

YOUR NAME (PRINT) \_\_\_\_\_ LAST FIRST MI

TEST CENTER \_\_\_\_\_ NUMBER NAME OF TEST CENTER ROOM NUMBER

# SAT Reasoning Test — General Directions

## Timing

- You will have 3 hours and 45 minutes to work on this test.
- There are ten separately timed sections:
  - ▶ One 25-minute essay
  - ▶ Six other 25-minute sections
  - ▶ Two 20-minute sections
  - ▶ One 10-minute section
- You may work on only one section at a time.
- The supervisor will tell you when to begin and end each section.
- If you finish a section before time is called, check your work on that section. You may NOT turn to any other section.
- Work as rapidly as you can without losing accuracy. Don't waste time on questions that seem too difficult for you.

## Marking Answers

- Carefully mark only one answer for each question.
- Make sure each mark is dark and completely fills the circle.
- Do not make any stray marks on your answer sheet.
- If you erase, do so completely. Incomplete erasures may be scored as intended answers.
- Use only the answer spaces that correspond to the question numbers.
- You may use the test book for scratchwork, but you will not receive credit for anything written there.
- After time has been called, you may not transfer answers to your answer sheet or fill in circles.
- You may not fold or remove pages or portions of a page from this book, or take the book or answer sheet from the testing room.

## Scoring

- For each correct answer, you receive one point.
- For questions you omit, you receive no points.
- For a wrong answer to a multiple-choice question, you lose one-fourth of a point.
  - ▶ If you can eliminate one or more of the answer choices as wrong, you increase your chances of choosing the correct answer and earning one point.
  - ▶ If you can't eliminate any choice, move on. You can return to the question later if there is time.
- For a wrong answer to a student-produced response ("grid-in") math question, you don't lose any points.
- The essay is scored on a 1 to 6 scale by two different readers. The total essay score is the sum of the two readers' scores.
- Off-topic essays, blank essays, and essays written in ink will receive a score of zero.

The passages for this test have been adapted from published material. The ideas contained in them do not necessarily represent the opinions of the College Board or ETS.

**IMPORTANT:** The codes below are unique to your test book. Copy them on your answer sheet in boxes 8 and 9 and fill in the corresponding circles exactly as shown.

<b>9</b>	<b>TEST FORM</b> (Copy from back of test book)

<b>8</b>				<b>FORM CODE</b>		
(Copy and grid as on back of test book.)						
(A)	(A)	(A)	(A)	(0)	(0)	(0)
(B)	(B)	(B)	(B)	(1)	(1)	(1)
(C)	(C)	(C)	(C)	(2)	(2)	(2)
(D)	(D)	(D)	(D)	(3)	(3)	(3)
(E)	(E)	(E)	(E)	(4)	(4)	(4)
(F)	(F)	(F)	(F)	(5)	(5)	(5)
(G)	(G)	(G)	(G)	(6)	(6)	(6)
(H)	(H)	(H)	(H)	(7)	(7)	(7)
(I)	(I)	(I)	(I)	(8)	(8)	(8)
(J)	(J)	(J)	(J)	(9)	(9)	(9)
(K)	(K)	(K)	(K)			
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(O)	(O)	(O)	(O)			
(P)	(P)	(P)	(P)			
(Q)	(Q)	(Q)	(Q)			
(R)	(R)	(R)	(R)			
(S)	(S)	(S)	(S)			
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(V)	(V)	(V)	(V)			
(W)	(W)	(W)	(W)			
(X)	(X)	(X)	(X)			
(Y)	(Y)	(Y)	(Y)			
(Z)	(Z)	(Z)	(Z)			

**DO NOT OPEN THIS BOOK UNTIL THE SUPERVISOR TELLS YOU TO DO SO.**









Start with number 1 for each new section. If a section has fewer questions than answer spaces, leave the extra answer spaces blank. Be sure to erase any errors or stray marks completely.

**SECTION**

**4**

- |                |                |                |                |
|----------------|----------------|----------------|----------------|
| 1 (A B C D E)  | 11 (A B C D E) | 21 (A B C D E) | 31 (A B C D E) |
| 2 (A B C D E)  | 12 (A B C D E) | 22 (A B C D E) | 32 (A B C D E) |
| 3 (A B C D E)  | 13 (A B C D E) | 23 (A B C D E) | 33 (A B C D E) |
| 4 (A B C D E)  | 14 (A B C D E) | 24 (A B C D E) | 34 (A B C D E) |
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| 10 (A B C D E) | 20 (A B C D E) | 30 (A B C D E) | 40 (A B C D E) |

**SECTION**

**5**

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**CAUTION**

Use the answer spaces in the grids below for SECTION 4 or SECTION 5 only if you are told to do so in your test book.

**Student-Produced Responses**

ONLY ANSWERS ENTERED IN THE CIRCLES IN EACH GRID WILL BE SCORED. YOU WILL NOT RECEIVE CREDIT FOR ANYTHING WRITTEN IN THE BOXES ABOVE THE CIRCLES.

<p>9</p>	<p>10</p>	<p>11</p>	<p>12</p>	<p>13</p>
<p>14</p>	<p>15</p>	<p>16</p>	<p>17</p>	<p>18</p>





Start with number 1 for each new section. If a section has fewer questions than answer spaces, leave the extra answer spaces blank. Be sure to erase any errors or stray marks completely.

SECTION

8

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SECTION

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SECTION

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- 39 (A) (B) (C) (D) (E)
- 40 (A) (B) (C) (D) (E)





**You may use this space to make notes for your essay. Remember, however, that you will receive credit ONLY for what is written on your answer sheet.**

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NOTES ONLY

Write essay on answer  
sheet!



## ESSAY

Time — 25 minutes

Turn to page 2 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.

**Important Reminders:**

- **A pencil is required for the essay.** An essay written in ink will receive a score of zero.
- **Do not write your essay in your test book.** You will receive credit only for what you write on your answer sheet.
- **An off-topic essay will receive a score of zero.**

You have twenty-five minutes to write an essay on the topic assigned below.

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

For a variety of reasons, people often make choices that have negative results. Later, they regret these choices, finding out too late that bad choices can be costly. On the other hand, decisions that seem completely reasonable when they are made may also be the cause of later disappointment and suffering. What looks like a wonderful idea at one time can later seem like the worst decision that could have been made. Good choices, too, can be costly.

**Assignment:** Are bad choices and good choices equally likely to have negative consequences? 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.

BEGIN WRITING YOUR ESSAY ON PAGE 2 OF THE ANSWER SHEET.

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

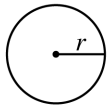
Turn to Section 2 (page 4) of your answer sheet to answer the questions in this section.

**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

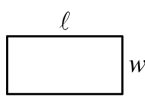
- The use of a calculator is permitted.
- All numbers used are real numbers.
- Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not drawn to scale. All figures lie in a plane unless otherwise indicated.
- 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

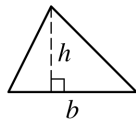


$$A = \pi r^2$$

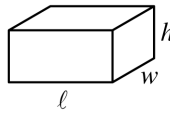
$$C = 2\pi r$$



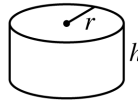
$$A = \ell w$$



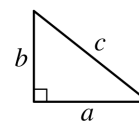
$$A = \frac{1}{2}bh$$



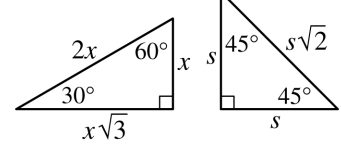
$$V = \ell wh$$



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



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



Special Right Triangles

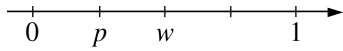
The number of degrees of arc in a circle is 360.

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

1. If  $t = \frac{2}{3}nk$ , what is the value of  $k$  when  $t = 30$  and  $n = 9$ ?
- (A) 5  
(B) 6  
(C) 10  
(D) 20  
(E) 45

2. If  $40,404 + x = 44,444$ , then  $40,404 - 10x =$
- (A)  $-4.04$   
(B) 0  
(C) 4  
(D) 4.04  
(E) 40.4

GO ON TO THE NEXT PAGE

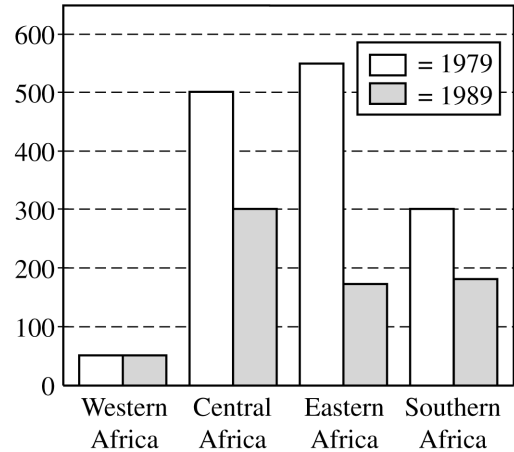


3. On the number line above, the tick marks are equally spaced. What is the value of  $w - p$ ?

- (A)  $\frac{3}{4}$   
 (B)  $\frac{2}{3}$   
 (C)  $\frac{1}{2}$   
 (D)  $\frac{1}{3}$   
 (E)  $\frac{1}{4}$

Questions 4-5 refer to the following graph.

ELEPHANT POPULATION IN SELECTED  
REGIONS IN AFRICA  
(in thousands)



4. Which of the following regions in Africa had an elephant population in 1989 that was approximately  $\frac{1}{3}$  of its elephant population in 1979?

- I. Central  
 II. Eastern  
 III. Southern

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

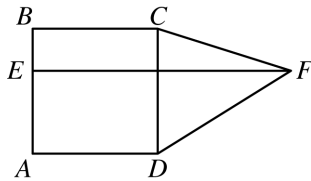
5. From 1979 to 1989, the total elephant population in the four regions of Africa decreased by approximately what percent?

- (A) 10%  
 (B) 30%  
 (C) 50%  
 (D) 70%  
 (E) 90%



6. For all numbers  $x$ , the function  $f$  is defined by  $f(x) = (x + 4)(x + 2)$ . Which of the following has a negative value?

(A)  $f(-5)$   
 (B)  $f(-4)$   
 (C)  $f(-3)$   
 (D)  $f(-2)$   
 (E)  $f(-1)$



7. In the figure above,  $\overline{EF}$  divides square  $ABCD$  into two rectangles, and  $\overline{CD}$  bisects  $\overline{EF}$ . If  $AB = 4$ , what is the area of  $\triangle DCF$ ?

(A) 9  
 (B) 8  
 (C) 7  
 (D) 6  
 (E) 5

8. While driving on a 500-mile trip, Mr. Smith averages 60 miles per hour for the first  $t$  hours. In terms of  $t$ , where  $t < 8$ , how many miles remain to be traveled?

(A)  $60t - 500$   
 (B)  $500 - 60t$   
 (C)  $30,000 - t$   
 (D)  $500 - \frac{60}{t}$   
 (E)  $\frac{500}{60t}$

Ⓒ 6	4
9	7
Ⓓ 8	5
Ⓔ 4	13
8	6

9. In the figure above, the average (arithmetic mean) of the numbers in each column is  $k$ . If the three circled numbers are moved from the left to the right column, which of the following combinations of numbers can then be moved from the right to the left column so that  $k$  remains the average of the numbers in each column?

