

# SAT Practice Test #5



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## 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.

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

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

A better understanding of other people contributes to the development of moral virtues. We shall be both kinder and fairer in our treatment of others if we understand them better. Understanding ourselves and understanding others are connected, since as human beings we all have things in common.

Adapted from Anne Sheppard, *Aesthetics: An Introduction to the Philosophy of Art*

**Assignment:** Do we need other people in order to understand ourselves? Plan and write an essay in which you develop your point of view on this issue. Support your position with reasoning and examples taken from your reading, studies, experience, or observations.

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

**BEGIN WRITING YOUR ESSAY ON PAGE 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  
24 Questions

**Turn to Section 2 (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. Like many other groups of people in the United States who have needed laws to ----- equal rights, Americans with disabilities have had to ----- legislation addressing their concerns.  
(A) guarantee . . lobby for  
(B) preclude . . enact  
(C) ascertain . . consolidate  
(D) compound . . contend with  
(E) suppress . . ratify
2. The café attracts a ----- clientele: a startlingly heterogeneous group of people collects there.  
(A) motley (B) callous (C) languid  
(D) mysterious (E) humane

3. The second edition of the textbook provides ----- footnotes; since the first edition, the editors have apparently ----- a great deal of background data.

- (A) meager . . accumulated
- (B) illegible . . clarified
- (C) copious . . amassed
- (D) voluminous . . excised
- (E) monotonous . . embellished

4. Professor Fernandez has been ----- about most of the purportedly humanitarian aspects of the colonial government and has insisted that its actions were, on the contrary, -----.

- (A) dubious . . self-serving
- (B) enthusiastic . . contemptible
- (C) disparaging . . sporadic
- (D) excited . . gratuitous
- (E) disillusioned . . benevolent

5. Concrete is ----- of many materials, a composite of rocks, pebbles, sand, and cement.

- (A) a conflagration (B) a distillation
- (C) a concordance (D) an aberration
- (E) an amalgamation

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

Questions 6-7 are based on the following passage.

Choice of language frequently plays a significant role in the development of the Hispanic American writer's voice and message. "I lack language," wrote Cherrie Moraga, author of *Loving in the War Years: lo que nunca pasó por sus labios*. The use of two languages in the title itself expresses the difficulty that the author perceives in narrating personal experience in one language when one has lived in another.

- Line 5
6. The author cites Moraga's book primarily in order to
- (A) emphasize the challenges that some Hispanic American writers face in getting their work published
  - (B) celebrate the achievements of a young Hispanic American novelist
  - (C) demonstrate the expressiveness of a writer who has mastered several languages
  - (D) confirm that American writers are exploring new artistic approaches
  - (E) illustrate a dilemma that Hispanic American writers often face
7. Which of the following situations is most analogous to the problem presented in the passage?
- (A) A Hispanic American artist living in Chile has difficulty selling his paintings.
  - (B) A Cherokee columnist assumes that readers of national newspapers are unfamiliar with Native American cultures.
  - (C) An African American novelist draws upon the historical past of African Americans to bring nuance to her work.
  - (D) A Russian novelist, living in the United States, finds it difficult to articulate insights in American English.
  - (E) An Asian American journalist attempts to write essays for both Japanese and American audiences.

Questions 8-9 are based on the following passage.

Line 5

The science fiction masterpiece *2001: A Space Odyssey* will probably be remembered best for the finely honed portrait of HAL, the Heuristically programmed ALgorithmic computer that could not only reason but also experience human feelings and anxiety. Surprisingly, perhaps, computers have in some ways surpassed writer Arthur C. Clarke's and film director Stanley Kubrick's vision of computing technology at the turn of the millennium. Today's computers are vastly smaller and more portable than HAL and use software interfaces that forgo the type of manual controls found on the spaceship that carried HAL.

10

8. The author's attitude toward the "portrait" (line 3) is best characterized as one of
- (A) resentment
  - (B) appreciation
  - (C) confusion
  - (D) awe
  - (E) derision
9. In the last sentence, the reference to "software interfaces" and "manual controls" provides an example of the
- (A) superiority of current computers to those envisioned by Clarke and Kubrick
  - (B) amazing ability of Clarke and Kubrick to envision certain aspects of the future
  - (C) many ways that computers like HAL could be accessed by human beings
  - (D) consistent attempts by computer programmers to override certain software
  - (E) deficiencies of current computers attempting to simulate human intelligence and emotions

Questions 10-16 are based on the following passage.

*In this passage, the author discusses the question of women's rights during the Revolutionary War period.*

Among the founding fathers, there was no controversy or debate on the definition of a voter as male. The United States Constitution embodied the patriarchal assumption shared by the entire society, that women could not participate in government. It was felt necessary by the founders to define the status of indentured servants, slaves, and American Indians in regard to voting rights, but there was no need felt even to mention, much less to explain or justify, that while women were to be counted among "the whole number of free persons" in each state for purposes of representation, they had no right to vote or to be elected to public office. The issue of the civil and political status of women never entered the debate.

Yet women in large numbers had been involved in political actions in the American Revolution and had begun to define themselves differently than had their mothers and grandmothers. At the very least, they had found ways of exerting influence on political events by fund-raising, tea boycotts, and actions against profiteering merchants. Loyalist women (those that sided with the British) made political claims when they argued for their property rights independent of those of their husbands or when they protested against various wartime atrocities. Several influential female members of elite families privately raised the issue of women's rights as citizens. Unbidden and without a recognized public forum, and emboldened by the revolutionary rhetoric and the language of democracy, women began to reinterpret their own status. Like the slaves, women took literally the preamble of the Declaration of Independence, which states that all men are created equal. The institution of slavery was hotly contested by the founding fathers and highly controversial. But unlike slaves, women were not defined as being even problematic in the debate.

The well-known exchange of private letters between John Adams and his wife Abigail sharply exemplifies the limits of consciousness on this issue of women's rights. Here was a well-matched and loving couple, but unusual in the wife's political interest and involvement. In 1776, Abigail Adams urged her husband, in a letter, to "remember the ladies" in his work on the legal code for the new republic, reminding him that wives needed protection against the "naturally tyrannical" tendencies of their husbands. Abigail's language was appropriate to women's subordinate status in marriage and society—she asked for men's chivalrous protection from the excesses of other men. Chiding his wife for being "saucy," he trivialized her argument by claiming that men were, in practice, "the subjects. We have only the name of masters." A problem outside of definition and discourse could not be taken seriously. And yet, for an instant, John Adams allowed himself to think seriously

on this subject—his wife's code of laws, if enacted, would lead to social disorder: "Depend upon it, we know better than to repeal our Masculine systems."

Here we see, in its extreme manifestation, the impact on history of men's power to define. Having established patriarchy as the foundation of family and the state, men viewed it as immutable and made it the very definition of social order. To challenge it was seen as both ludicrous and profoundly threatening.

10. The author most likely includes the quotation from the United States Constitution in line 10 in order to
- (A) point out the incongruity of women being characterized as free while having no political rights
  - (B) demonstrate that women were in fact free, while servants, slaves, and American Indians were not
  - (C) suggest that women could be appointed as representatives but could not vote
  - (D) illustrate the difficult task of ensuring equitable political representation
  - (E) explain how women could be represented in government without being considered free citizens
11. The author specifies "fund-raising, tea boycotts, and actions against profiteering merchants" in lines 18-19 in order to
- (A) prove that women altered the course of the American Revolution through their activities
  - (B) demonstrate how women protested male dominance
  - (C) point out the only activities available to women during this period
  - (D) indicate that women only engaged in political activities that directly affected their households
  - (E) give examples of political activities undertaken by women during the Revolutionary War
12. The author mentions "Loyalist women" (line 20) to demonstrate that
- (A) women who demanded property rights during the American Revolution were not considered disloyal
  - (B) women on both sides of the American Revolution engaged in political activities
  - (C) Loyalist women were more vocal about their political views than other women
  - (D) Loyalist women were noted for their tea boycotts and fund-raising
  - (E) Loyalist women tended to be more socially influential than those that supported the revolution



13. The author describes John and Abigail Adams as "a well-matched and loving couple" (line 38) to point out that
- (A) the couple fundamentally agreed on political issues
  - (B) the couple were compatible until Abigail Adams became outspoken in her political views
  - (C) even compatible marriage partners did not agree on issues involving women's rights
  - (D) contrary to public belief, John and Abigail Adams were a happily married couple
  - (E) most married partners do not agree on issues that involve conflicts between men and women
14. In line 43, "naturally" is closest in meaning to
- (A) appropriately
  - (B) authentically
  - (C) thoroughly
  - (D) innately
  - (E) unsurprisingly
15. The author uses the phrase "for an instant" (lines 50-51) in order to
- (A) point out John Adams' desire for an immediate solution to a pressing issue
  - (B) suggest disapproval of any amount of time devoted to such an insignificant issue
  - (C) indicate that John Adams glimpsed his wife's point despite his cultural limitations
  - (D) express approval for John Adams' swift response to a crucial issue
  - (E) show outrage at John Adams' outright dismissal of Abigail Adams' request
16. In the final sentence, the author's characterization of the challenge to the social order serves to
- (A) suggest that such a challenge was in the militant spirit of the Founding Fathers
  - (B) express ambivalence toward the political assumptions of the Founding Fathers
  - (C) show the author's disapproval of such an ill-fated effort
  - (D) indicate that the men of the era both ridiculed and feared a change in the social order
  - (E) imply that women of the era recognized the futility of their efforts to gain their rights

Questions 17-24 are based on the following passage.

The following is excerpted from an essay written in 1995 to acquaint a general audience with new developments in research on play among animals.

Consider the puppy. At only three weeks of age, this tiny ball of fur has already begun gnawing, pawing, and tugging at its littermates. At four to five weeks, its antics rival those of a rambunctious child, chasing and wrestling with its siblings at all hours of the day and night.

