 is cautious
 - (B) indignant while Passage 2 is nostalgic
 - (C) matter-of-fact while Passage 2 is sarcastic
 - (D) objective while Passage 2 is critical
 - (E) sensationalistic while Passage 2 is understated
19. Which statement best describes a significant difference between the two interpretations of how deviant behavior is propagated?
- (A) Passage 1 emphasizes the individual's role; Passage 2 emphasizes society's role.
 - (B) Passage 1 explains the history of deviance; Passage 2 emphasizes the modern perspective.
 - (C) Passage 1 discusses the demonic perspective; Passage 2 discusses the role of disorganization.
 - (D) Each passage presents several reasons for deviant behavior.
 - (E) Each passage discusses society's role in deviant behavior.

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.



SECTION 10

Time — 10 minutes

14 Questions

Turn to Section 10 of your answer sheet to answer the questions in this section.

Directions: For each question in this section, select the best answer from among the choices given and fill in the corresponding circle on the answer sheet.

The following sentences test correctness and effectiveness of expression. Part of each sentence or the entire sentence is underlined; beneath each sentence are five ways of phrasing the underlined material. Choice A repeats the original phrasing; the other four choices are different. If you think the original phrasing produces a better sentence than any of the alternatives, select choice A; if not, select one of the other choices.

In making your selection, follow the requirements of standard written English; that is, pay attention to grammar, choice of words, sentence construction, and punctuation. Your selection should result in the most effective sentence—clear and precise, without awkwardness or ambiguity.

EXAMPLE:

Bobby Flay baked his first cake and he was thirteen years old then.

- (A) and he was thirteen years old then
- (B) when he was thirteen
- (C) at age thirteen years old
- (D) upon the reaching of thirteen years
- (E) at the time when he was thirteen

(A) ● (C) (D) (E)

1. Weather vanes range in style from the practical to the fanciful, but in the end its purpose is still the same: to point out the direction of the wind.
 - (A) its purpose is still the same
 - (B) their purpose being the same
 - (C) the purpose is the same for every one of them
 - (D) they all share the same purpose
 - (E) the purpose is the same for all of them

2. The horrors of war and the experiences of a woman serving in the Woman's Royal Navy Service during the Second World War, which are stirringly chronicled in Edith Pargeter's novel *She Goes to War*.
 - (A) the Second World War, which are stirringly chronicled
 - (B) the Second World War are stirringly chronicled
 - (C) a stirring chronicle of the Second World War
 - (D) the Second World War, that appear in a stirring chronicle
 - (E) a chronicle of the Second World War that stirs the emotions
3. The commercial airliner flew too close to the military base, an act that the army viewed as a violation of its air space.
 - (A) as
 - (B) as if it was
 - (C) to be
 - (D) that it was
 - (E) for
4. Arvo Pärt is an Estonian composer, he is noted for his ethereal, unusual harmonies, and he will direct the symphony concert tonight.
 - (A) Arvo Pärt is an Estonian composer, he is noted for his ethereal, unusual harmonies, and he
 - (B) Arvo Pärt is an Estonian composer noted for his ethereal, unusual harmonies, he
 - (C) Arvo Pärt, an Estonian composer, and because he is noted for his ethereal, unusual harmonies, he
 - (D) Although Arvo Pärt is an Estonian composer, he is noted for his ethereal, unusual harmonies, and he
 - (E) Arvo Pärt, an Estonian composer noted for his ethereal, unusual harmonies,

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5. The lawyer for the plaintiff in the civil court case responded to the emotional appeals of the defendant she produced actual physical evidence of the defendant's culpability.
- (A) defendant she produced
 - (B) defendant with the production of
 - (C) defendant, produced
 - (D) defendant; and produced
 - (E) defendant by producing
6. Sandeep could only objectively judge the results of the experiment after he realized that he could depend on expertise different from his own.
- (A) could depend on expertise different from his own
 - (B) can depend on expertise different from his own
 - (C) could depend on expertise different from his expertise
 - (D) can depend on expertise different from his expertise
 - (E) would have the ability to depend on expertise different from his own
7. Dr. Kornstein's colleagues considered him not only a great surgeon but also being an inspiring teacher of innovative surgical techniques.
- (A) being an inspiring teacher of
 - (B) having inspired the teaching of
 - (C) with inspiration teaching
 - (D) he was inspiring in his teaching of
 - (E) an inspiring teacher of
8. Many employees chose to switch to the new company insurance plan for the reasons that their monthly payments would be reduced.
- (A) for the reasons that their monthly payments would be reduced
 - (B) because their monthly payments would be reduced
 - (C) because of their reductions in monthly payments
 - (D) because its monthly payments were to be reduced
 - (E) for the reason that they reduced their monthly payment
9. In spite of an appearance of no specific expression on its face, a squirrel sometimes plays clever games with anyone trying to view it, scrambling to the opposite side of a tree to elude a would-be observer.
- (A) In spite of an appearance of no specific expression on its face, a squirrel
 - (B) Despite the fact of an appearance of no specific expression on its face, a squirrel
 - (C) Although the expression on the face of the squirrel is not specific in appearance, it
 - (D) Although a squirrel appears to have no specific expression on its face, it
 - (E) Although the face of a squirrel has no specific expression, it
10. Learning from recent field tests, the efficiency of the engine on which they would base next year's trucks was significantly increased by the designers.
- (A) the efficiency of the engine on which they would base next year's trucks was significantly increased by the designers
 - (B) the designers based next year's truck engine on a significant increase in efficiency
 - (C) the designers significantly increased the efficiency of the engine on which they would base next year's trucks
 - (D) their efficiency was significant in designing the engine as a basis for next year's trucks
 - (E) the engine on which the designers would base next year's trucks was significantly increased in efficiency



11. The crash of the Mars Climate Orbiter was caused by a lack of training among the members of the navigation team and failing to use metric units in the coding of the software.
- (A) failing to use metric units
 - (B) a failure to use metric units
 - (C) by people which failed to use metric units
 - (D) because of the failure to use metric units
 - (E) because people failed to use metric units
12. Rory and I, starting to clear the snow away from the front door, we still have hours of work ahead of us.
- (A) Rory and I, starting to clear the snow away from the front door
 - (B) Rory and I, starting to clear the snow away from the front door, however
 - (C) Rory and I have started to clear the snow away from the front door, and
 - (D) Even though starting from the front door to clear the snow away, Rory and I
 - (E) Even though Rory and I have started to clear the snow away from the front door
13. While rhododendron and cherry blossoms are both bright in color, the main difference being the size of the tree that grows them.
- (A) the main difference being the size of the tree that grows them
 - (B) the main difference is that they grow on two trees that are different
 - (C) the two grow on trees of different sizes
 - (D) the main difference being they grow on different-size trees
 - (E) and the trees they grow on are different in size
14. Better known for *The Foreigner*, other works of Larry Shue, such as *The Nerd*, were of equal quality even though they were less famous.
- (A) other works of Larry Shue, such as *The Nerd*,
 - (B) other works by Larry Shue, such as *The Nerd*,
 - (C) Larry Shue also created other works, such as *The Nerd*, that
 - (D) Larry Shue's other works, like *The Nerd*,
 - (E) Larry Shue wrote other stories, like *The Nerd*, that

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NO TEST MATERIAL ON THIS PAGE.