(A) 6, 13  
 (B) 4, 5, 6  
 (C) 4, 7, 5  
 (D) 4, 7, 6  
 (E) 7, 5, 6

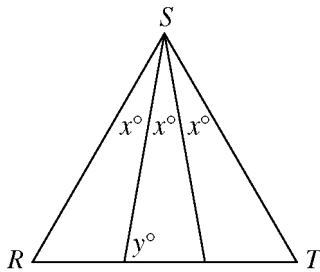




10. By 7:00 P.M.,  $\frac{1}{3}$  of the junior class had arrived at a school dance. By 8:00 P.M., 30 more juniors had arrived, raising attendance to  $\frac{1}{2}$  of the junior class.

How many people are in the junior class?

- (A) 30  
(B) 90  
(C) 120  
(D) 180  
(E) 240



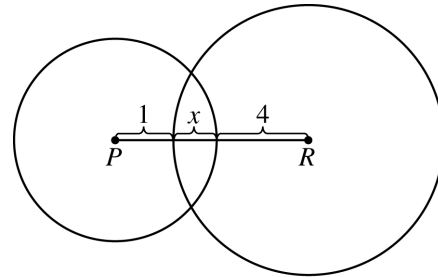
11. In the equilateral triangle  $RST$  above, what is the value of  $y$ ?

- (A) 60  
(B) 70  
(C) 75  
(D) 80  
(E) 85

$x$	$y$
2	7
4	$a$
$a$	$b$

12. In the table above, if  $y = 2x + 3$ , what is the value of  $b$ ?

- (A) 4  
(B) 11  
(C) 15  
(D) 25  
(E) 28



Note: Figure not drawn to scale.

13. In the figure above, the radius of the circle with center  $R$  is twice the radius of the circle with center  $P$ . What is the radius of the circle with center  $R$ ?

- (A) 5  
(B) 6  
(C) 7  
(D) 8  
(E) 10

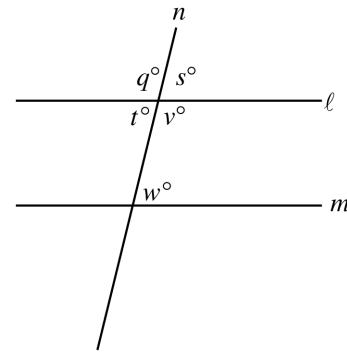


14. A weather-watch camera is set so that its shutter opens every 31 seconds. If  $g(h)$  represents the number of times the camera's shutter opens in  $h$  hours, which of the following defines  $g$ ?

- (A)  $g(h) = 31h$   
 (B)  $g(h) = 31 \cdot 3600h$   
 (C)  $g(h) = \frac{31h}{3600}$   
 (D)  $g(h) = \frac{3600h}{31}$   
 (E)  $g(h) = \frac{31 \cdot 3600}{h}$

Marble 1 was red.  
 Marble 2 was not red.  
 Marble 3 was blue.  
 Marble 4 was the same color as marble 1.  
 Marble 5 was the same color as marble 2.

15. A jar contained 10 marbles—some red, some white, and some blue. The information above is about 5 marbles that were drawn from the jar. If  $x$  is the total number of blue marbles drawn, which of the following statements must be true?
- (A) The only possible value of  $x$  is 1.  
 (B) The only possible value of  $x$  is 2.  
 (C) The only possible value of  $x$  is 3.  
 (D) The only possible values of  $x$  are 1 and 2.  
 (E) The only possible values of  $x$  are 1 and 3.



Note: Figure not drawn to scale.

16. In the figure above,  $l \parallel m$ . If  $v = 2w$ , which of the following must be equal to  $q$ ?
- (A)  $v + t$   
 (B)  $v - t$   
 (C)  $t$   
 (D)  $2v$   
 (E)  $s + t$

17. If the integer  $m$  is divided by 6, the remainder is 5. What is the remainder if  $4m$  is divided by 6?
- (A) 0  
 (B) 1  
 (C) 2  
 (D) 4  
 (E) 5

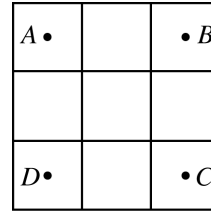


18. The daytime telephone rate between two cities is 90 cents for the first 3 minutes and  $c$  cents for each additional minute. The total charge is reduced 65 percent on calls made after 11:00 P.M. The cost, in dollars, of a 30-minute call made at 11:15 P.M. between these two cities is

- (A)  $0.35(0.90) + 27c$   
 (B)  $0.35(0.90 + 0.27c)$   
 (C)  $0.35(0.90 + 9c)$   
 (D)  $0.65(0.90 + 27c)$   
 (E)  $0.65(0.90 + 0.30c)$

19. How many positive four-digit integers have 1 as their first digit and 2 or 5 as their last digit?

- (A) 144  
 (B) 180  
 (C) 200  
 (D) 300  
 (E) 720



20. In the figure above, a square with sides of length 6 units is divided into 9 squares. What is the area of the circle (not shown) that passes through the points  $A$ ,  $B$ ,  $C$ , and  $D$ , which are the centers of the four corner squares?

- (A)  $6\pi$  square units  
 (B)  $8\pi$  square units  
 (C)  $9\pi$  square units  
 (D)  $10\pi$  square units  
 (E)  $18\pi$  square units

**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 (page 4) 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:**

Hoping to ----- the dispute, negotiators proposed a compromise that they felt would be ----- to both labor and management.

- (A) enforce . . useful
- (B) end . . divisive
- (C) overcome . . unattractive
- (D) extend . . satisfactory
- (E) resolve . . acceptable

(A) (B) (C) (D) ●

1. Although visitors initially may find touring the city by subway to be -----, they are pleased to discover that subways are an inexpensive and ----- way to get around.
  - (A) wasteful . . generous
  - (B) daunting . . efficient
  - (C) extravagant . . prohibitive
  - (D) convenient . . solitary
  - (E) enjoyable . . easy
2. One critic asserts that modern urban architecture causes sensory deprivation because it fails to provide visual and tactile ----- .
  - (A) latency (B) stimulation (C) complacency
  - (D) confusion (E) extension
3. Because little rain falls in the district during summer, municipalities are necessarily ----- to ----- water from winter storms.
  - (A) ready . . squander
  - (B) reluctant . . retain
  - (C) free . . absorb
  - (D) careful . . store
  - (E) unwilling . . conserve
4. Toni Cade Bambara's novels are engrossing because the protagonists, in striving to achieve goals, are not simply ----- characters.
  - (A) passive (B) tangible (C) abandoned
  - (D) autonomous (E) redundant
5. Once his integrity had been -----, the mayoral candidate was quick both to ----- these attacks and to issue counterattacks.
  - (A) debunked . . buttress
  - (B) restored . . recommence
  - (C) revoked . . relinquish
  - (D) impugned . . repudiate
  - (E) vitiated . . avoid



The passages below are followed by questions based on their content; questions following a pair of related passages may also be based on the relationship between the paired passages. Answer the questions on the basis of what is stated or implied in the passages and in any introductory material that may be provided.

Questions 6-9 are based on the following passages.

**Passage 1**

Before silent film star Charlie Chaplin (1899-1977) came along, tramps and hoboes had long been a part of the Anglo-American cartoon and comic strip tradition. But Chaplin was to raise the tramp figure to heights of poetic and mythic power. Chaplin's famous Tramp is a human being down and out on his luck but full of passion for life and hope that things will get better. He is complex and many-sided, thereby touching most human beings at one or more points in our character and makeup. There is a good deal in his nature that most of us identify with in our secret selves, apart from what we are in the public world we inhabit.

**Passage 2**

Chaplin was very forthcoming during a 1957 interview about how much the early comic strips "Weary Willie and Tired Tim" influenced his creation of his own Tramp character. "There's been a lot said about how I evolved the little tramp character who made my name," said Chaplin. "Deep, psychological stuff has been written about how I meant him to be a symbol of all the class war, of the love-hate concept, the death-wish, and what-all. But if you want the simple Chaplin truth behind the Chaplin legend, I started the little tramp simply to make people laugh and because those other tramps, Weary Willie and Tired Tim, had always made me laugh."

6. Given Chaplin's statement in lines 22-25 ("I . . . laugh"), he would most likely view Passage 1's portrayal of the "famous Tramp" (line 5) as
- (A) misleading readers about his creative intention
  - (B) disregarding his effort to render social commentary through humor
  - (C) implying that the Tramp was derived from a comic strip
  - (D) asserting that the Tramp was the only character he portrayed
  - (E) assuming that few could embrace his ideas

7. Compared to the description of Chaplin's Tramp in Passage 1, the account of the Tramp in Passage 2 is less
- (A) optimistic
  - (B) ambiguous
  - (C) sincere
  - (D) complicated
  - (E) humorous
8. In comparison to Passage 2, the tone of Passage 1 is
- (A) more defensive
  - (B) more laudatory
  - (C) more sentimental
  - (D) less analytical
  - (E) less pretentious
9. Which best describes the relationship between Passage 1 and Passage 2 ?
- (A) Passage 1 explains the profound effect of Chaplin's Tramp on audiences; Passage 2 describes how Chaplin created the Tramp.
  - (B) Passage 1 explores how Chaplin expanded the Tramp's character; Passage 2 analyzes the Tramp's impact on audiences.
  - (C) Passage 1 examines the origin of the Tramp figure; Passage 2 traces the comedic evolution of the Tramp.
  - (D) Passage 1 illustrates how Chaplin gained fame as the Tramp; Passage 2 discusses Chaplin's love of comic figures like the Tramp.
  - (E) Passage 1 argues that Chaplin added depth to the Tramp; Passage 2 focuses on Chaplin's purpose in developing the Tramp.



**Questions 10-18 are based on the following passage.**

The following passage is from a 1994 novel about a young woman named Sophie who at age eleven had left Haiti to join her mother in New York.

I was eighteen and going to start college in the fall. We moved to a one-family house in a tree-lined neighborhood; my mother continued working her two jobs, but she put in even longer hours.

Before the move, I had been going to a Haitian Adventist school. They guaranteed that they would get me into college and they had lived up to their pledge. My mother couldn't have been happier. Her sacrifices had paid off.

I never told my mother that I hated the Bilingual Institution. It was as if I had never left Haiti. All the lessons were in French, except for English composition and literature classes.

When my mother was home, she made me read out loud from the English Composition textbooks. The first words I read sounded like rocks falling in a stream. Then very slowly things began to take on meaning. There were words that I heard often. Words that jump out of New York Creole<sup>1</sup> conversations, like the last kernel in a cooling popcorn machine. Words like *TV*, *building*, and *feeling*. There were other words that helped too, words that looked almost the same in French, but were pronounced differently in English: *nationality*, *alien*, *race*, *enemy*. Eventually, I began to read better. I answered swiftly when my mother asked me a question in English.

"Sophie, there is a great responsibility that comes with knowledge, to study hard," my mother would say. I spent six years doing nothing but that. School, home, and prayer.