Such behavior is not unusual among social mammals. From human children to whales to sewer rats, many groups of mammals and even some birds play for a significant fraction of their youth. Brown bear cubs, like puppies and kittens, stalk and wrestle with one another in imaginary battles. Deer play tag, chasing and fleeing from one another. Wolves play solitary games with rocks and sticks. Chimpanzees tickle one another.

However fascinating these displays of youthful exuberance may be, play among animals was ignored by scientists for most of this century. Biologists assumed that this seemingly purposeless activity had little effect on animal development, was not a distinct form of behavior, and was too nebulous a concept either to define or to study. Even the term "play" caused problems for researchers, because it suggests that watching animals goof off is not an activity for serious scientists.

But a steady accumulation of evidence over the past two decades now suggests that play is a distinct form of behavior with an important role in the social, physical, and mental development of many animals. In one study, kittens, mice, and rats were found to play the most at ages when permanent changes were occurring in their muscle fiber and the parts of their brains regulating movement. Kittens were most playful between 4 and 20 weeks of age; rats, from 12 to 50 days; and mice, from 15 to 29 days. Development at those ages is comparable to that of a two-year-old human infant. At these precise times in the development of these animals, muscle fibers differentiate and the connections to areas of the brain regulating movement are made. Such changes apparently are not unique to kittens, mice, and rats, but apply to mammals in general.

Thus, research on play has given biologists an important tool with which to probe the development of the brain and motor systems of animals. The study on rats, kittens, and mice may, for instance, provide a physiological explanation for why infant animals employ in their play the same kinds of behavior that they will later use as adults. By stalking and capturing imaginary prey over and over again, a kitten builds its muscle and brain connections in a way that allows it to perform those actions later in life.

Play may also provide insight into the social development of animals. When the rough-and-tumble of play ends traumatically with a yelp or a shriek, young animals may be learning the limits of their strength and how to control themselves among others. Those are essential lessons for an animal living in a close-knit group. Perhaps, some scientists

guess, as mammals gathered into social groups, play took on the function of socializing members of the group. Not everyone agrees with this theory, though. Another explanation is that play may not have evolved to confer any advantage but is simply a consequence of higher cognitive abilities or an abundance of nutrition and parental care.

Why did play evolve? No one knows for certain, but after ten years of studying brown bears of Alaska, biologist Robert Fagen has his own opinion. "Why do people dance?" he asks. "Why do birds sing? For the bears, we're becoming increasingly convinced that aesthetic factors are primary." Sometimes, that is, animals play simply for the fun of it.

17. In line 4, "rival" is closest in meaning to

- (A) mock
- (B) dispute
- (C) nearly equal
- (D) play with
- (E) contend against

18. In the second paragraph (lines 6-13), the references to animals primarily serve to

- (A) suggest that animal play can be difficult to study
- (B) prove a controversial point about animal behavior
- (C) contrast with a previous description of animal play
- (D) emphasize physical similarities between animals and humans
- (E) show the variety of animal play

19. The findings of "one study" (line 26) primarily support which of the following claims?

- (A) Play is difficult to study because it takes so many forms.
- (B) Most animal species tend to begin playing as they approach adulthood.
- (C) Play is a key factor in the social organization of some animal groups.
- (D) Researchers do not always recognize behavioral similarities among diverse species.
- (E) Research into play may help us understand animals' physiological development.



20. The principle illustrated in lines 43-46 ("By stalking . . . life") is best conveyed by which additional example?
- (A) Some puppies play only with their siblings.
  - (B) A toddler prefers to play with one particular toy.
  - (C) A lion is trained to jump through a hoop.
  - (D) Young monkeys chase each other up and down a tree.
  - (E) Certain species of birds migrate south every fall.
21. Which would be most likely to learn the "essential lessons" mentioned in line 51 ?
- (A) A class setting out on a field trip
  - (B) A young athlete playing on a soccer team
  - (C) A small child attempting to roller-skate
  - (D) A bear defending its young
  - (E) A kitten playing with a ball of string
22. The "theory" (line 55) and the "opinion" (line 61) differ primarily about whether
- (A) animals enjoy playing
  - (B) play occurs mainly among social animals
  - (C) animals learn to play by watching one another
  - (D) play serves a useful purpose
  - (E) play is pleasurable to watch
23. The discussion of Robert Fagen's work (lines 59-65) serves to
- (A) strengthen an argument with corroborating evidence
  - (B) show that varying explanations may be logically related
  - (C) illustrate the resistance of conservative scientists to new ideas
  - (D) demonstrate how a widely held belief loses credibility as new findings emerge
  - (E) expand the discussion to include a different type of explanation
24. In lines 61-64, Fagen compares bears playing to people dancing in order to suggest that both activities
- (A) have little practical function
  - (B) involve peer groups in shared physical activity
  - (C) promote physical coordination
  - (D) are often observed in younger animals
  - (E) are commonly associated with social development

## 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  
18 Questions

**Turn to Section 3 (page 4) 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

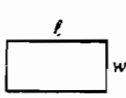
- The use of a calculator is permitted.
- All numbers used are real numbers.
- Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not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

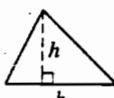


$$A = \pi r^2$$

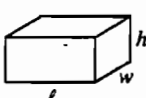
$$C = 2\pi r$$



$$A = \ell w$$



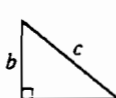
$$A = \frac{1}{2}bh$$



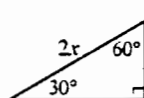
$$V = \ell wh$$



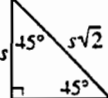
$$V = \pi r^2 h$$



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



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. According to a certain recipe, 25 pounds of flour are needed to make 300 rolls. At this rate, how many pounds of flour are needed to make 12 rolls?

(A) 1  
(B) 2  
(C) 3  
(D) 4  
(E) 6

2. If  $xy = 10$ , what is the value of  $2 \cdot \frac{x}{y} \cdot y^2$ ?

(A) 5  
(B) 3  
(C) 10  
(D) 12  
(E) 20

3. If  $x + y = 30$  and  $x > 8$ , then which of the following must be true?

(A)  $y > 0$   
 (B)  $y < 22$   
 (C)  $y = 22$   
 (D)  $y > 22$   
 (E)  $x < 30$

$P(3, 2)$

$Q(7, 2)$

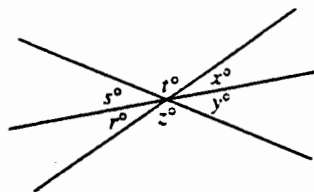
$R(7, 4)$

4. The coordinates of points  $P$ ,  $Q$ , and  $R$  in the  $xy$ -plane are given above. What is the perimeter of  $\triangle PQR$ ?

(A) 12  
 (B) 14  
 (C)  $6 + \sqrt{20}$  (approximately 10.47)  
 (D)  $6 + \sqrt{32}$  (approximately 11.66)  
 (E)  $\sqrt{164}$  (approximately 12.81)

5. The first 5 terms in a sequence are shown above. Each term after the first is found by adding 9 to the term immediately preceding it. Which term in this sequence is equal to  $8 + (26 - 1)9$ ?

(A) The 8th  
 (B) The 9th  
 (C) The 25th  
 (D) The 26th  
 (E) The 27th



6. Three lines intersect in a point as shown in the figure above. Which of the following pairs of angle measures is NOT sufficient for determining all six angle measures?

(A)  $t$  and  $z$   
 (B)  $t$  and  $y$   
 (C)  $s$  and  $x$   
 (D)  $r$  and  $t$   
 (E)  $r$  and  $s$

7. The sum of two numbers that differ by 1 is  $t$ . In terms of  $t$ , what is the value of the greater of the two numbers?

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

NUMBER OF SIBLINGS PER STUDENT  
IN A PRESCHOOL CLASS

Number of Siblings	Number of Students
0	3
1	6
2	2
3	1

8. The table above shows how many students in a class of 12 preschoolers had 0, 1, 2, or 3 siblings. Later, a new student joined the class, and the average (arithmetic mean) number of siblings per student became equal to the median number of siblings per student. How many siblings did the new student have?
- (A) 0  
(B) 1  
(C) 2  
(D) 3  
(E) 4

**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.

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

Write answer in boxes. →

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

Grid in result. →

← Fraction line

Answer: 2.5

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

← Decimal point

Answer: 201

Either position is correct.

2	0	1
○	○	○
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0

**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 |
| ○ | ○ | ○ |
| 1 | 0 | 0 |
| 2 | 0 | 0 |
| 3 | 0 | 0 |
| 4 | 0 | 0 |
| 5 | 0 | 0 |
| 6 | 0 | 0 |
| 7 | 0 | 0 |
| 8 | 0 | 0 |
| 9 | 0 | 0 |

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

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

9. If  $2(x - 3) = 8$ , what does  $\frac{x - 3}{x + 3}$  equal?

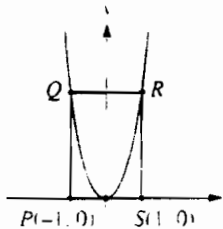
10. When twice a number is decreased by 3, the result is 253. What is the number?



OUTDOOR SNEAKER COMPANY'S  
JULY PRODUCTION

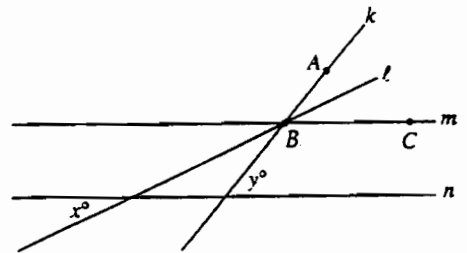
	High-tops	Low-tops	Total
White	3,600		
Black		1,500	
Total		5,500	10,000

11. Outdoor Sneaker Company manufactures only white sneakers and black sneakers, both of which are available as either high-tops or low-tops. On the basis of the information in the table above, how many black sneakers did Outdoor Sneaker Company manufacture in July?



12. In the figure above,  $PQRS$  is a rectangle, and points  $Q$  and  $R$  lie on the graph of  $y = ax^2$  where  $a$  is a constant. If the perimeter of  $PQRS$  is 10, what is the value of  $a$ ?

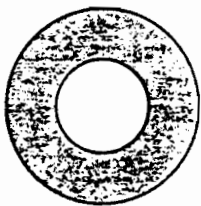
13. If  $ab + c = a + bc$ , what is the value of  $b$  when  $a = 2$  and  $c = 3$ ?



Note: Figure not drawn to scale.

14. In the figure above,  $m \parallel n$  and  $l$  bisects  $\angle ABC$ . If  $45 < x < 55$ , what is one possible value for  $x$ ?

15. The Acme Plumbing Company will send a team of 3 plumbers to work on a certain job. The company has 4 experienced plumbers and 4 trainees. If a team consists of 1 experienced plumber and 2 trainees, how many different such teams are possible?



Note: Figure not drawn to scale.

16. The figure above consists of two circles that have the same center. If the shaded area is  $64\pi$  square inches and the smaller circle has a radius of 6 inches, what is the radius, in inches, of the larger circle?

17. If  $p$ ,  $r$ , and  $s$  are three different prime numbers greater than 2, and  $n = p \times r \times s$ , how many positive factors, including 1 and  $n$ , does  $n$  have?

$$h(t) = c - (d - 4t)^2$$

18. At time  $t = 0$ , a ball was thrown upward from an initial height of 6 feet. Until the ball hit the ground, its height, in feet, after  $t$  seconds was given by the function  $h$  above, in which  $c$  and  $d$  are positive constants. If the ball reached its maximum height of 106 feet at time  $t = 2.5$ , what was the height, in feet, of the ball at time  $t = 1$ ?

**SECTION 4**  
**Time — 25 minutes**  
**35 Questions**

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

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

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

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

EXAMPLE:

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. Mr. Chung would like to retire, but retirement is unable to be afforded by him.

- (A) Mr. Chung would like to retire, but retirement is unable to be afforded by him.
- (B) Mr. Chung would like to retire, but he cannot afford to do so.
- (C) Mr. Chung would like to retire, but he is unable to afford that.
- (D) Retirement is what Mr. Chung would like to do, but he cannot afford it.
- (E) Retirement appeals to Mr. Chung, but he cannot afford stopping working.

2. The Ussuri tiger, a relative of the Bengal tiger, has been described as the strongest tiger and also the most peaceful of them.

- (A) the strongest tiger and also the most peaceful of them
- (B) not only the strongest tiger, but also more peaceful than any
- (C) the strongest tiger at the same time as it is the most peaceful tiger
- (D) at once the strongest and also the most peaceful of them
- (E) the strongest and yet the most peaceful of tigers

3. Like most new residents, the town's winding streets confused the Curtis family for a day or two.

- (A) the town's winding streets confused the Curtis family
- (B) the winding streets of the town confusing the Curtis family
- (C) the Curtis family was confused by the town's winding streets
- (D) the Curtis family, who found the town's winding streets confusing
- (E) there were winding streets in the town which confused the Curtis family

4. The city of Houston, Texas, is about sixty miles inland while being the third largest foreign-trade port in the United States.

- (A) is about sixty miles inland, while being
- (B) although about sixty miles inland, is
- (C) being located about sixty miles inland makes it
- (D) which is about sixty miles inland, although it is
- (E) whose location is about sixty miles inland, makes it

5. Great literature, such as the Greek tragedies or the novels of Jane Austen, endures by their speaking directly and freshly to each new generation of readers
- (A) by their speaking directly and freshly
  - (B) by its speaking direct and fresh
  - (C) because it speaks directly and freshly
  - (D) because of speaking direct and fresh
  - (E) since they speak with directness and freshness
6. The services of architect I.M. Pei are always very much in demand considering that his buildings combine both beauty and an affordable price.
- (A) considering that his buildings combine both beauty and an affordable price
  - (B) considering that his buildings combine both beauty and affordability
  - (C) because his buildings combine beauty and affordability
  - (D) because his buildings will combine not only beauty but also an affordable price
  - (E) being that his buildings will combine both beauty and affordability
7. The tragic story of Paolo and Francesca was the subject of a poem and a symphony, being popular throughout the nineteenth century.
- (A) The tragic story of Paolo and Francesca was the subject of a poem and a symphony, being popular throughout the nineteenth century
  - (B) The tragic story of Paolo and Francesca was popular throughout the nineteenth century, where it is being made the subject of a poem and a symphony
  - (C) The tragic story of Paolo and Francesca was popular throughout the nineteenth century when it was the subject of both a poem and a symphony
  - (D) Paolo and Francesca, whose tragic story was the subject of a popular poem and symphony throughout the nineteenth century
  - (E) Being the subject of a poem and a symphony, the tragic story of Paolo and Francesca having been popular throughout the nineteenth century
8. C.G. Jung, a Swiss psychologist, whose renown as a pioneer in the field of psychoanalysis almost equals that of Sigmund Freud
- (A) C.G. Jung, a Swiss psychologist, whose renown as a pioneer
  - (B) C.G. Jung, who was a Swiss psychologist and whose renown as a pioneer
  - (C) A Swiss with renown as a psychological pioneer, C.G. Jung
  - (D) C.G. Jung was a Swiss psychologist whose renown as a pioneer
  - (E) A Swiss, C.G. Jung who was a psychological pioneer and whose renown
9. Many people think taxes are too high, consequently, some of those people do not report all the money they earn.
- (A) high, consequently some of those people do not report
  - (B) high, therefore some of those people do not report
  - (C) high; consequently, some do not report
  - (D) high, some people do not report
  - (E) high, and therefore not reporting
10. Just as Ireland has produced many famous writers and the Netherlands an abundance of famous painters, so Finland has provided a large number of famous architects.
- (A) so Finland has provided a large number of famous architects
  - (B) Finland provides famous architects, and by large numbers
  - (C) Finland's contribution is to provide famous architects in a large number
  - (D) and so then, for Finland, a large number of famous architects is provided
  - (E) and like them Finland has provided a large number of famous architects
11. Readers of the novice writer's recent book have said that it is at once frustrating because of its chaotic structure but its originality is still a delight.
- (A) but its originality is still a delight
  - (B) although it is delightfully original
  - (C) and it is delightful in its originality
  - (D) while being so original as to delight them
  - (E) and delightful because of its originality

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) (B) (C) (D) (E)

12. Much of the success of Frank Capra and George

A  
 Stevens as a director of motion pictures can be  
 B  
attributed to the technical work of talented film  
 C D  
 editors. No error  
 E

13. It was fortunate that Ms. Seward attended the

A  
 committee meeting, for only she was able to examine  
 B C  
 the problem calm and thoughtfully. No error  
 D E

14. My colleague and myself received an award for our

A B  
 paper on the accuracy with which a polygraph  
 C  
measures physiological processes. No error  
 D E

15. A lack of job opportunities for recent graduates

A  
 restricts their independence, often forcing them  
 B C  
 to remain at home or else they move back home.  
 D  
No error  
 E

16. Marathon racing, a challenging test of endurance,

has become increasingly popular among amateur  
 A B C  
 athletes in the last few years. No error  
 D E

17. Crossing and recrossing the stream, stepping on or

A  
 over slippery rocks, and following a trail that grew  
 B C  
 steeper and steeper, the hikers soon realized  
how challenging their day would be. No error  
 D E

18. Though best known as a jazz vocalist, he

A  
also enjoyed gospel music, whereby he told his  
 B C  
 manager that he wanted to make a recording of his  
 D  
 favorite gospel songs. No error  
 E

19. In the foothills of that large mountain range is

A  
 the sources of a river whose course was not  
 B  
fully mapped until this century. No error  
 C D E



20. In 1850 Jim Beckwourth, a Black American explorer, discovered in the mountains of the Sierra Nevada A B  
a pass soon becoming an important gateway to C D  
California gold-rush country. No error E
21. Because the flood has made the bridge inaccessible to A  
automobiles and pedestrians alike, we had rented B C  
a small boat to reach the island. No error D E
22. The Mount Isa mine complex is one of A  
the most highly mechanized in the world, B  
plus being the largest single industrial C D  
enterprise in Queensland. No error E
23. Although one likes to believe that your own A B C  
children are beautiful, intelligent, and well behaved,  
what one believes is not always the case. No error D E
24. The warning in the plays is clear: unless we restore A B  
the integrity of the family, all traditional values C  
will disappear. No error D E
25. As a student becomes familiar with both early A  
and contemporary Native American literature, one B  
may notice that traditional stories have influenced C D  
recent ones. No error E
26. John Edgar Wideman is regarded to be one of A B  
the most talented writers of the late twentieth century  
and is often compared to such literary giants as C D  
Ralph Ellison and Richard Wright. No error E
27. Mastery of cardiopulmonary resuscitation techniques A  
are mandatory for firefighters and police officers B C  
as well as rescue squad volunteers. No error D E
28. In the United States, the industrial use of plastics is A B C  
greater than steel, aluminum, and copper combined. D  
No error E
29. The dolls in the collection, all more than two hundred A B  
years old, had been carefully carved for children C  
long since gone. No error D 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 essay, a response to an assignment to write about a historical figure one would like to meet.