And then, I fell in love with Joseph. He broke the monotony of my life when he moved next door. He was the color of ground coffee, with a voice like molasses that turned to music when he held a saxophone to his lips.

One day, he came to our door and asked if he could use the phone. After his call, he announced that he had gotten a job. "I am a musician."

"I know," I said. "Sometimes I hear you playing at night." "Does it bother you?"

"Non, it's very pretty."

"I detect an accent," he said.

Oh please, say a small one, I thought. After seven years in this country, I was tired of having people detect my accent. I wanted to sound completely American, especially for him.

"Where are you from?" he asked.

"Haiti."

"Ah, do you speak Creole?"

"Oui, oui,"<sup>2</sup> I ventured, for a laugh.

"We, we," he said, pointing to me and him, "We have something in common. I speak a form of Creole, too. I am from Louisiana. My parents considered themselves what we call Creoles. Is it a small world or what?"

Later that week, Joseph brought me a sandwich to thank me for letting him use the phone. He stayed while I ate.

"What are you going to study in college?" he asked.

"I think I am going to be a doctor."

"You *think*? Is this something you like?"

"I suppose so," I said.

"You have to have a passion for what you do."

"My mother says it's important for us to have a doctor in the family."

"What if you don't want to be a doctor?"

"There's a difference between what people want and what's good for them."

"You sound like you are quoting someone," he said.

"My mother."

"What would Sophie like to do?" he asked.

That was the problem. Sophie really wasn't sure. I had never really dared to dream on my own.

"It is okay not to have your future on a map," he said.

"That way you can flow wherever life takes you."

"That is not Haitian," I said. "That's very American."

"What is?"

"Being a wanderer. The very idea."

"I am not American," he said. "I am African American."

"What is the difference?"

"The African. Most Haitians are of African descent. So you see, it means that you and I, we are already part of each other."

<sup>1</sup> The French-derived language of Haiti

<sup>2</sup> French word for "yes," pronounced "we"

**10.** Sophie "hated" (line 9) her school because

- (A) she resented how hard her mother had to work to send her there
- (B) she had little exposure to English
- (C) it was in a neighborhood that seemed foreign and unfriendly
- (D) the courses were too difficult
- (E) the teachers were intolerant of her language errors

**11.** The comparison in line 15 emphasizes the

- (A) halting way in which Sophie thought she read
- (B) powerful impact of the words Sophie read aloud
- (C) feeling Sophie had about her native language
- (D) obstacles to Sophie's writing in a new language
- (E) strength of Sophie's commitment to learn English





12. Sophie's manner of answering her mother (lines 23-24) shows her
- (A) struggle with an anger that she has tried to conceal
  - (B) impatience with her mother's persistent questioning
  - (C) growing command of a new language
  - (D) need to revert to French to express her feelings
  - (E) eagerness to return to her reading as quickly as possible
13. The use of italics in line 55 serves to emphasize
- (A) Joseph's idealism as contrasted with Sophie's cynicism
  - (B) Joseph's unsuccessful attempt to cheer Sophie
  - (C) Joseph's incredulity at Sophie's approach to her future
  - (D) the unlikelihood that Sophie will be able to pursue her goal
  - (E) the extent to which Sophie has underestimated her talents
14. Sophie's response in line 56 reveals that she
- (A) is anxious to impress others
  - (B) is reluctant to confess her deepest fears
  - (C) is single-minded in her dedication to a medical career
  - (D) has apparently decided that she should hide her heritage from Joseph
  - (E) has rarely questioned the decisions others have made for her
15. In line 61, the "difference" is between
- (A) selfishness and altruism
  - (B) desire and practicality
  - (C) intuitive knowledge and learned knowledge
  - (D) love for family and love for friends
  - (E) duty to the past and fear of the future
16. By using Sophie's name (line 65) instead of "you," Joseph is attempting to
- (A) pose as a narrator of a story
  - (B) approach a frightening topic gradually
  - (C) make Sophie consider a new perspective
  - (D) appear unconcerned about Sophie's attitude
  - (E) pretend that he is unaware of Sophie's presence
17. The "problem" (line 66) for Sophie is that
- (A) what she wants and what her mother wants are radically different
  - (B) medical school would require her mother to make even more financial sacrifices
  - (C) Joseph expects her to follow his dreams instead of her own
  - (D) she is uncomfortable with the long years of schooling that becoming a doctor entails
  - (E) she never considered her own needs as important
18. Joseph's statement in lines 68-69 ("It is . . . you") primarily shows him to be
- (A) more tenacious than Sophie's mother is
  - (B) more tolerant of ambiguity than Sophie is
  - (C) more cynical about the future than Sophie is
  - (D) unsentimental about family and heritage
  - (E) incapable of making commitments



**Questions 19-24 are based on the following passage.**

The following passage is from an essay written in 1991 about fences in suburban culture.

In the United States, the traditional view embraced by society is that fences are European, out of place in the American landscape. This notion turns up repeatedly in nineteenth-century American writing about the landscape.

Line

5 One author after another denounces “the Englishman’s insultingly inhospitable brick wall, topped with broken bottles.” Frank J. Scott, an early landscape architect who had a large impact on the look of America’s first suburbs, worked tirelessly to rid the landscape of fences, which he  
10 derided as a feudal holdover from Britain. Writing in 1870, he held that “to narrow our own or our neighbor’s views of the free graces of Nature” was selfish and undemocratic. To drive through virtually any American suburb today, where every lawn steps right up to the street in a gesture of open-  
15 ness and welcome, is to see how completely such views have triumphed. After a visit to the United States, British novelist Vita Sackville-West decided that “Americans . . . have no sense of private enclosure.”

In many American suburbs such as the one where I grew  
20 up, a fence or a hedge along the street meant one thing: the family who lived behind it was antisocial, perhaps even had something to hide. Fences and hedges said: Ogres within; skip this place on Halloween. Except for these few dubious addresses, each little plot in our development was landscaped  
25 like a miniature estate, the puniest “expanse” of unhedged lawn was made to look like a public park. Any enjoyment of this space was sacrificed to the conceit of wide-open land, for without a fence or hedge, front yards were much too public to spend time in. Families crammed their activities  
30 into microscopic back-yards, the one place where the usefulness of fences and hedges seemed to outweigh their undemocratic connotations.

But the American prejudice against fences predates the suburban development. Fences have always seemed to us  
35 somehow un-American. Europeans built walled gardens; Americans from the start distrusted the *hortus conclusus*.\* If the space within the wall was a garden, then what was that outside the wall? To the Puritans the whole American landscape was a promised land and to draw lines around  
40 sections of it was to throw this paramount idea into question. When Anne Bradstreet, the Massachusetts colony’s first poet, set about writing a traditional English garden ode, she tore down the conventional garden wall—or (it comes to the same thing) made it capacious enough to take in the  
45 whole of America.

The nineteenth-century transcendentalists, too, considered the American landscape “God’s second book” and they taught us to read it for moral instruction. Residues of this idea persist, of course; we still regard and write about nature  
50 with high moral purpose (an approach that still produces a

great deal of pious prose). And though, in our own nature writing, guilt seems to have taken the rhetorical place of nineteenth-century ecstasy, the essential religiosity remains. We may no longer spell it out, but most of us still believe  
55 the landscape is somehow sacred, and to meddle with it sacrilegious. And to set up hierarchies within it—to set off a garden from the surrounding countryside—well, that makes no sense at all.

\* A Latin phrase that means “confined garden”

**19.** In line 1, “embraced” most nearly means

- (A) caressed
- (B) adopted
- (C) enfolded
- (D) included
- (E) encircled

**20.** In lines 10-12, Frank J. Scott’s observation implies that nature

- (A) is graceful and beautiful only in areas uninhabited by humans
- (B) should be available for all to enjoy without hindrance
- (C) must be incorporated into the design of American suburbs
- (D) exerts a more powerful effect on the British than on Americans
- (E) is less evident in American suburbs than in the British countryside

**21.** In lines 12-15, “To drive . . . welcome” suggests that suburban lawns

- (A) represent the American preoccupation with appearances
- (B) epitomize the values of capitalism
- (C) reflect a particular American attitude
- (D) emulate the inviting character of formal British gardens
- (E) reveal the distinctive personality of a homeowner

**22.** In line 27, “conceit” most nearly means

- (A) grandiose ideal
- (B) extreme vanity
- (C) ingenious expression
- (D) ornate article
- (E) extravagant edifice



23. The discussion in lines 41-45 (“When Anne . . . America”) implies that Anne Bradstreet’s garden poetry
- (A) reflected her disapproval of America’s rapid development
  - (B) followed the pattern set by more innovative British poets
  - (C) espoused the Puritans’ belief in religious freedom
  - (D) promoted greater enthusiasm for gardening in America
  - (E) focused on the vast American landscape rather than on individual gardens

24. In line 56, the “hierarchies” most closely represent
- (A) a practical but undesirable consequence of urban life
  - (B) a crucial method of determining territorial claims
  - (C) a misguided division of nature’s sacred space
  - (D) an effort to protect pristine land from development
  - (E) an unfortunate legacy of nineteenth-century America

**S T O P**

**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 4

Time — 25 minutes

18 Questions

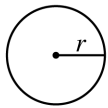
Turn to Section 4 (page 5) of your answer sheet to answer the questions in this section.

**Directions:** This section contains two types of questions. You have 25 minutes to complete both types. For questions 1-8, 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

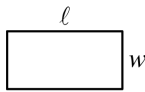
- The use of a calculator is permitted.
- All numbers used are real numbers.
- Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not drawn to scale. All figures lie in a plane unless otherwise indicated.
- 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

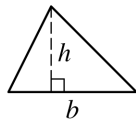


$$A = \pi r^2$$

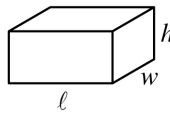
$$C = 2\pi r$$



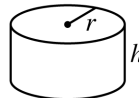
$$A = \ell w$$



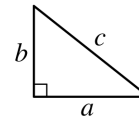
$$A = \frac{1}{2}bh$$



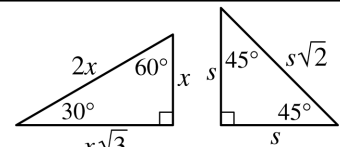
$$V = \ell wh$$



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



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



Special Right Triangles

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

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

1. If  $(0.0002)x = 0.0002$ , then  $x =$

- (A) 0.0001  
 (B) 0.1  
 (C)  $\frac{1}{2}$   
 (D) 1  
 (E) 1,000

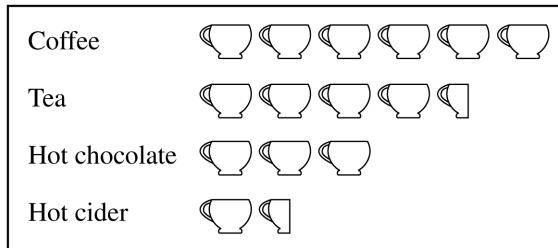
2. If  $n$  is 3 less than  $w$  and  $w$  is 1 more than  $z$ , what is the value of  $n$  when  $z = 1$ ?