(1) What person from the past would I most like to meet? (2) Not a famous or powerful person; I would prefer meeting a really good observer who lived in a faraway place at a dramatic moment in time. (3) Nancy Gardner Prince, a young African American woman who went to live at the imperial Russian court in 1824. (4) Some of the most famous events in Russian history took place then, there was a time when people challenged the government, fought hardly for social reforms, risking being defeated and punished. (5) Nancy Gardner Prince was right there in Saint Petersburg. (6) Anyone can read about this period, but I would love to listen to that woman who was born and raised in Massachusetts who heard the rumors and felt the unrest.

(7) Her ability to speak several languages enabled her to gather stories from eyewitnesses of major events like the uprising of December 1825. (8) She shared in the hope and sadness of those long-ago people. (9) We know that she tried to learn about everything she found—I believe she would have much to say about the many countries she lived in. (10) For nine years she worked and moved through all levels of society, from meeting with the empress on charitable projects to fostering poor children. (11) Talking to Nancy Prince would be just great.

30. In context, which of the following is the best phrase to insert at the beginning of sentence 3?

- (A) That one is
- (B) My choice would be
- (C) In any case, that would be
- (D) An excellent observer,
- (E) Nevertheless, I have chosen

31. In context, which of the following revisions would NOT improve sentence 4 (reproduced below)?

*Some of the most famous events in Russian history took place then, there was a time when people challenged the government, fought hardly for social reforms, risking being defeated and punished.*

- (A) Begin with "I should explain".
- (B) Change "then, there" to "then. It".
- (C) Delete the comma after "government" and insert "and".
- (D) Change "hardly" to "passionately".
- (E) Change "being defeated and punished" to "defeat and punishment".

32. Sentence 5 in the passage is best described as

- (A) introducing a new topic
- (B) providing an additional example
- (C) emphasizing a major point
- (D) linking two contrasting discussions
- (E) presenting a personal opinion

33. In context, which revision appropriately shortens sentence 6 (reproduced below)?

*Anyone can read about this period, but I would love to listen to that woman who was born and raised in Massachusetts who heard the rumors and felt the unrest.*

- (A) Change "Anyone can read" to "Read".
- (B) Change "this period" to "this".
- (C) Change "I would love to listen" to "to listen".
- (D) Change "who was born and raised in" to "from".
- (E) Delete "and felt the unrest".

34. Which of the following is the best sentence to insert at the beginning of the second paragraph?

- (A) The journey from Massachusetts had been long.
- (B) In 1824 Saint Petersburg was a turbulent city.
- (C) Russian history has fascinated me for years.
- (D) Unfortunately, Prince faced harsh winters in Saint Petersburg.
- (E) Prince was an ideal observer in several ways.

35. In context, which of the following revisions would NOT improve sentence 9 (reproduced below)?

*We know that she tried to learn about everything she found—I believe she would have much to say about the many countries she lived in.*

- (A) Delete “We know that”.
- (B) Delete “I believe”.
- (C) Change “found” to “encountered”.
- (D) Change the dash to a semicolon.
- (E) Change “much” to “tons of things”.

## STOP

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

## SECTION 5

Time — 25 minutes

24 Questions

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

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

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) (E)

1. The depiction of the ----- wolf is largely a misconception; wolves are ----- creatures that prefer to run in packs.
  - (A) howling . . noisy
  - (B) maternal . . shy
  - (C) lone . . social
  - (D) vicious . . dangerous
  - (E) hungry . . famished
2. Jazz pioneer Louis Armstrong is renowned for his improvisations on the trumpet; his innovations as a vocalist are equally -----
  - (A) obscure (B) severe (C) conventional
  - (D) erroneous (E) noteworthy
3. Andrew's hunch that Ms. Smith would lose the election was ----- when her opponent won in a landslide, proving Andrew's ----- to be correct.
  - (A) compromised . . prediction
  - (B) rejected . . insolence
  - (C) substantiated . . endorsement
  - (D) confirmed . . intuition
  - (E) belied . . retraction
4. The medicine does have a salutary effect by ----- pain, even if recent studies prove that it cannot eliminate such discomfort entirely.
  - (A) alleviating (B) distracting (C) revitalizing
  - (D) eradicating (E) augmenting
5. The intern was almost too -----; he felt the suffering of his patients as if it were his own.
  - (A) candid (B) disarming (C) empathetic
  - (D) insightful (E) hysterical
6. As the charismatic speaker left the podium, she was surrounded by ----- of zealous supporters who ----- our attempts to approach her.
  - (A) an entourage . . interfered with
  - (B) a debacle . . concurred with
  - (C) a faction . . pertained to
  - (D) a dearth . . intercepted
  - (E) a coalition . . encompassed
7. Sally was a lighthearted and even-tempered woman; she had none of her sister's -----
  - (A) affluence (B) affability (C) equanimity
  - (D) resilience (E) truculence
8. Because postmodernist critics often rely on ----- language, their prose frequently seems ----- to nonspecialists who fail to comprehend its meaning.
  - (A) accessible . . abstruse
  - (B) arcane . . unequivocal
  - (C) esoteric . . impenetrable
  - (D) hackneyed . . exotic
  - (E) lucid . . grating

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 9-12 are based on the following passages.

**Passage 1**

When children are first born, they know nothing of the world beyond themselves. Almost immediately they are presented with rattles, dolls, or other playthings that will become their constant companions and, in some sense, their mentors. In nearly every imaginable situation, children are accompanied by toys that perform the vital role of reducing a complex universe of human culture to terms that they can readily apprehend. It is not that children are unable to grasp such things on their own. Rather, toys furnish a playground where rehearsals for reality can proceed without constraint or self-consciousness, allowing children an opportunity to exercise their inherent capacities for learning and assimilation.

**Passage 2**

I can't dispute that children might learn something from their toys. What I do dispute, however, are the grandiose conclusions that the so-called "experts" have drawn from that simple fact. Some have gone so far as to claim that toys are critical to teaching children about their cultures, maintaining that, without toys, children would have difficulty adjusting to the ways of the world. Hogwash! Children play with toys to have fun, not to create some sort of cultural microcosm. Perhaps those who speculate about the profound significance of childhood recreation should spend more time playing with toys and less time writing about them.

9. Both passages are concerned with the

- (A) distinction between play and reality
- (B) role of toys in children's lives
- (C) validity of expert opinions
- (D) transition from childhood to maturity
- (E) different ways that toys reflect human culture

10. The author of Passage 2 would most probably consider the last sentence of Passage 1 to be

- (A) accurate but misleading
- (B) unnecessarily cautious
- (C) too vague to verify or dispute
- (D) uncharacteristically perceptive
- (E) exaggerated and pretentious

11. Compared to the tone of Passage 1, the tone of Passage 2 is more

- (A) scholarly
- (B) disdainful
- (C) apologetic
- (D) sentimental
- (E) somber

12. The last line of Passage 2 suggests that the author of Passage 1 has

- (A) treated a serious subject lightly
- (B) utilized a stilted writing style
- (C) never observed children at play
- (D) lost touch with childhood realities
- (E) falsified crucial evidence



Questions 13–24 are based on the following passages.

The following passages consider the experience of listening to recorded books. Passage 1 is from a 1994 collection of essays on reading in the electronic age. Passage 2 is from a 1998 essay by a teacher of writing and literature who is legally blind.

### Passage 1

When we read with our eyes, we hear the words in the theater of our auditory inwardness. The voice we conjure up is our own—it is the sound-print of the self. Bringing this voice to life via the book is one of the subtler aspects of the reading magic, but hearing a book in the voice of another amounts to a silencing of that self—it is an act of vocal tyranny. The listener is powerless against the taped voice, not at all in the position of my five-year-old daughter, who admonishes me continually, “Don’t read it like that, Dad.” With the audio book, everything—pace, timbre, inflection—is determined for the captive listener. The collaborative component is gone; one simply receives.

Both the reader’s inner voice and the writer’s literary or stylistic voice are, obviously, sexed. When I read a male writer, I simply adjust my vocalization to the tone of the text; when I read a woman, I don’t attempt an impersonation, but I am aware that my voicing is a form of translation. But when I listened to a cassette of John Cheever’s stories read by an expressive female voice, I just couldn’t take it. Midway through “The Enormous Radio” I had to pop the tape from the machine to keep her from wreaking havoc on my sense of Cheever. Cheever’s prose is as imprinted with his gender as Virginia Woolf’s is with hers. Nor could I get past the bright vigor of the performing voice; I missed the dark notes, the sense of pooling shadows that has always accompanied my readings of the man.

Sometimes, to be sure, the fit is excellent—either because the reader achieves the right neutrality, allowing the voice to become a clear medium for the text, or because the interpretation somehow accords with my own expectations. Then, too, I have had the pleasure of hearing an author rendering his or her own work. Indeed, listening to certain re-mastered recordings of the “greats,” I have experienced the skin-prickling illusion of proximity (I am actually listening to James Joyce . . .). The author can open up a work in ways that no other reader can. At moments like these I find myself wavering, questioning the fixity of my assumptions.

### Passage 2

For better or worse, listening to an audio book almost always feels like a shared experience. I feel myself not merely a passive audience but engaged in a kind of exchange. Readers are not reading to me; we are reading together. I have a sense of continuous back-and-forth

commentary, where I bounce my ideas off the readers’ ideas, or what I perceive as their ideas from their intonations, mistakes, involuntary grunts, and sighs. This is precisely what alarms the sighted reader who thinks of reading as a private and intensely personal act, a solo flight with no copilot to look over your shoulder, make snide comments, or gush about the view. But I can’t help myself. This way of thinking about reading comes from the habit of listening to people I know read aloud to me. When my husband reads to me, usually a big novel or epic, the text becomes a topic of conversation throughout the day. The initial impressions one has during the course of reading, the ideas one revises or rejects as reading continues, become our mutual property. We share the process of reading, a real-time event in the intimate space where ideas take shape.

I require my writing students to turn in taped readings of their work. This is not only a convenience that allows me to return their work as quickly as a sighted teacher would. But reading their work aloud also makes the students more conscious of flaws in their prose. Frequently, I notice, they feel compelled to speak to me at the end of the tape, particularly after reading a longer piece of work. “I tried to do it another way first, but I think this works better,” they say. “Reading it over, I see the ending is kind of abrupt.” I don’t discount the possibility that these outpourings are staged pleas for me to go easy on them. But I also think there is something about having just read aloud for an extended time that makes them drop their guard. I sense they are not so much speaking to me as thinking aloud. I feel myself briefly invited into the mysterious space between the writer and the text. I imagine them sitting alone, in the circle of light cast by a solitary reading lamp. The text lies in their laps. Or they read it off the computer screen, their reading punctuated by an occasional tap-tap-tap of the scroll command. Outside the circle of light, in the general darkness, I hover, a receiving presence.

13. Compared to the author of Passage 2, the author of Passage 1 shows a greater concern about the

- (A) creation of genuine dialogue between lovers of great books
- (B) limited availability of recorded books
- (C) problems inherent in listening to a writer’s interpretation of his or her own work
- (D) difficulty of imagining a distinctive voice when one reads silently
- (E) particular gender of speakers, listeners, and writers

14. The author of Passage 1 notes his daughter's admonition (lines 9-10) primarily to
- (A) acknowledge the tendency of adults to read aloud without sufficient expression
  - (B) caution the reader against indulging precocious children
  - (C) offer an example of active participation
  - (D) stress the importance of reading to children
  - (E) recount his daughter's achievements with pride
15. The statement in lines 13-14 ("Both . . . sexed") primarily indicates that the author of Passage 1 believes that
- (A) gender can create particular stylistic problems for a writer
  - (B) people prefer to read novels written by authors of their own gender
  - (C) readers and writers are often interested in discussions of romantic love
  - (D) gender usually shapes an individual's use of language
  - (E) a reader will experience difficulty expressing his or her inner voice
16. Which hypothetical situation involves the same "form of translation" (line 17) discussed by the author of Passage 1?
- (A) A feminist scholar studies a novel written by a woman during the nineteenth century.
  - (B) An artist who has always painted in oils decides to attempt a landscape in watercolors.
  - (C) A tourist has difficulty understanding speakers of a regional dialect.
  - (D) A father revises a traditional fairy tale in order to include his daughter in the plot.
  - (E) A song written by a woman and normally performed by a female vocalist is sung by a man.
17. In line 29, "clear medium" refers to situations in which
- (A) the voice of the audio-book speaker does not interfere with the listener's enjoyment
  - (B) a person enjoys listening to an audio book more than reading silently
  - (C) an audio book leads to a greater appreciation of a writer's intent than a printed book does
  - (D) the gender of an author cannot easily be determined
  - (E) the listener's tastes do not color his or her response to a book
18. In Passage 1, the discussion about writers reading their own works (lines 31-38) serves primarily to
- (A) reiterate the author's opposition to audio-book speakers
  - (B) introduce a particular instance that challenges the main argument of the passage
  - (C) offer a note of irony in an otherwise serious discussion
  - (D) pay tribute to those writers the author has particularly enjoyed reading
  - (E) shift the discussion from listening to audio books to producing them
19. The author of Passage 1 would most likely interpret the "exchange" described in lines 42-46 of Passage 2 as being
- (A) disturbing, because speakers of audio books enunciate words in a peculiar manner
  - (B) one-sided, since the listener cannot communicate directly with the speaker
  - (C) enjoyable, since the listener can hear a book while performing a monotonous chore
  - (D) disheartening, because fewer and fewer people are discovering the pleasure of silent reading
  - (E) inspiring, because it will encourage more people to enjoy classic works

20. The author of Passage 2 mentions "intonations, mistakes, involuntary grunts, and sighs" (lines 45-46) in order to
- (A) imply that some audio-book readers have surprisingly poor speaking skills
  - (B) assert that listening to audio books is enjoyable regardless of the reader's speaking ability
  - (C) argue that a speaker's vocal inflections can obscure the author's intended meaning
  - (D) indicate that her ideas are considered idiosyncratic by some
  - (E) suggest that unconscious expressions often betray one's true opinions
21. In Passage 2, the author's reasons for setting the requirement described in lines 60-61 are best characterized as both
- (A) rigorous and presumptuous
  - (B) pragmatic and pedagogical
  - (C) capricious and creative
  - (D) provocative and unprecedented
  - (E) arbitrary and idiosyncratic
22. In lines 66-68, the author of Passage 2 uses quotations to demonstrate that
- (A) beginning writers make fairly predictable errors
  - (B) students tend to be overly critical of their own work
  - (C) students know more about writing than one would expect
  - (D) reading aloud makes students more aware of their prose
  - (E) reading aloud can be challenging for writers of all abilities
23. The author of Passage 2 uses the term "staged pleas" (lines 69-70) in order to
- (A) illustrate the dramatic quality of her students' readings
  - (B) underscore the high standards she sets for her students' work
  - (C) suggest that there might be an opportunistic motive for her students' behavior
  - (D) congratulate herself on devising a useful technique for teaching writing
  - (E) mock her students' efforts to earn high grades without hard work
24. How do the examples of the daughter in Passage 1 (lines 8-10) and the husband in Passage 2 (lines 52-54) primarily function in their respective passages?
- (A) The first is offered to illustrate the naïveté of a child, whereas the second demonstrates the sophistication of an adult.
  - (B) The first introduces a humorous moment, whereas the second emphasizes the seriousness of a problem.
  - (C) The first contrasts with the notion of a passive experience, whereas the second exemplifies a shared activity.
  - (D) The first represents a burdensome responsibility, whereas the second depicts an enjoyable interaction.
  - (E) The first captures a spontaneous emotion, whereas the second illustrates intellectual objectivity.

## STOP

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

**SECTION 7**  
Time — 25 minutes  
20 Questions

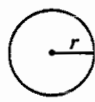
**Turn to Section 7 (page 6) of your answer sheet to answer the questions in this section.**

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

Notes

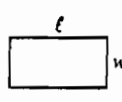
- The use of a calculator is permitted.
- All numbers used are real numbers.
- Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not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

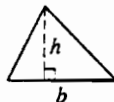


$$A = \pi r^2$$

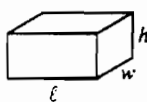
$$C = 2\pi r$$



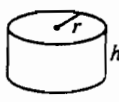
$$A = lw$$



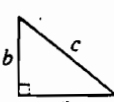
$$A = \frac{1}{2}bh$$



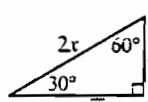
$$V = lwh$$



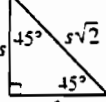
$$V = \pi r^2 h$$



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



Special Right Triangles

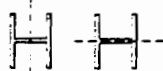


The number of degrees of arc in a circle is 360.

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

1. If  $k$  is a positive integer divisible by 3, and if  $k < 60$ , what is the greatest possible value of  $k$ ?

- (A) 55  
(B) 56  
(C) 57  
(D) 58  
(E) 59



2. The letter H is symmetric with respect to two different lines, as shown by the dotted lines in the figure above. Which of the following letters is symmetric with respect to at least two different lines?

- (A) K  
(B) L  
(C) M  
(D) X  
(E) Y

3. Bobby receives \$2 for each chore he does during the week, plus a weekly allowance of \$10. If Bobby receives no other money, which of the following expressions represents the total dollar amount Bobby receives for a week in which he has done  $n$  chores?

(A)  $10 + n$   
 (B)  $(10 + 2)n$   
 (C)  $10n + 2$   
 (D)  $10 + 2n$   
 (E)  $(10 + n)2$

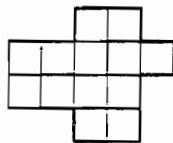


Figure A

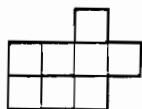
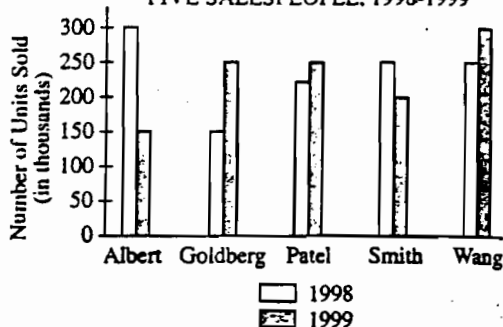


Figure B

4. The smallest squares in Figure A and Figure B are all equal in size. If the area of Figure A is 26 square centimeters, what is the area of Figure B?

(A) 12 sq cm  
 (B) 14 sq cm  
 (C) 16 sq cm  
 (D) 18 sq cm  
 (E) 20 sq cm

SALES BY COMPANY X'S  
 FIVE SALESPeOPLE, 1998-1999



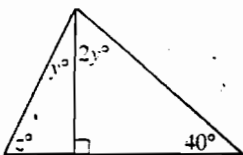
5. According to the graph above, which salesperson had the greatest increase in the number of units sold from 1998 to 1999?

(A) Albert  
 (B) Goldberg  
 (C) Patel  
 (D) Smith  
 (E) Wang

6. If the average (arithmetic mean) of 6, 6, 12, 16, and  $x$  is equal to  $x$ , what is the value of  $x$ ?

(A) 6  
 (B) 8  
 (C) 9  
 (D) 10  
 (E) 11





7. In the figure above, what is the value of  $z$ ?

- (A) 55
- (B) 60
- (C) 65
- (D) 70
- (E) 75

8. A computer program randomly selects a positive two-digit integer. If the integer selected is odd, twice that integer is printed. If the integer selected is even, the integer itself is printed. If the integer printed is 26, which of the following could have been the integer selected?