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

GO ON TO THE NEXT PAGE



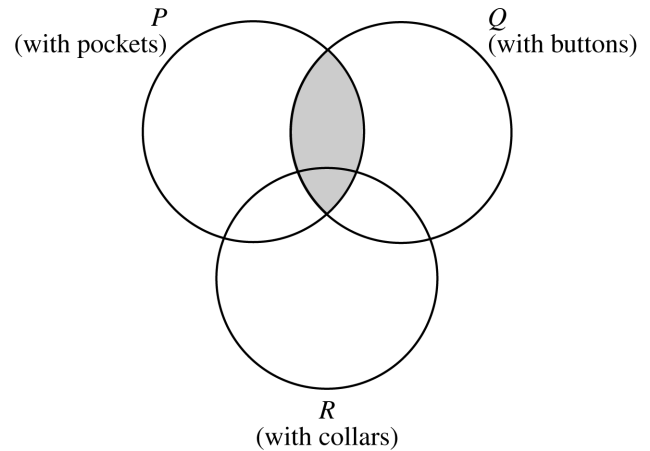
## HOT-BEVERAGE SURVEY RESULTS



 = 10 responses

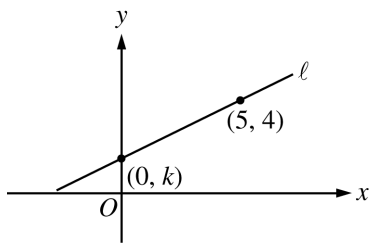
3. The pictograph above shows the results of a survey in which 150 people were asked to indicate which of four hot beverages they drink. How many more responses did Coffee receive than Hot cider?
- (A) 15  
(B) 30  
(C) 40  
(D) 45  
(E) 60

## SHIRTS



5. In the figure above, circular region  $P$  represents shirts with pockets, circular region  $Q$  represents shirts with buttons, and circular region  $R$  represents shirts with collars. What is represented by the shaded region?
- (A) Shirts with pockets, buttons, and collars  
(B) Shirts with pockets and buttons, but without collars  
(C) Shirts with pockets and buttons (some possibly with collars)  
(D) Shirts with pockets and collars (some possibly with buttons)  
(E) Shirts with buttons and collars (some possibly with pockets)

4. If  $k$  is a positive even integer, then  $(k + 1)(k + 2)$  could equal which of the following?
- (A) 10  
(B) 20  
(C) 30  
(D) 40  
(E) 50

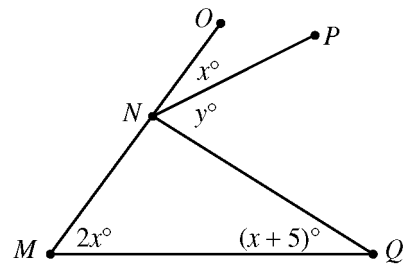


6. In the figure above, the slope of line  $\ell$  is  $\frac{1}{2}$ . What is the value of  $k$ ?

- (A) 3  
(B)  $\frac{5}{2}$   
(C)  $\frac{9}{4}$   
(D) 2  
(E)  $\frac{3}{2}$

7. If  $\frac{v}{s} = 2$  and  $\frac{r}{s} = \frac{t}{v}$ , where  $t \neq 0$ , which of the following must be equal to  $\frac{r}{t}$ ?

- (A)  $\frac{1}{2}$   
(B) 2  
(C)  $\frac{t}{v}$   
(D)  $\frac{v}{2s}$   
(E)  $\frac{2v}{s}$



8. In the figure above,  $N$  lies on  $\overline{MO}$ . In terms of  $x$ , which of the following must be equivalent to  $y$ ?

- (A)  $2x$   
(B)  $2x + 5$   
(C)  $3x + 5$   
(D)  $90 - x$   
(E)  $180 - 3x$





**Directions:** For Student-Produced Response questions 9-18, use the grids at the bottom of the answer sheet 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 scratchwork.

Write answer in boxes.

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

Grid in result.

Fraction line

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

Answer: 2.5

Decimal point

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

Answer: 201

Either position is correct.

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

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

**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 sheet 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  $\frac{31}{2}$  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	
	•	•	•	•
	0	0	0	0
1	1	•	1	•
2	•	2	•	•
3	3	•	3	•
4	4	•	4	•
5	5	•	5	•
6	6	•	6	•

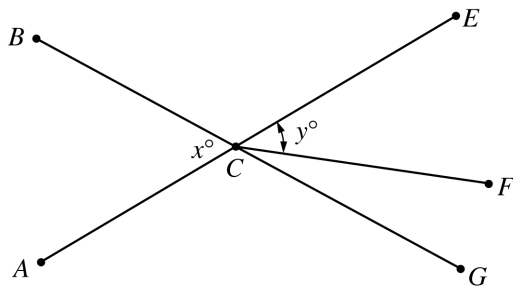
	.	6	6	6
	•	•	•	•
	0	0	0	0
1	1	•	1	•
2	2	•	2	•
3	3	•	3	•
4	4	•	4	•
5	5	•	5	•
6	•	6	•	•

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

9. If  $\frac{1}{n} = \frac{2}{5}$ , what is the value of  $n$ ?

10. A recipe for making 10 loaves of bread requires 24 cups of flour and 4 tablespoons of baking powder. If the proportions in this recipe are to be used to make 3 loaves of bread, how many cups of flour will be needed? (Do not round your answer.)

GO ON TO THE NEXT PAGE



Note: Figure not drawn to scale.

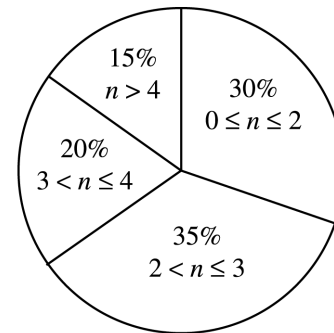
11. In the figure above,  $\overline{AE}$  and  $\overline{BG}$  intersect at  $C$ . If  $x = 80$  and  $\overline{CF}$  bisects  $\angle ECG$ , what is the value of  $y$ ?

12. The length and width of a rectangle have integer values. If the area of the rectangle is 75, what is one possible value for the perimeter of the rectangle?

-1, 0, 1, 2

13. A sequence is formed by repeating the 4 numbers above in the same order indefinitely. What is the sum of the first 28 terms of the sequence?

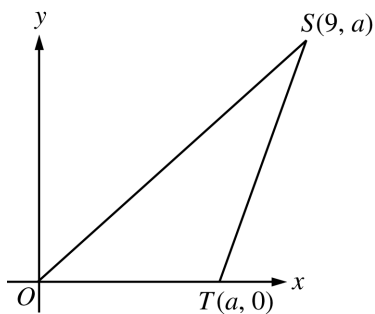
RESPONSES TO  
VACATION QUESTION



14. In a survey, 3,400 people responded to the following question: "How many weeks of vacation did you take last year?" Their responses to the question are summarized in the chart above, where  $n$  equals the number of vacation weeks indicated. How many respondents took more than 2 weeks of vacation last year?



15. If  $90\left(x^3 + \frac{1}{10}x^2 + \frac{1}{30}x + \frac{1}{90}\right) = ax^3 + bx^2 + cx + d$  for all values of  $x$ , where  $a$ ,  $b$ ,  $c$ , and  $d$  are constants, what is the value of  $a + b + c + d$ ?



Note: Figure not drawn to scale.

16. In the  $xy$ -plane above, the area of  $\triangle OST$  is 8. What is the value of  $a$ ?

17. The total cost of a taxicab ride is the sum of
- (1) a basic fixed charge for using the taxicab, and
  - (2) an additional charge for each  $\frac{1}{4}$  of a mile that is traveled.

If the total cost to ride  $\frac{3}{4}$  mile is \$4.00 and the total cost to ride  $1\frac{1}{2}$  miles is \$5.50, what is the total cost, in dollars, of a 3-mile ride?

(Disregard the \$ sign when gridding your answer. If, for example, your answer is \$1.37, grid 1.37)

18. Let the function  $s$  be defined so that  $s(x)$  is the area of a semicircle with diameter  $x$ . If  $s(6) + s(8) = s(b)$ , what is the value of  $b$ ?

**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 6**

Time — 25 minutes

35 Questions

**Turn to Section 6 (page 6) 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:**

Laura Ingalls Wilder published her first book and she was sixty-five years old then.

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

A  B  C  D  E

1. A stranger, the students were surprised to see him enter the classroom carrying a bowling ball.
- (A) A stranger, the students were surprised to see him enter the classroom carrying a bowling ball.
  - (B) A stranger carrying a bowling ball, the students were surprised to see him entering the classroom.
  - (C) The students were surprised to see a stranger enter the classroom, and he carried a bowling ball.
  - (D) The students were surprised to see a stranger carrying a bowling ball enter the classroom.
  - (E) The students, who were surprised to see a stranger enter the classroom carrying a bowling ball.

2. Several of Frank Stella's paintings were inspired by the shapes of waves and whales, titled after chapter headings from *Moby-Dick*.
- (A) paintings were inspired by the shapes of waves and whales, titled
  - (B) paintings had their inspiration from the shapes of waves and whales with titles
  - (C) paintings, inspired by the shapes of waves and whales, are titled
  - (D) paintings, which were inspired by the shapes of waves and whales and which are titled
  - (E) paintings, being inspired by the shapes of waves and whales, titled
3. The mayor claimed that a majority of the property owners would have favored her proposal if put to the vote.
- (A) would have favored her proposal if put
  - (B) would have favored her proposal if it had been put
  - (C) favored her proposal if it would have been put
  - (D) favored her proposal if put
  - (E) favored her proposal if they were put
4. The psychologist states that most people want the same things: interesting and meaningful work, respect, and to have them be loved for themselves alone.
- (A) interesting and meaningful work, respect, and to have them be loved for themselves alone
  - (B) to have interesting and meaningful work, respect, and loved for themselves alone
  - (C) work that has interest and is meaningful, to have respect, and to be beloved for themselves alone
  - (D) interesting and meaningful work, respect, and their own love
  - (E) to have interesting and meaningful work, to be respected, and to be loved for themselves alone