- I. 13
- II. 26
- III. 52

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

9. How many seconds are there in  $m$  minutes and  $s$  seconds?

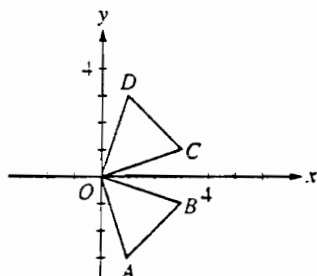
- (A)  $60m + s$
- (B)  $m + 60s$
- (C)  $60(m + s)$
- (D)  $\frac{m + s}{60}$
- (E)  $\frac{m}{60} + s$

10. If  $(2x - 2)(2 - x) = 0$ , what are all the possible values of  $x$ ?

- (A) 0 only
- (B) 1 only
- (C) 2 only
- (D) 1 and 2 only
- (E) 0, 1, and 2

11. If  $x^3 = y^9$ , what is  $x$  in terms of  $y$ ?

- (A)  $\sqrt{y}$
- (B)  $y^2$
- (C)  $y^3$
- (D)  $y^6$
- (E)  $y^{12}$



12. In the  $xy$ -coordinate system above, which of the following line segments has a slope of  $-1$ ?

- (A)  $\overline{OA}$
- (B)  $\overline{OB}$
- (C)  $\overline{OC}$
- (D)  $\overline{OD}$
- (E)  $\overline{DC}$

13. Kyle's lock combination consists of 3 two-digit numbers. The combination satisfies the three conditions below.

- One number is odd.
- One number is a multiple of 5.
- One number is the day of the month of Kyle's birthday.

If each number satisfies exactly one of the conditions, which of the following could be the combination to the lock?

- (A) 14-20-13
- (B) 14-25-13
- (C) 15-18-16
- (D) 20-15-20
- (E) 34-30-21

$$\sqrt{x-9} = x-3$$

14. For all values of  $x$  greater than 3, the equation above is equivalent to which of the following?

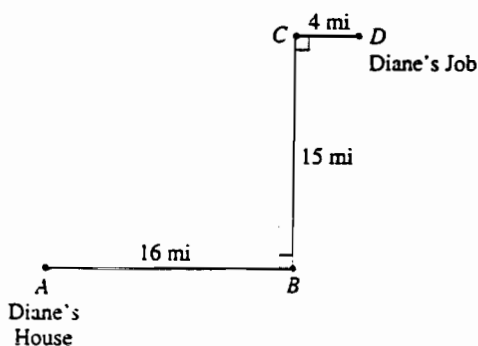
- (A)  $x = x^2$
- (B)  $x = x^2 + 18$
- (C)  $x = x^2 - 6x$
- (D)  $x = x^2 - 6x + 9$
- (E)  $x = x^2 - 6x + 18$

15. How many integers in the set of all integers from 1 to 100, inclusive, are not the square of an integer?

(A) 19  
(B) 50  
(C) 81  
(D) 89  
(E) 90

17. One circle has a radius of  $\frac{1}{2}$  and another circle has a radius of 1. What is the ratio of the area of the larger circle to the area of the smaller circle?

(A) 2 : 1  
(B) 3 : 1  
(C) 3 : 2  
(D) 4 : 1  
(E) 5 : 2



16. The figure above shows the route of Diane's trip from her house to her job. Diane travels 16 miles from A to B, 15 miles from B to C, and 4 miles from C to D. If she were able to travel from A to D directly, how much shorter, in miles, would the trip be?

(A) 5  
(B) 8  
(C) 10  
(D) 11  
(E) 15

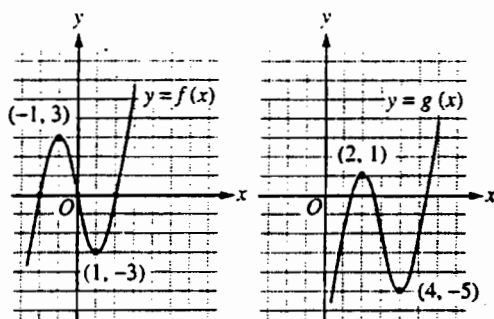
18. If the sum of the consecutive integers from  $-22$  to  $x$ , inclusive, is 72, what is the value of  $x$ ?

(A) 23  
(B) 25  
(C) 50  
(D) 75  
(E) 94

19. If  $k$ ,  $n$ ,  $x$ , and  $y$  are positive numbers satisfying

$x^{-\frac{4}{3}} = k^{-2}$  and  $y^{\frac{4}{3}} = n^2$ , what is  $(xy)^{-\frac{2}{3}}$  in terms of  $n$  and  $k$ ?

- (A)  $\frac{1}{nk}$   
 (B)  $\frac{n}{k}$   
 (C)  $\frac{k}{n}$   
 (D)  $nk$   
 (E) 1



20. The figures above show the graphs of the functions  $f$  and  $g$ . The function  $f$  is defined by  $f(x) = x^3 - 4x$ . The function  $g$  is defined by  $g(x) = f(x + h) + k$ , where  $h$  and  $k$  are constants. What is the value of  $hk$ ?
- (A) -6  
 (B) -3  
 (C) -2  
 (D) 3  
 (E) 6

**STOP**

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

# SECTION 8

Time — 20 minutes

19 Questions

Turn to Section 8 (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) (E)

1. Eduardo was — to find that the editorial he had written was — by several typographical errors.

- (A) dismayed . . authenticated
- (B) overjoyed . . exacerbated
- (C) intrigued . . enveloped
- (D) prepared . . enhanced
- (E) embarrassed . . marred

2. In order to — the loss of natural wetlands used by migrating snow geese, conservationists in the 1960's and 1970's — wetland refuges in the northern prairies.

- (A) standardize . . ignored
- (B) offset . . surrendered
- (C) explain . . dismantled
- (D) compensate for . . established
- (E) account for . . administered

3. Frequently used as a spice, ginger also has — properties: it can be used to help treat coughs, colds, and upset stomachs.

- (A) timeworn (B) invariable (C) edible
- (D) curative (E) descriptive

4. The scientific organization — the newspaper for prominently covering the predictions of a psychic while — to report on a major research conference.

- (A) celebrated . . failing
- (B) promoted . . refusing
- (C) denounced . . neglecting
- (D) spurned . . hastening
- (E) honored . . opting

5. The colors and patterns on butterflies' wings may seem merely —, but they are actually — the survival of these insects, enabling them to attract mates and to hide from predators.

- (A) artificial . . dependent on
- (B) unique . . unnecessary to
- (C) decorative . . instrumental in
- (D) beautiful . . results of
- (E) unrelated . . precursors of

6. A discerning publishing agent can — promising material from a mass of submissions, separating the good from the bad.

- (A) supplant (B) dramatize (C) finagle
- (D) winnow (E) overhaul

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 is from a novel set at the imaginary Jocelyn College in 1950.*

When Henry Mulcahy, a middle-aged instructor of literature at Jocelyn College, Pennsylvania, unfolded the president's letter and became aware of its contents, he gave a sudden sharp cry of impatience and irritation, as if such interruptions could positively be brooked no longer. This was the last straw. How was he expected to take care of forty students if other demands on his attention were continually being put in the way? On the surface of his mind, this vagrant grievance kept playing. Meanwhile, he had grown pale and his hands were trembling with anger and a strange sort of exultation. "Your appointment will not be continued beyond the current academic year. . . ." He sprang to his feet and mimed the sentence aloud, triumphantly, in inverted commas, bringing the whole force of his personality to bear on this specimen or exhibit of the incredible.

He had guessed long ago that Hoar meant to dismiss him, but he was amazed, really amazed (he repeated the word to himself) that the man should have given himself away by an action as overt as this one. As an intellectual, he felt stunned not so much by the moral insensitiveness of the president's move as by the transparency of it. You do not fire a person who has challenged you openly at faculty meetings, who has fought, despite you and your cabal, for a program of salary increases and a lightening of the teaching load, who has not feared to point to waste and mismanagement concealed by those in high places, who dared to call only last week (yes, fantastic as it seemed, this was the background of the case) for an investigation of the Buildings and Grounds Department and begged the dietitian to *unscramble*, if she would be so good, for her colleagues, the history of the twenty thousand eggs. . . . A consolatory smile, capping this enumeration, materialized on his lips; the letter was so inconsonant with the simplest precepts of strategy that it elicited a kind of pity, mingled with contempt and dry amusement.

Still, the triteness of the attempt, the tedium of it, tried forbearance to the limit: at a progressive college, surely, one had the right to expect something better than what one was used to at Dudley or Wilkins State, and the very element of repetition gave the whole affair an unwarranted and unreal character, as of some tawdry farce seriously reenacted. He had been in the academic harness long enough, he should have thought (and the files in the college office could testify), to anticipate anything, yet some unseen tendril of trust, he now remarked with a short harsh laugh, must have spiraled out from his heart and clung to the president's person, or simply to the idea of decency, for him now to feel this new betrayal so keenly.

For the truth was, as Mulcahy had to acknowledge, pacing up and down his small office, that in spite of all the evidence he had been given of the president's unremitting hatred, he found himself hurt by the letter—wounded, to be honest, not only in his self-esteem but in some tenderer place, in that sense of contract between people that transcends personal animosities and factional differences, that holds the individual distinct from the deed and maintains even in the fieriest opposition the dream of final agreement and concord. He had not known, in short, that the president disliked him so flatly. It was the usual mistake of a complex intelligence in assessing a simple intelligence, of an imagination that is capable of seeing and feeling on many levels at once, as opposed to an administrative mentality that feels operationally through acts. Like most people of literary sensibility, he had been unprepared, when it came down to it, for the obvious: a blunt, naked wielding of power. And the fact that he had *thought* himself prepared, he bitterly reflected, was precisely a measure of the abyss between the Maynard Hoars of this world and the Mulcahys.

The anomalies of the situation afforded him a gleam of pleasure—to a person of superior intellect, the idea that he or she has been weak or a fool in comparison with an inferior adversary is fraught with moral comedy and sardonic philosophic applications. He sat down at his desk, popped a peppermint into his mouth, and began to laugh softly at the ironies of his biography: Henry Mulcahy, called Hen by his friends, forty-one years old, the only Ph.D. in the literature department, contributor to such prestigious magazines as the *Nation* and the *Kenyon Review*, Rhodes scholar, Guggenheim fellow, father of four, fifteen years teaching experience, yet having the salary and rank of only instructor—an "unfortunate" personality in the lexicon of department heads, but in the opinion of a number of his colleagues the cleverest man at Jocelyn and the victim, here as elsewhere, of that ferocious envy of mediocrity for excellence that is the ruling passion of all systems of jobholders.

7. The passage is narrated from the point of view of

- (A) Henry Mulcahy
- (B) an observer who does not know Mulcahy initially but who learns about him during the course of the passage
- (C) an observer who has only partial knowledge of Mulcahy
- (D) an observer who knows all about Mulcahy and his thoughts
- (E) an administrator at Jocelyn College



8. The mention of the "transparency" (line 22) of President Hoar's move implies that Mulcahy views the president's decision as a
- (A) vindictive and unwise action
  - (B) timid and hesitant rebuke
  - (C) necessary enforcement of Jocelyn's stated policies
  - (D) step that was not motivated by any personal considerations
  - (E) choice that was painful and difficult to make
9. The issues that Mulcahy has fought for at Jocelyn are listed (lines 22-32) in order to point out that they
- (A) elicited a sympathetic response from the college faculty
  - (B) prove that Jocelyn is a poorly run college
  - (C) are criticisms raised by President Hoar in his letter to Mulcahy
  - (D) deal with theoretical issues that most people cannot understand
  - (E) represent a wide range of topics, from the trivial to the serious
10. Mulcahy most likely regards the choice of the word "unscramble" (line 31) as
- (A) an imitation of the literal-minded diction of the dietitian
  - (B) a euphemism for a harsher word
  - (C) a witty and amusing play on words
  - (D) an example of how administrators like President Hoar abuse language
  - (E) a scholarly word that is in keeping with the mood of faculty meetings
11. In context, Mulcahy's "condolatory smile" (lines 32-33) is most probably an expression of both
- (A) cynical skepticism and comical self-pity
  - (B) sincere compassion and whimsical delight
  - (C) profound surprise and delighted appreciation
  - (D) bitter disappointment and sly criticism
  - (E) condescending sympathy and amused scorn
12. Mulcahy apparently believes that he is being dismissed from Jocelyn College because he
- (A) is outspoken in his criticism of the way the college is run
  - (B) has not continued to do research in his field
  - (C) is not as dedicated to the students as the other faculty members are
  - (D) made fun of the college president at a faculty meeting
  - (E) is resented by other professors who are jealous of his academic achievements
13. In context, the term "progressive college" (line 38) suggests that the college is
- (A) successful and respected
  - (B) liberal and experimental
  - (C) eager to increase enrollment
  - (D) steadily improving in quality
  - (E) oriented toward the sciences
14. The passage suggests that Dudley and Wilkins State (line 40) are colleges that
- (A) are best known for their drama courses
  - (B) are less progressive than Jocelyn
  - (C) have better academic programs than Jocelyn
  - (D) have been trying to imitate Jocelyn
  - (E) are smaller than Jocelyn
15. In the context of the passage, one who "holds the individual distinct from the deed" (lines 56-57) can be expected to
- (A) forgive someone, even though that person has been malicious
  - (B) praise someone, even when that person is wrong
  - (C) promote someone, even though that person may not be qualified
  - (D) disagree with someone's actions without attacking that person's character
  - (E) understand someone's motives without revealing that knowledge to the person's enemies
16. In line 60, "flatly" most nearly means
- (A) evenly
  - (B) tautly
  - (C) shallowly
  - (D) unemphatically
  - (E) unequivocally
17. The phrase "ironies of his biography" (line 76) refers to Mulcahy's belief that
- (A) he has not received the recognition and rewards that he deserves
  - (B) he has been more active later in his academic career than at its beginning
  - (C) he is ridiculed by his friends despite his impressive academic achievements
  - (D) his personal life is not as satisfying as his professional career
  - (E) his personality is not suited to his scholarly pursuits

18. The passage suggests that Mulcahy's main shortcoming is that

- (A) his devotion to literature takes precedence over his loyalty to college administrators
- (B) he allows himself to be intimidated by his peers
- (C) he is too idealistic and self-sacrificing in his dedication to teaching and research
- (D) because of his superior education and academic honors, he is arrogant to his students
- (E) despite his intelligence, he is naïve about the politics of college administration

19. Mulcahy apparently attributes his difficulties at Jocelyn to the

- (A) extraordinary amount of time that he has to spend with his students
- (B) fact that he is too modest to tell others of his academic accomplishments
- (C) distaste he has for making himself appear competent at the expense of others
- (D) resentment of those whom he judges to be less intelligent than he is
- (E) length and nature of his academic experience, which has alerted him to the flaws of others

## 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  
16 Questions

**Turn to Section 9 (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

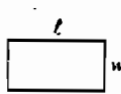
- The use of a calculator is permitted.
- All numbers used are real numbers.
- Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not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

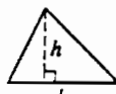


$$A = \pi r^2$$

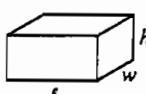
$$C = 2\pi r$$



$$A = \ell w$$



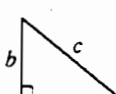
$$A = \frac{1}{2}bh$$



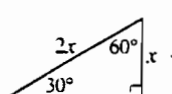
$$V = \ell wh$$



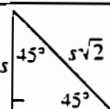
$$V = \pi r^2 h$$



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



Special Right Triangles

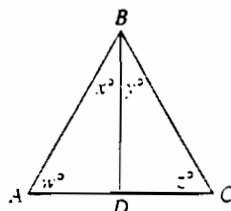


The number of degrees of arc in a circle is 360.

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

1. If 6 cars out of 10 on an assembly line are red, what is the probability that a car selected at random from the assembly line will be red?

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



Note: Figure not drawn to scale.

2. If  $AB = BC$  and  $\overline{BD}$  bisects  $\overline{AC}$  in the figure above, which of the following CANNOT be concluded?
- (A)  $w = x$   
(B)  $w = z$   
(C)  $x = y$   
(D)  $AD = DC$   
(E)  $\overline{BD} \perp \overline{AC}$

3. If 30 percent of  $m$  is 40, what is 15 percent of  $m$ ?

- (A) 15
- (B) 20
- (C) 25
- (D) 30
- (E) 35

4. If  $n$  is any negative number, which of the following must be positive?

- (A)  $\frac{n}{2}$
- (B)  $2n$
- (C)  $n + 2$
- (D)  $n - 2$
- (E)  $2 - n$

5. The ratio 1.2 to 1 is equal to which of the following ratios?


- (A) 1 to 2
- (B) 12 to 1
- (C) 5 to 6
- (D) 6 to 5
- (E) 6 to 50

6. The legend of a certain pictograph shows



= 5 million new homes. Approximately

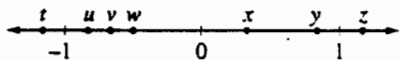
how many new homes are represented by the

symbols  ?

- (A) 3.5 million
- (B) 10.5 million
- (C) 15.5 million
- (D) 17.5 million
- (E) 35 million

7. If  $a$  and  $b$  are positive integers and  $a^2 - b^2 = 7$ , what is the value of  $a$ ?

(A) 3  
(B) 4  
(C) 5  
(D) 6  
(E) 7



8. On the number line above, which of the following corresponds to  $|u - w|$ ?
- (A)  $t$   
(B)  $v$   
(C)  $x$   
(D)  $y$   
(E)  $z$

9. A number  $n$  is increased by 5 and the result is multiplied by 5. This result is decreased by 5. Finally, that result is divided by 5. In terms of  $n$ , what is the final result?

(A)  $n - 5$   
(B)  $n - 1$   
(C)  $n$   
(D)  $n + 4$   
(E)  $5(n + 5)$

10. Phillip used four pieces of masking tape, each 6 inches long, to put up each of his posters. Phillip had a 300-foot roll of masking tape when he started. If no tape was wasted, which of the following represents the number of feet of masking tape that was left on the roll after he put up  $n$  posters? (12 inches = 1 foot)

(A)  $300 - 6n$   
(B)  $300 - 2n$   
(C)  $300 - n$   
(D)  $300 - \frac{1}{2}n$   
(E)  $300 - \frac{1}{4}n$

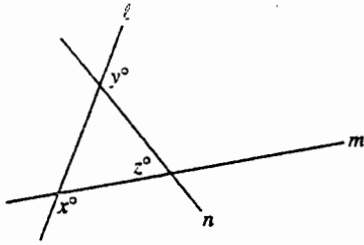
11. In the  $xy$ -coordinate plane, line  $m$  is the reflection of line  $\ell$  about the  $x$ -axis. If the slope of line  $m$  is  $-\frac{4}{5}$ , what is the slope of line  $\ell$ ?

- (A)  $\frac{5}{4}$
- (B)  $\frac{4}{5}$
- (C)  $\frac{1}{5}$
- (D)  $-\frac{4}{5}$
- (E)  $-\frac{5}{4}$

12. If  $n = 3p$ , for what value of  $p$  is  $n = p$ ?

- (A) 0
- (B)  $\frac{1}{3}$
- (C) 1
- (D) 3
- (E)  $n$  can never equal  $p$ .