5. By employing exotic harmonies and making unusual use of instruments, Mahler was a pathfinder from romanticism to modern music.
- (A) Mahler was a pathfinder  
 (B) a path was created by Mahler  
 (C) Mahler created a path  
 (D) Mahler was the creator of a path  
 (E) was how Mahler created a path
6. In the past, many famous painters meticulously ground their own colors, an attention to detail that is noteworthy.
- (A) an attention to detail that is noteworthy  
 (B) inasmuch as they showed attention to detail, it is noteworthy  
 (C) this makes it noteworthy in showing their attention to detail  
 (D) an idea that is noteworthy in showing their attention to detail  
 (E) which is noteworthy and it shows an attention to detail
7. By including pieces of cloth, newspaper, wallpaper, and other materials in his work, Picasso's innovation had an important influence on twentieth-century art.
- (A) Picasso's innovation had an important influence on  
 (B) this innovation of Picasso's was important in its influence over  
 (C) Picasso's important innovative influence was on  
 (D) Picasso was influential, with his innovation, over  
 (E) the innovative Picasso was an important influence on
8. Once American films looked slick and commercial compared to European imports; now, almost the reverse is true.
- (A) now, almost the reverse is true  
 (B) now they are almost the reverse  
 (C) instead, there is almost a reversal now  
 (D) now it is almost the reverse that is true  
 (E) it has now been almost reversed
9. Although known primarily as a poet, the paintings of Lawrence Ferlinghetti have recently been receiving public attention.
- (A) Although known primarily as a poet, the paintings of Lawrence Ferlinghetti  
 (B) Although known primarily for his poetry, Lawrence Ferlinghetti's paintings  
 (C) Although his poetry is primarily what he is known for, Lawrence Ferlinghetti's paintings  
 (D) Although Lawrence Ferlinghetti is known primarily as a poet and his paintings  
 (E) Although Lawrence Ferlinghetti is known primarily for his poetry, his paintings
10. For many a brilliant architect, being free to innovate is more important than being well paid.
- (A) being free to innovate is more important than  
 (B) having freedom of innovation is more important than  
 (C) there is more importance in the freedom to innovate than  
 (D) freedom to innovate has more importance than  
 (E) to have the freedom to innovate is more important than
11. What was not achieved in last year's county voter registration drive was more than compensated for by this year, which registered over three thousand new voters.
- (A) by this year, which registered over three thousand new voters  
 (B) by this year, having over three thousand new voters registered  
 (C) by this year's drive, which registered over three thousand new voters  
 (D) when they registered three thousand new voters this year  
 (E) this year, when they registered over three thousand new voters



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 delegates and him immediately  
 A B C  
 accepted the resolution drafted by the  
 D  
 neutral states. No error  
 E

(A) ● (C) (D) (E)

12. For the cyclist exploring Ireland's western cliffs,  
 A  
 every road leading out of the town of Clifden offers  
 B  
their own set of wonders. No error  
 C D E
13. The construction of a waterway linking the Atlantic  
 and Pacific Oceans was first proposed in 1524,  
 A  
but not until the Panama Canal opened in 1914 did  
 B  
such a project become a reality. No error  
 C D E
14. The charm of Lofting's book lies in the humorous  
 A B  
 reversal of roles—the animals guide, assist, and  
 C  
 generally they take care of the helpless humans.  
 D  
No error  
 E
15. People were trained to perform one tiny part of one  
 A  
 process in one department of one industry, and so  
having no sense of the process as a whole. No error  
 B C D E
16. The *Stegosaurus*, plant-eating dinosaurs with  
 A  
protective bony plates and tail spikes, was  
 B  
once common in what is now Colorado. No error  
 C D E
17. Some plants use chemical signals that repel insects,  
 A  
 and also, these signals help to put neighboring plants  
 B  
 on alert so they can mount their own defenses.  
 C D  
No error  
 E
18. Innovative use of computers in the classroom allows  
 students to undertake projects that encourages them  
 A B C  
 to be both analytical and intellectually adventurous.  
 D  
No error  
 E
19. When one is researching the customs of a com-  
 A  
 munity, you must learn about its history and observe  
 B C  
 its people going about their ordinary activities.  
 D  
No error  
 E



20. Working with consummate skill, Picasso sketched a  
A  
portrait of the youthful but experienced dancer who  
B C  
was posing for him. No error  
D E
21. From 1566 until 1576 Santa Elena, now an  
A  
excavation site in South Carolina, was the capital  
B  
of Spanish Florida; however , it has become an  
C D  
English settlement by 1735. No error  
E
22. Despite the attorney's moving plea, the judge placed  
A B  
the juvenile offender on probation for an indecisive  
C D  
period. No error  
E
23. Yearning for a truly representative art form  
A B  
of the Americas, the art world of the 1920's  
looked hopefully to the three popular Mexican  
C  
mural artists of the day . No error  
D E
24. There has always been a great deal of friction between  
A  
Joan and I because we have opposing political views  
B C  
about which we are very vocal. No error  
D E
25. When M. R. Harrington, an archaeologist from the  
A  
Museum of the American Indian, began to excavate  
B  
the ruins he named the Pueblo Grande de Nevada, he  
C  
unearthed artifacts indicating a 500-year occupation  
D  
by indigenous peoples. No error  
E
26. The supervisor cited three workers, each of which  
A  
is likely to win a prize for having suggested cost-  
B C  
effective changes at the factory. No error  
D E
27. Freedom of action and expression are at the  
A  
foundation not only of our system of government but  
B  
also of our expectations concerning human relations  
C  
at all levels of society. No error  
D E
28. While both disaster rescue workers and news reporters  
may face physical danger, the latter can usually  
A B  
control his or her exposure to risk, whereas rescue  
C D  
workers often cannot. No error  
E
29. The refusal of the management to revise their  
A B  
policy on family leave caused an uproar among  
C D  
employees. No error  
E



**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) Some of the world's greatest scientists have been women, and most people still tend to think of science as a "man's game." (2) There are probably many reasons that more men than women had fame as scientists. (3) Unequal access to educational opportunities is certainly one.

(4) But sometimes the reason is plain old-fashioned dishonesty. (5) James Watson, Francis Crick, and Maurice Wilkins were awarded the Nobel Prize for the discovery by them of the double helix structure of the DNA molecule. (6) The discovery is seen by most as one of the greatest contributions to the modern history of biology.

(7) One of the most important pieces of evidence used by Watson and Crick to figure out this structure was an x-ray diffraction photograph that had been taken by a woman, Rosalind Franklin. (8) Scientists often build on the work of other scientists, but they usually do so openly. (9) Franklin's photograph was secretly shown to Watson by her colleague Maurice Wilkins. (10) Who never told her what he had done. (11) And then Watson, Crick, and Wilkins gave Nobel Prize lectures that contained 98 references to the work of other scientists, not citing a single one of Franklin's papers. (12) Of them only Wilkins in his speech making even a casual reference to her when he said she made some "very valuable contributions to the x-ray analysis."

30. In context, which of the following is the best change to make to sentence 1 ?

- (A) Insert "As one can see" at the beginning.
- (B) Insert "In the field of genetics" at the beginning.
- (C) Insert "of course" after "and".
- (D) Insert "yet" after "and".
- (E) Delete the quotation marks.

31. What is the best way to deal with sentence 2 ?

- (A) Omit it.
- (B) Switch it with sentence 1.
- (C) Insert "Definitely" at the beginning.
- (D) Change "many" to "lots of".
- (E) Change "had" to "have achieved".

32. Which of the following sentences is best inserted after sentence 3 ?

- (A) They think of science as a field in which men have been traditionally encouraged to participate.
- (B) The failure of the educational system to nurture young girls' interest in science is certainly another.
- (C) Some of the best-known names in science are those of men such as Galileo and Einstein.
- (D) The girls in my school are not given the same opportunities to study scientific subjects as the boys are.
- (E) Yet Rosalind Franklin was a woman who made a number of extremely significant contributions to modern science.

33. In context, which of the following is the best way to express the underlined portion of sentence 5 (reproduced below) ?

*James Watson, Francis Crick, and Maurice Wilkins were awarded the Nobel Prize for the discovery by them of the double helix structure of the DNA molecule.*

- (A) (As it is now)
- (B) They were awarded the Nobel Prize for the discovery
- (C) Watson, Crick, and Wilkins were awarded the Nobel Prize for the discovery by them
- (D) James Watson, Francis Crick, and Maurice Wilkins were awarded the Nobel Prize for their discovery
- (E) But the Nobel Prize was awarded to Watson, Crick, and Wilkins for the discovery





34. In context, which of the following is the best version of sentences 9 and 10 (reproduced below) ?

*Franklin's photograph was secretly shown to Watson by her colleague Maurice Wilkins. Who never told her what he had done.*

- (A) (As it is now)
- (B) Similarly, her colleague Maurice Wilkins showed Franklin's photograph to Watson, and he never told her about it.
- (C) Unfortunately, she did not know that her colleague Maurice Wilkins had secretly shown this photograph to Watson.
- (D) In fact, Franklin's colleague Maurice Wilkins never told her that he had shown Watson the photograph.
- (E) In this case, Franklin's colleague Maurice Wilkins secretly showed Watson her photograph without telling her.

35. Which of the following is the best way to express the underlined portion of sentence 12 (reprinted below) ?

*Of them only Wilkins in his speech making even a casual reference to her when he said she made some "very valuable contributions to the x-ray analysis."*

- (A) (As it is now)
- (B) Having made his speech, only Wilkins had made even
- (C) Of the three, only Wilkins made even
- (D) Only his speech contained even
- (E) In the same manner, Wilkins made

**S T O P**

**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 (page 6) 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:**

Hoping to ----- the dispute, negotiators proposed a compromise that they felt would be ----- to both labor and management.

- (A) enforce . . useful
- (B) end . . divisive
- (C) overcome . . unattractive
- (D) extend . . satisfactory
- (E) resolve . . acceptable

(A) (B) (C) (D) ●

1. New data measuring the ----- of land beneath the oceans permit accurate generalizations about the topography of the seafloor.  
(A) models (B) contours (C) remnants  
(D) populations (E) pigments
2. Excessive secrecy tends to ----- excessive curiosity and thus serves to ----- the very impulses against which it guards.  
(A) inhibit . . protect  
(B) disguise . . supplant  
(C) satisfy . . limit  
(D) compel . . deride  
(E) invite . . provoke
3. In frigid regions a layer of permafrost under the soil surface prevents water from sinking deep into the soil, and so the water ----- the land, helping to create bog and ----- conditions.  
(A) freezes . . tropical  
(B) parches . . marsh  
(C) inundates . . desert  
(D) aerates . . jungle  
(E) floods . . swamp
4. Although the bystander's account of the car accident at first seemed -----, the police officer was surprised, on further investigation, to find that it was -----.  
(A) dubious . . erroneous  
(B) incongruous . . inconsistent  
(C) implausible . . correct  
(D) logical . . pertinent  
(E) probable . . coherent
5. The legislation facing Congress was so ----- that it threatened to shatter the governing body's fragile bipartisanship.  
(A) divisive (B) transparent (C) concordant  
(D) repetitive (E) rhetorical
6. In *All God's Children Need Traveling Shoes*, author Maya Angelou uses -----, brief descriptive sketches, to provide ----- view of Ghana that clearly details the land and its people.  
(A) missives . . an illusory  
(B) themes . . a thorough  
(C) vignettes . . a vivid  
(D) treatises . . an authentic  
(E) abstracts . . an ambiguous
7. Because an older horse is more ----- than a younger one, it is safer for a novice rider.  
(A) frolicsome (B) cantankerous  
(C) gargantuan (D) tractable  
(E) precipitate
8. The library's collection is a ----- of Asian American historical documents, including rare materials about race relations.  
(A) summary (B) fabrication (C) consensus  
(D) trove (E) replication

GO ON TO THE NEXT PAGE 



The passages below are followed by questions based on their content; questions following a pair of related passages may also be based on the relationship between the paired passages. Answer the questions on the basis of what is stated or implied in the passages and in any introductory material that may be provided.

**Questions 9-10 are based on the following passage.**

Line 5 There you are, driving along the freeway, nobody in sight, just you, daydreaming, when RIGHT BEHIND YOU there's a blast of sound, as of some eighteen-wheeler out of control, howling in rage . . . WHERE IS IT? Without thinking, you see all directions at once: the empty road ahead and behind, the lack of vehicles on all sides. . . . Slowly, you come to understand that the sound is not from the road but from a highballing freight train travelling parallel to the freeway.

10 How long to go from full alert to anticlimax? Less than a minute. It was a chemical reaction, pure and simple, and it crippled time in your mind.

9. The capital letters in lines 2 and 4 primarily serve to evoke a sense of
- (A) anger
  - (B) alarm
  - (C) impatience
  - (D) disbelief
  - (E) embarrassment
10. If the passage were to continue, the next paragraph would most likely discuss
- (A) other qualities of freight trains that often cause anxiety in humans
  - (B) the chemical reaction that occurs when drivers repeatedly honk their horns in traffic
  - (C) the destination of the driver and the reason for the driver's haste
  - (D) the nature of the chemical reaction that occurs when people become scared
  - (E) important differences between the effects of truck horns and train whistles on humans

**Questions 11-12 are based on the following passage.**

Line 5 When Dr. Mae C. Jemison blasted into orbit aboard the space shuttle Endeavour on September 12, 1992, she also blasted into history as the first woman of color to go into space. A chemical engineer, scientist, physician, teacher, and astronaut, Jemison has been undaunted by a lack of role models or by roadblocks to women and minority people. "I had to learn very early not to limit myself due to others' limited imagination," says Dr. Jemison. An advocate for science and technology, Jemison maintains, "we need to change the image of who does science. That's important not only for folks who want to go into science, but for the folks who fund science."

11. The primary purpose of the passage is to
- (A) note obstacles facing women in science
  - (B) explain how Jemison fosters interest in science
  - (C) discuss how Jemison rose to fame
  - (D) provide a sketch of Jemison and her goals
  - (E) describe Jemison's introduction to science
12. In lines 9-12, Jemison is represented as
- (A) a political ideologue
  - (B) an arbitrator of disputes
  - (C) a mentor to women
  - (D) a charismatic visionary
  - (E) a champion of reform



**Questions 13-24 are based on the following pair of passages.**

*Mark Twain is the pseudonym of Samuel Clemens (1835-1910), who is best known for his stories about life along the Mississippi River. He also lectured and read from his writings in many countries around the world. The following passages are adapted from two essays about Clemens published while Clemens was still alive.*

**Passage 1**

Line 5 While Mark Twain has declared that humor is a  
"subject which has never had much interest" for him, it is  
as a humorist that the world persists in regarding him. It is  
certain that Mark Twain is the greatest genius evolved by  
natural selection out of the ranks of American journalism.  
Crude, rudimentary, and often coarse as much of his writing  
was, it bore upon it the fresh stamp of contemporary  
actuality. American humor, neither unfathomably absurd  
like the Irish, nor sharp and sensible and full of the realities  
of life like the Scottish, is simply the humor of imagination.  
It consists in piling towers on towers and mountains on  
mountains; of heaping a joke up to the stars and extending  
it to the end of the world.

Humor, it must be remembered, is a function of  
nationality. The same joke, as related by an American,  
a Scotsman, or an Irishman, carries with it a distinctive  
ethnic flavor and individuality of approach. Indeed, it is  
open to question whether most humor does not require  
some specialized knowledge of some particular locality.  
The secret of Mark Twain's worldwide popularity as a  
humorist is not to be attributed to any tricks of style, to  
any breadth of knowledge, or even to any depth of intel-  
lectuality. His humor has international range because it is  
constructed out of a deep comprehension of human nature  
and a profound sympathy for human relationships and  
human failings; thus, it successfully surmounts the diffi-  
culties of translation into alien tongues. Above all, he has  
sympathized with and admired the citizens of every nation,  
seeking beneath the surface veneer the universal traits of  
that nation's humanity. It is a matter of fact that he has  
made far more damaging admissions concerning America  
than concerning any other nation. "My secret, if there is a  
secret," Twain has said, "is to create humor independent of  
local conditions. Through studying humanity as exhibited  
in the people and localities I best knew and understood, I  
have sought to winnow out the encumbrance of the local.  
Humor, like morality, has its eternal verities."

**Passage 2**

Humor as a solid quality and a lucrative trade is of  
modern invention. The great men who dared to laugh in  
an earlier age than ours laughed in moderation and with

a wise purpose. Aristophanes, Shakespeare, and Chaucer  
are the true humorists of our world. They did not jest out  
of season. Their humor is precious on account of its parsim-  
ony. They do not at every turn slap their readers on the  
back and assure them that there is nothing congruous in  
the visible world. Of the irreverence that turns whatever  
is beautiful or noble into a stupid jest they knew nothing.  
They kept their humor in its proper place; they used it for a  
wise purpose; they did not degrade it to catch an easy round  
of applause; and, fortunately for them, they are today refused  
the august title of humorist, which sits so aptly upon the  
shoulders of Mark Twain.

The essence of humor is that it should be unexpected.  
The modern humorist is never unexpected. He beats the  
drum from the moment at which he appears upon the stage.  
Mark Twain brings whatever time has honored down to  
the level of a Yankee drummer. He finds every custom  
ridiculous that does not conform with the standard of the  
United States. He holds his sides when he thinks of the  
old masters. Nor does he understand that there are certain  
manifestations of genius which should be sacred even for  
the jester. In other words, Mark Twain the humorist is a  
bull in the china shop of ideas. When, as in *A Connecticut  
Yankee in King Arthur's Court*, he gave full rein to his  
fancy, he achieved such a masterpiece of vulgarity as the  
world has never seen. His book gives you the same sort  
of impression which you might receive from a beautiful  
picture over which a poisonous slug had crawled. The hint  
of magnificence is there, pitilessly deformed and defaced.  
And it is the more pitiful because he has a talent which  
stands in need of no folly for its embellishment. Had he  
never cut a joke, had he refrained always from grinning at  
grave and beautiful things, how brilliant a fame would have  
been his!

13. Which statement best describes how the authors of the two passages differ in their views of Twain's humor?
- (A) The author of Passage 1 criticizes its offensive style, whereas the author of Passage 2 deplors its American bias.
  - (B) The author of Passage 1 views it as mediocre, whereas the author of Passage 2 views it as intolerable.
  - (C) The author of Passage 1 concludes that it is trivial, whereas the author of Passage 2 concludes that it is harmless.
  - (D) The author of Passage 1 praises its universality, whereas the author of Passage 2 disparages its lack of discrimination.
  - (E) The author of Passage 1 admires its vigor, whereas the author of Passage 2 considers it understated.



14. In line 23, Passage 1, “range” most nearly means
- (A) scope
  - (B) distance
  - (C) variation
  - (D) ranking
  - (E) value
15. In lines 23-27 (“His humor . . . tongues”), the author of Passage 1 attributes Twain’s international popularity to his
- (A) knowledge of comedic style
  - (B) intellectual breadth
  - (C) understanding of people
  - (D) mastery of foreign languages
  - (E) reputation for appealing to ethnic humor
16. Which of the following most nearly captures the meaning of “winnow . . . local” (line 36, Passage 1) ?
- (A) Intermix local details with universal truths
  - (B) Take out that which prevents one from recognizing the universal
  - (C) Use the universal as a way to place the specific in context
  - (D) Devise new ways to express old truths
  - (E) Reap the benefits of local customs so as to understand the universal
17. Which of the following, if true, would most seriously undermine the main argument presented in Passage 1 ?
- (A) Humor is intrinsically connected to a sense of morality.
  - (B) Certain cultural differences are so powerful that it is impossible for them to be transcended.
  - (C) Humor is a function of imagination coupled with exaggeration.
  - (D) In order to be successful as a humorist, one must have specialized knowledge of local customs.
  - (E) Humor is based on perpetual truths.
18. Twain’s style of humor is criticized in Passage 2 mainly because the author believes that Twain
- (A) lacks the subtlety of the literary masters
  - (B) ignores local customs
  - (C) confuses the standards of different nations
  - (D) attempts too hard to appear refined
  - (E) is less amusing as a public speaker than as a writer
19. Which of the following terms would the author of Passage 2 most likely use to describe Twain?
- (A) Aristocrat
  - (B) Reformer
  - (C) Apologist
  - (D) Visionary
  - (E) Chauvinist
20. In the last sentence of Passage 2 (lines 71-74), the author indicates that Mark Twain
- (A) would have enjoyed fame despite his vulgarity and crudeness
  - (B) would have been a better writer if he had not attempted humor
  - (C) would have enjoyed a brilliant career if he had perfected his comedic technique
  - (D) was an amateur and a dilettante whose interest in humor was superficial
  - (E) was destined for failure as a result of his insensitivity to his audience
21. Which of the following, if true, would best support the main argument presented in Passage 2 ?
- (A) Literary greatness can sometimes be the subject of offensive satire.
  - (B) Certain subjects are not easily satirized.
  - (C) Intelligent men and women appreciate a good joke at their own expense every now and then.
  - (D) Humorists are likely to be well received when they undertake to ridicule respected writers of the past.
  - (E) Contemporary humorists are never as insightful as the great comic writers of the past.
22. How would the author of Passage 1 most likely respond to the assertion in Passage 2 that Twain ridicules everything “that does not conform with the standard of the United States” (lines 58-59) ?
- (A) Twain reserves his harshest criticism for America.
  - (B) Twain is a gifted American journalist.
  - (C) Twain achieved international success because he is American.
  - (D) Twain attempts to create a uniquely American style of humor.
  - (E) Twain is captivated by American culture.



23. Which of the following pairs best represents each author's attitude toward the term "humorist," as used in Passage 1 (line 3) and Passage 2 (line 62) ?

Passage 1

Passage 2

- |               |               |
|---------------|---------------|
| (A) Amusement | Anger         |
| (B) Envy      | Mockery       |
| (C) Pride     | Embarrassment |
| (D) Approval  | Smugness      |
| (E) Respect   | Disdain       |

24. How would the author of Passage 2 most likely respond to the claim made by the author of Passage 1 that Twain "admired the citizens of every nation, seeking beneath the surface veneer the universal traits of that nation's humanity" (lines 28-30) ?

- (A) Twain's humor is so unexpected that he is able to see startling aspects about the behavior of people all over the world.
- (B) Twain shares with the humorists of the past the tendency to attack foolishness whenever he sees it.
- (C) Twain is limited by his inability to see things from anything other than an American perspective.
- (D) Twain always uses his humor for a wise purpose and uses humor to emphasize the importance of people respecting each other.
- (E) The effect of Twain's probing beneath the surface is limited by the fact that he is not nearly as funny as many people claim he is.

**S T O P**

**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

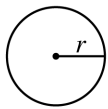
Turn to Section 8 (page 7) of your answer sheet to answer the questions in this section.

**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

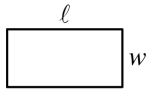
- The use of a calculator is permitted.
- All numbers used are real numbers.
- Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not drawn to scale. All figures lie in a plane unless otherwise indicated.
- 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

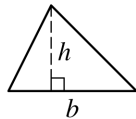


$$A = \pi r^2$$

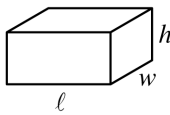
$$C = 2\pi r$$



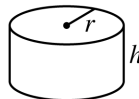
$$A = \ell w$$



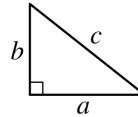
$$A = \frac{1}{2}bh$$



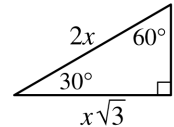
$$V = \ell wh$$



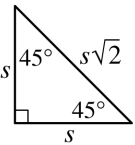
$$V = \pi r^2 h$$



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



Special Right Triangles



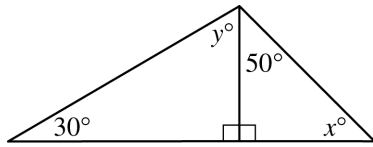
The number of degrees of arc in a circle is 360.

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

- Classified ads cost \$2.50 per 30 words at *City Newspaper*. What is the least number of words that must be deleted from the text of a 75-word classified ad to reduce the cost to \$5.00 or less?
  - 5
  - 15
  - 20
  - 30
  - 60

- If  $3x - x = 2x + x + 20$ , then  $x =$ 
  - 20
  - 10
  - 5
  - 10
  - 20

GO ON TO THE NEXT PAGE



3. In the figure above, what is the value of  $x + y$ ?

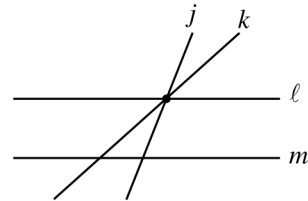
- (A) 90
- (B) 100
- (C) 110
- (D) 120
- (E) 130

4. If  $a > b > 0$ , which of the following is greater than  $\frac{a}{b}$ ?

- (A) 1
- (B)  $\frac{b}{a}$
- (C)  $\frac{1}{\frac{a}{b}}$
- (D)  $\frac{a}{2b}$
- (E)  $\frac{2a}{b}$

5. If  $\sqrt{16} = 2^k$ , what is the value of  $k$ ?

- (A) 1
- (B) 2
- (C) 3
- (D) 4
- (E) 8



6. In the figure above,  $l \parallel m$ . If  $p$  (not shown) is another line in the plane, what is the least number of points at which  $p$  can intersect these four lines?

- (A) None
- (B) One
- (C) Two
- (D) Three
- (E) Four





7. If  $-9 < x < 9$ , which of the following must be true?

- (A)  $x^2 < 9$   
 (B)  $x^3 > 9$   
 (C)  $|x| < 9$   
 (D)  $|x - 2| > 7$   
 (E)  $|x - 9| < 9$

9. The average (arithmetic mean) of  $a$ ,  $b$ , and  $c$  is equal to the median of  $a$ ,  $b$ , and  $c$ . If  $0 < a < b < c$ , which of the following must be equal to  $b$ ?

- (A)  $\frac{a + c}{2}$   
 (B)  $\frac{a + c}{3}$   
 (C)  $\frac{c - a}{2}$   
 (D)  $\frac{c - a}{3}$   
 (E)  $\sqrt{ac}$

$x$	-1	1	3	5
$k(x)$	-2	0	2	4

8. The table above gives values of the linear function  $k$  for selected values of  $x$ . Which of the following defines  $k$ ?

- (A)  $k(x) = -2x + 1$   
 (B)  $k(x) = -x + 1$   
 (C)  $k(x) = \frac{1}{2}x - \frac{1}{2}$   
 (D)  $k(x) = x - 1$   
 (E)  $k(x) = 2x - 1$

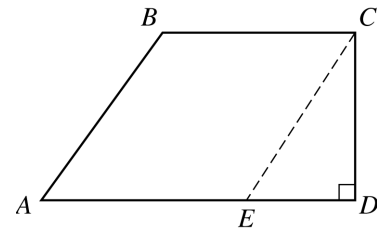
10. There are  $x$  exposures on a certain roll of film. The cost of the roll of film is  $d$  dollars, and the cost to develop the film is  $c$  cents per exposure. What is the cost, in dollars, to purchase and develop the roll of film?

- (A)  $\frac{cx}{100} + d$   
 (B)  $\frac{dx}{100} + c$   
 (C)  $\frac{cdx}{100}$   
 (D)  $cx + 100d$   
 (E)  $100dx + c$



11. A circular piece of cardboard is cut in half along a diameter. If the diameter is 12 inches, what is the perimeter, in inches, of one of the semicircular pieces?

(A)  $6\pi + 6$   
 (B)  $6\pi + 12$   
 (C)  $12\pi + 6$   
 (D)  $12\pi + 12$   
 (E)  $12\pi + 24$



13. In the figure above, the length of  $\overline{CD}$  is 4, and the length of each side of quadrilateral  $ABCE$  is 5. What is the area of quadrilateral  $ABCD$ ?

(A) 32  
 (B) 28  
 (C) 27  
 (D) 26  
 (E) 22



R Y G W B R Y G



Y G W B

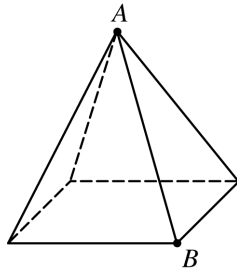
12. The figure above shows the remaining pieces of a paper chain from which a section has been removed. The first link of the original chain was red and the colors of the links formed the repeating pattern of red (R), yellow (Y), green (G), white (W), and blue (B) from left to right. Which of the following could be the number of links in the section that was removed?

(A) 60  
 (B) 61  
 (C) 62  
 (D) 63  
 (E) 64

$A, B, C, D, E, F, G$

14. A list consists of all possible three-letter arrangements formed by using the letters above such that the first letter is  $D$  and one of the remaining letters is  $A$ . If no letter is used more than once in an arrangement in the list and one three-letter arrangement is randomly selected from the list, what is the probability that the arrangement selected will be  $DCA$ ?

(A)  $\frac{1}{5}$   
 (B)  $\frac{1}{6}$   
 (C)  $\frac{1}{9}$   
 (D)  $\frac{1}{10}$   
 (E)  $\frac{1}{12}$



15. The pyramid above has a square base and four congruent triangular faces. The height of the pyramid is 5 inches and each edge of the base is 4 inches long. What is the length of  $\overline{AB}$ , in inches?

- (A)  $\sqrt{29}$  (approximately 5.39)  
(B)  $\sqrt{33}$  (approximately 5.74)  
(C)  $\sqrt{39}$  (approximately 6.24)  
(D)  $\sqrt{43}$  (approximately 6.56)  
(E)  $\sqrt{57}$  (approximately 7.55)

16. For all  $x \geq -1$ , let the function  $f$  be defined as  $f(x) = \sqrt{x+1}$ . Which of the following is equal to  $f(15) - f(8)$ ?

- (A)  $f(-1)$   
(B)  $f(0)$   
(C)  $f(1)$   
(D)  $f(7)$   
(E)  $f(\sqrt{7})$

**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 9**

Time — 20 minutes

19 Questions

**Turn to Section 9 (page 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:**

Hoping to ----- the dispute, negotiators proposed a compromise that they felt would be ----- to both labor and management.

- (A) enforce . . useful  
 (B) end . . divisive  
 (C) overcome . . unattractive  
 (D) extend . . satisfactory  
 (E) resolve . . acceptable

(A) (B) (C) (D) ●

- Seeking to ----- what people view and read by determining what art and literature should be available, censorship laws directly ----- free expression.
 

(A) govern . . liberate  
 (B) juxtapose . . prescribe  
 (C) defer . . nullify  
 (D) control . . prohibit  
 (E) balance . . promote
- Myra laughed exuberantly and embraced her friends repeatedly, so ----- was she about having been selected.
 

(A) ambivalent (B) quizzical (C) euphoric  
 (D) jaded (E) exacting
- It would be a waste of time for any reviewer to bother ----- a book whose utter worthlessness is ----- to even the least discerning reader.
 

(A) enjoying . . doubtful  
 (B) mocking . . figurative  
 (C) assessing . . welcome  
 (D) condemning . . obvious  
 (E) ignoring . . obnoxious
- The new policy has been called a quiet revolution because, though introduced without -----, it is already producing ----- changes.
 

(A) warning . . specious  
 (B) fanfare . . momentous  
 (C) concealment . . transient  
 (D) hesitation . . ostensible  
 (E) debate . . negligible
- When two chemical compounds are combined, a ----- effect can be achieved: the resulting combination can be more potent than either of the individual compounds alone.
 

(A) synergistic (B) naturalistic (C) competitive  
 (D) retroactive (E) neutralizing
- Artists who are described as ----- are the first to experiment with new forms or concepts.
 

(A) aesthetic (B) partisan (C) decorous  
 (D) cerebral (E) avant-garde

GO ON TO THE NEXT PAGE 



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

**Questions 7-19 are based on the following passage.**

*The following passage was adapted from a book about the Great Plains, a plateau extending westward from the prairies of central North America to the eastern base of the Rocky Mountains.*

Line Before the railroads were built, the way west followed  
5 the rivers: west along the Platte into Wyoming, over South  
Pass, up the Snake River into the Oregon Territory; or up  
the Missouri through the Dakotas and into Montana, then  
west along the Yellowstone. It was the easiest but not the  
most accurate way to see the country. The country looked  
better or worse from the prospect of the river; I can't say  
which, not having gone that way. But the country looked  
different, certainly, not at all like the Great Plains. There  
10 are many reasons why it could not have seemed the same.

A river is an edge, for one thing, and not simply in the  
cartographer's sense that it divides one piece of ground  
from another. It is a biological edge. There worlds collide,  
strangers meet, and much business, although not of the  
15 monetary kind, is transacted. Edges in the natural world  
are like cities in human cultures. They are the cosmopolitan  
places—populous, noisy, gaudy, rich, exciting—where one  
expects the unexpected and the extraordinary is ordinary.  
They are altogether unlike the provinces, where the surprises  
20 lie not in discovering what is odd or new but in appreciating,  
at last, what is routine and everyday, a larger accomplish-  
ment than one might imagine. The rivers of the earliest  
westward travelers passed through the provinces, but these  
rivers revealed a world that was not, in itself, characteristic  
25 of those regions.

Rivers carry water, for instance, but the region of the  
Great Plains is by its nature arid—not so arid as the deserts,  
although for a long time the Great Plains were regarded  
as a desert, but arid enough to inhibit the growth of trees,  
30 except along rivers. You could no more know the Great  
Plains by canoeing up the Missouri than you could see  
the Sonoran Desert by rafting down the Colorado. River  
travelers poled or steamed up the channels by day and  
fished for supper by twilight. The Blackfeet, the lords of  
35 the Great Plains and the prairie's most serious students,  
would no sooner have dined on catfish than we would on  
a dish of fricasseed sewer rat. The mucus-covered creatures  
of the muddy river bottoms, the Blackfeet thought, were  
simply not the best the plains had to offer; far from being  
40 palatable, catfish were repulsive, disgusting.

The rivers, moreover, seek the level, that is, the low  
ground, but the plains are the province of the big sky. The  
rivers are always running away to the sea, but the plains  
are always rising toward the mountains. They are contrary  
45 forces working in contrary directions. The rivers dig in; the

plains surmount. A river closes in, rounds the bend, runs  
between banks, hides shallows and snags, tumbles over  
rapids, skirts islands, is forever calling attention to itself,  
like a trail, which a river inevitably becomes. The plains,  
50 on the other hand, open out, unfold, beg the long and track-  
less view. The river draws a line; the plains reveal a space.

It is like the difference between an interstate expressway  
and a county road. An interstate is broad and swift and, in  
its own way, keeps to the level. You can drive on an inter-  
55 state across the most endlessly enchanting of countryside  
and encounter only an unrelieved monotony. The express-  
way exists in its own world, an unwalled tunnel, and moves  
at its own urgent pace. It has a rhythm and a rigidly regular  
time quite distinct from the landscape it crosses. It would  
60 not serve its purposes in any other way.

The county road, on the other hand, moves in and  
through the landscape and exists as one more feature of  
it. Where there is a tree and a sun, the road falls under  
shadow; where there is a stream, the road follows down  
65 one bank, across the water, and up the other bank; where  
a tall hill intervenes, the road goes around rather than  
through it and the traveler enjoys the sensation of having  
moved among hills; at the village, the road unhesitatingly  
takes it in, and your own pace slows to accommodate the  
70 taking in, rather than swooping to the right or left around  
the settlement at a curve calculated for high-speed safety.  
A stray cow might cross in front of you and you will be  
obliged to stop to let it pass, and so you will chance to  
hear the song of the meadowlark on the fence post. The  
75 hay wagon ahead cannot be gotten around; you are forced  
to reduce your own speed to the local standard, and so you  
see the marsh hawk circling above a pothole.

The best way to go west, therefore, is the slowest way  
possible and across country rather than along the rivers,  
80 avoiding both the old watery rivers and the new ones of  
asphalt and cast concrete.

7. The author's primary purpose in the passage is to

- (A) introduce the narrative figure of the traveler
- (B) convey the excitement felt by the earliest explorers
- (C) encourage an appreciation of the Great Plains
- (D) establish the vanished beauty of western rivers
- (E) confirm the mysterious nature of the Great Plains



8. For the author, a “biological edge” (line 13) represents a
- (A) place where communities mingle
  - (B) barrier that separates different groups
  - (C) contrast to an urbanized environment
  - (D) change over time in the geography of the land
  - (E) clash between incompatible ways of life
9. In line 20, “appreciating” most nearly means
- (A) preserving from harm
  - (B) increasing in value
  - (C) understanding better
  - (D) praising
  - (E) thanking
10. In lines 26-32 (“Rivers carry . . . Colorado”), the author implies that viewing the plains from the prospect of a river might lead one to conclude that the plains are
- (A) less arid than they actually are
  - (B) less populous than they actually are
  - (C) rising more rapidly toward the mountains than they actually do
  - (D) not fertile enough to sustain the growth of trees
  - (E) not as arid as the desert
11. The author mentions the Blackfeet (lines 34-40) primarily because
- (A) they appreciated the plains
  - (B) they were experts in using the resources of the rivers
  - (C) they cared about the ecology of the plains
  - (D) river travelers learned a lot from them
  - (E) local people were in awe of them
12. The author indicates that the view offered by the interstate is similar to that offered by the river in that both
- (A) are teeming with unexpected surprises
  - (B) are reflective of environmental changes
  - (C) are subjected to minor obstructions
  - (D) give the traveler an unobstructed look at nature
  - (E) give an erroneous impression of the countryside
13. In context, the word “tunnel” (line 57) most directly emphasizes the expressway’s
- (A) function as a means of escape from provincial dullness
  - (B) role as a connection between two points
  - (C) independence from its surroundings
  - (D) intrusion into the landscape
  - (E) destruction of wildlife
14. The description of the county road (lines 61-77) suggests that it is most like the Great Plains in the way that it
- (A) encourages a feeling of satisfaction with one’s lot in life
  - (B) fosters a sense of the world around one
  - (C) creates a desire to cultivate stillness and silence
  - (D) evokes a sense of power and mastery over the land
  - (E) imparts an intuitive awareness of the complexity of all life
15. Both the “stray cow” (line 72) and the “hay wagon” (line 75) are presented as
- (A) features of a rural landscape that are depicted sentimentally in American art
  - (B) objects that present unexpected dangers to the unwary
  - (C) memories of the author’s childhood that are typical of the Great Plains
  - (D) obstacles that force people to pay attention to the beauty of their surroundings
  - (E) symbols of an agrarian ideal that attracted settlers to the west
16. The opinion expressed in lines 78-81 (“The best . . . concrete”) assumes that the westward traveler
- (A) is familiar with the Great Plains
  - (B) dislikes cities
  - (C) appreciates the slow pace of river travel
  - (D) is interested in studying different species in nature
  - (E) wants to savor the countryside



17. How is the way referred to in line 78 “best”?

- (A) It is safe and easy.
- (B) It provides the most insight.
- (C) It is the most convenient.
- (D) It has the most historical significance.
- (E) It illustrates the author’s fund of knowledge.

18. Which of the following best expresses the author’s central point about river travel?

- (A) It was often hazardous.
- (B) It caused disputes between travelers and the residents of the Northwest Territory.
- (C) It was an inefficient way to travel.
- (D) It offered little opportunity to learn about the landscape of the Great Plains.
- (E) It offered the safest route to the West Coast.

19. The passage as a whole most fully answers which question?

- (A) Which western river provides the best access to the mountains?
- (B) Which ecosystems of the Great Plains are most exciting for visitors?
- (C) What do the rivers of the West teach us about our past?
- (D) What route west provides most information about the Great Plains?
- (E) How can one identify the best scenery in the Great Plains?

**S T O P**

**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 (page 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.

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:

Laura Ingalls Wilder published her first book and she was sixty-five years old then.

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

(A) ● (C) (D) (E)

1. The amount of garbage produced in the United States could be reduced by recycling trash, minimizing packaging, and developing new technology for incinerators and landfills.

- (A) and developing new technology
- (B) and if they develop new technology
- (C) and also by developing new technology
- (D) and new technology being developed
- (E) and if there was new technology

2. Tickets are available at the box office they can be picked up one hour before the performance.

- (A) at the box office they can be picked up one hour before the performance
- (B) at the box office; they can be picked up one hour before the performance
- (C) one hour before the performance, they can be picked up at the box office
- (D) and that can be picked up at the box office one hour before the performance
- (E) at the box office, one hour before the performance is when they can be picked up

3. Medical research now emphasizes that the best treatment for many diseases is the body's own defenses being stimulated.

- (A) the best treatment for many diseases is the body's own defenses being stimulated
- (B) the best treatment for many diseases is stimulation of the body's own defenses
- (C) there should be stimulation of the body's own defenses for the best treatment for many diseases
- (D) there should be a stimulation of the body's own defenses to achieve the best treatment for many diseases
- (E) the body's own defenses should have stimulation for the best treatment for many diseases

4. Some political scientists are convinced that the major conflict toward democracy and communism is moral.

- (A) toward democracy and communism is moral
- (B) is a moral one between democracy and communism
- (C) between democracy, compared to communism, is a moral one
- (D) is a moral one for democracy, compared to communism
- (E) between democracy and communism is a moral one





5. Until just recently many students would take lengthy trips during spring break rather than temporary jobs like now.
- (A) break rather than temporary jobs like now  
 (B) break instead of temporary jobs like now  
 (C) break; now they take temporary jobs  
 (D) break; instead, students are taking temporary jobs  
 (E) break, but now it is temporary jobs
6. To meet the college's requirement of service to her community, 40 hours of her time to Habitat for Humanity were volunteered by Laurie.
- (A) 40 hours of her time to Habitat for Humanity were volunteered by Laurie  
 (B) Laurie volunteered 40 hours of her time to Habitat for Humanity  
 (C) 40 hours of her time to Habitat for Humanity was what Laurie volunteered  
 (D) through 40 hours of volunteering by Laurie to Habitat for Humanity  
 (E) Laurie, to Habitat for Humanity, was volunteering 40 hours of her time
7. Reviews of books and films have generally been exempt from the standards of libel that are applied to news stories, but they are now questioning the distinction between reporting and criticism.
- (A) they are now questioning the distinction between reporting and criticism  
 (B) questions are now being asked by them as to the distinction between reporting and criticism  
 (C) the distinction between reporting and criticism is now being questioned  
 (D) the question they are asking now is whether there is a distinction between reporting and criticism  
 (E) the distinction they make between reporting and criticism is now questioned
8. A writer who well understood the plight of the underprivileged, many acclaim Richard Wright as the novelist of the downtrodden.
- (A) many acclaim Richard Wright as  
 (B) many have acclaimed Richard Wright as  
 (C) Richard Wright is being acclaimed by many as  
 (D) Richard Wright has been widely acclaimed as  
 (E) widely acclaimed is Richard Wright as
9. Having no additional funds to spend, the meeting of the budget committee was promptly concluded.
- (A) the meeting of the budget committee was promptly concluded  
 (B) the meeting of the budget committee concluded promptly  
 (C) the conclusion of the budget committee meeting was prompt  
 (D) the budget committee promptly concluded its meeting  
 (E) the budget committee's meeting was promptly concluded
10. In the early songs of the Beatles, one hears plaintive Blues-inspired melodies that would seem to be more a product of rural southern America than an English industrial city.
- (A) a product of rural southern America than an English industrial city  
 (B) a product from rural southern America than that of an English industrial city  
 (C) produced in rural southern America than by an English industrial city  
 (D) a product out of rural southern America than from an English industrial city  
 (E) a product of rural southern America than of an English industrial city
11. In 1968 air pollution from automobile exhaust, particularly like that in the Los Angeles environs, became of an increasingly more urgent concern to environmentalists.
- (A) like that in the Los Angeles environs, became of an increasingly more urgent  
 (B) of the sort found in the Los Angeles area, became an increasingly urgent  
 (C) such as you have in the area of Los Angeles, became of increasingly more urgent  
 (D) like the kind in and around Los Angeles and its environs, became an increasingly urgent  
 (E) the kind similar to the Los Angeles area, became an increasingly more urgent



12. Although long considered a vestigial organ that has no function in humans, the appendix, some scientists believe, may have a significant role as part of the body's immune system.
- (A) the appendix, some scientists believe, may have
  - (B) the appendix, which, some scientists believe, may have
  - (C) the appendix, in the belief of some scientists, is possibly having
  - (D) the appendix is believed by some scientists as perhaps having
  - (E) some scientists believe the appendix may have
13. Failing to anticipate the sharp downturn in the economy, millions of dollars were lost through the investment fund's managers' slowness to act.
- (A) millions of dollars were lost through the investment fund's managers' slowness to act
  - (B) millions of dollars were lost due to the slowness of the investment fund's managers to act
  - (C) the investment fund's managers were slow to act, millions of dollars were lost as a result
  - (D) the investment fund's managers were slow to act and thus lost millions of dollars
  - (E) the investment fund lost millions of dollars because its managers acted too slowly
14. Most often defenders of art have justified its existence with their pointing out a function that nothing but art itself could perform.
- (A) with their pointing out a function that nothing but art itself could perform
  - (B) by them pointing out a function that only art could perform
  - (C) through the pointing out of a function performed by art alone
  - (D) by pointing to some function that art alone can perform
  - (E) through their having pointed to a function performed by art itself

**S T O P**

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