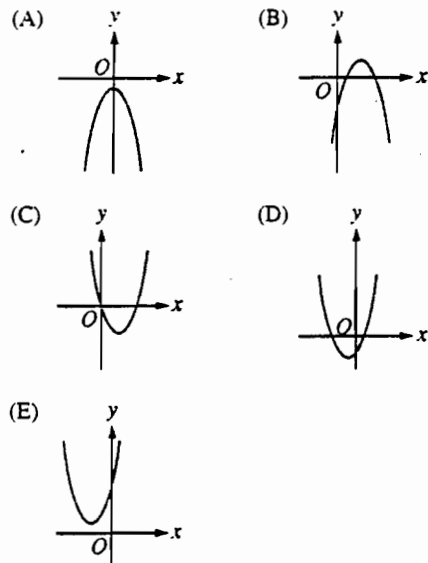


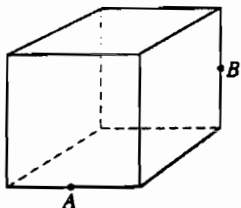
Note: Figure not drawn to scale.

13. In the figure above, if  $z = 30$ , what is the value of  $x + y$ ?

- (A) 60
- (B) 150
- (C) 180
- (D) 210
- (E) 330

14. If the function  $f$  is defined by  $f(x) = x^2 + bx + c$ , where  $b$  and  $c$  are positive constants, which of the following could be the graph of  $f$ ?





15. The cube shown above has edges of length 2, and  $A$  and  $B$  are midpoints of two of the edges. What is the length of  $\overline{AB}$  (not shown) ?

- (A)  $\sqrt{2}$
- (B)  $\sqrt{3}$
- (C)  $\sqrt{5}$
- (D)  $\sqrt{6}$
- (E)  $\sqrt{10}$

16. Let  $\boxed{x}$  be defined as  $\boxed{x} = x^2 - x$  for all values of  $x$ . If  $\boxed{a} = \boxed{a-2}$ , what is the value of  $a$  ?

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

**STOP**

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

**SECTION 10**  
Time — 10 minutes  
14 Questions

**Turn to Section 10 (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. Before signing up for next year's courses, the students' schedules must be approved by their advisers.

- (A) the students' schedules must be approved by their advisers
- (B) the students must have their schedules approved by their advisers
- (C) their advisers must approve the schedule of each student
- (D) the schedules of students must be approved, and by their advisers
- (E) approval of each one's schedule must be given by their advisers

2. Although its being factual in content, the televised biography of Queen Elizabeth I did not seem credible.

- (A) Although its being factual in content
- (B) Despite its factual content
- (C) Whereas it was factual in content
- (D) Its contents being factual
- (E) Even though factual contents were there

3. We do not have absolute personal freedom because what anyone does would have an effect on other people's lives.

- (A) freedom because what anyone does would have an effect on other people's lives
- (B) freedom because it has an effect on the lives of other people
- (C) freedom because what we do affects other people
- (D) freedom, and the reason is the effect our actions have on other people
- (E) freedom, our actions having an effect on other people

4. The information age has ushered children into a global society. this situation causing educators to lament a lack of texts that explain the diversity of cultures.

- (A) this situation causing educators to lament
- (B) which is the cause of educators lamenting
- (C) this causing educators' laments over
- (D) a situation causing educators to lament
- (E) and with it educators' lament at

5. One result of the fire department's new contract is that they can no longer offer overtime pay on weekends.

- (A) One result of the fire department's new contract is that they can no longer offer overtime pay on weekends.
- (B) As one result of its new contract, the fire department can no longer offer overtime pay on weekends.
- (C) One result of the fire department's new contract is that overtime pay on weekends can no longer be offered to them.
- (D) The fire department's new contract results in their no longer being able to offer them overtime pay on weekends.
- (E) One result of the fire department's new contract are that offering overtime pay on weekends is no longer possible.

6. Anita liked to watch television, of which she found the science programs especially fascinating.

- (A) television, of which she found the science programs especially fascinating
- (B) television; she found the science programs especially fascinating
- (C) television, and it was especially the science programs that were of fascination
- (D) television; the fascination of the science programs especially
- (E) television, especially fascinating to her were the science programs

7. Poet Anne Spencer initially allowed very little of her work to be published because her exacting standards caused her to doubt that her poems were good enough to share with others.

- (A) because her exacting standards caused her to doubt
- (B) her standards being exacting, she doubted
- (C) because of her standards being exacting, which she doubted
- (D) from having exacting standards causing her to doubt
- (E) having exacting standards causing her doubting

8. It is hard for some young people to believe that women were at one time not admitted to some colleges, but they have since become coeducational.

- (A) colleges, but they have since become coeducational
- (B) colleges, but they are now coeducational
- (C) colleges, and have since become coeducational
- (D) colleges that have since become coeducational
- (E) colleges, since becoming coeducational

9. The Navajo migrated from Canada to the southwestern United States at the same time as the Apache, and they speak an Apachean language.

- (A) The Navajo migrated from Canada to the southwestern United States at the same time as the Apache, and they
- (B) The Navajo, who migrated from Canada to the southwestern United States at the same time as the Apache,
- (C) Migrating from Canada to the southwestern United States at the same time were the Navajo and the Apache, and they
- (D) The Navajo migrated from Canada to the southwestern United States with the Apache and this is why they
- (E) A migration from Canada to the southwestern United States at the same time with the Apache, the Navajo

10. Arelia believes that cloth draped over hills is an art form that cannot last long enough as a work of art either to please or influence future generations.

- (A) cannot last long enough as a work of art either to please or influence future generations
- (B) cannot last long enough as a work of art, for ages to come neither pleasing or influencing future generations
- (C) is not a lasting work of art that for ages to come will either please or influence future generations
- (D) is not a lasting work of art that will remain for ages pleasing and influencing future generations
- (E) will not last long enough either to please or to influence future generations

11. The price of gold has been influenced by continued inflation and because people have lost faith in the dollar.
- (A) because people have lost faith
  - (B) because of the loss of faith
  - (C) by people which have lost faith
  - (D) losing faith
  - (E) loss of faith
12. Giraffes born with very long necks were able to stay alive when food was scarce and were therefore able to pass this desirable trait on to their offspring.
- (A) and were therefore able to pass this desirable trait on to their offspring
  - (B) and this desirable trait was passed on as a result to its offspring
  - (C) so that their offspring could have this desirable trait passed to them
  - (D) so, therefore, this desirable trait would be inherited by their offspring
  - (E) and therefore have this desirable trait inherited in their offspring
13. If we compare the number of alligators with the Gila monster over time, we see that the alligator is in decline.
- (A) If we compare the number of alligators with the Gila monster over time, we see that the alligator is
  - (B) Comparing the number of alligators and the Gila monster, we see that alligators are
  - (C) In comparison with Gila monsters, the number of alligators are
  - (D) To compare the alligator with Gila monsters is to show that it is
  - (E) A comparison over time of the numbers of alligators and Gila monsters shows that alligators are
14. Many of the instruments used in early operations of the United States Army Signal Corps were adaptations of equipment used by the Plains Indians, particularly that of the heliograph.
- (A) Corps were adaptations of equipment used by the Plains Indians, particularly that of the heliograph
  - (B) Corps, there were adaptations of equipment used by the Plains Indians, particularly the heliograph
  - (C) Corps, and in particular the heliograph, was an adaptation of equipment used by the Plains Indians
  - (D) Corps, particularly the heliograph, were adaptations of equipment used by Plains Indians
  - (E) Corps being adaptations, the heliograph in particular, of those used by Plains Indians

## 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.

Table 1. Critical Reading Conversion Table			
Raw Score	Scaled Score	Raw Score	Scaled Score
67	800	30	470-530
66	770-800	29	470-530
65	740-800	28	460-520
64	720-800	27	450-510
63	700-800	26	450-510
62	690-790	25	440-500
61	670-770	24	440-500
60	660-760	23	430-490
59	660-740	22	420-480
58	650-730	21	420-480
57	640-720	20	410-470
56	630-710	19	400-460
55	630-710	18	400-460
54	620-700	17	390-450
53	610-690	16	380-440
52	600-680	15	380-440
51	610-670	14	370-430
50	600-660	13	360-420
49	590-650	12	350-410
48	580-640	11	350-410
47	580-640	10	340-400
46	570-630	9	330-390
45	560-620	8	310-390
44	560-620	7	300-380
43	550-610	6	290-370
42	550-610	5	270-370
41	540-600	4	260-360
40	530-590	3	250-350
39	530-590	2	230-330
38	520-580	1	220-320
37	510-570	0	200-290
36	510-570	-1	200-290
35	500-560	-2	200-270
34	500-560	-3	200-250
33	490-550	-4	200-230
32	480-540	-5	200-210
31	480-540	-6 and below	200



**Table 2. Math Conversion Table**

<b>Raw Score</b>	<b>Scaled Score</b>	<b>Raw Score</b>	<b>Scaled Score</b>
54	800	23	460-520
53	750-800	22	450-510
52	720-800	21	440-500
51	700-780	20	430-490
50	690-770	19	430-490
49	680-740	18	420-480
48	670-730	17	410-470
47	660-720	16	400-460
46	640-700	15	400-460
45	630-690	14	390-450
44	620-680	13	380-440
43	620-680	12	360-440
42	610-670	11	350-430
41	600-660	10	340-420
40	580-660	9	330-430
39	570-650	8	320-420
38	560-640	7	310-410
37	550-630	6	290-390
36	550-630	5	280-380
35	540-620	4	270-370
34	530-610	3	260-360
33	520-600	2	240-340
32	520-600	1	230-330
31	520-580	0	210-310
30	510-570	-1	200-290
29	500-560	-2	200-270
28	490-550	-3	200-250
27	490-550	-4	200-230
26	480-540	-5	200-210
25	470-530	-6 and below	200
24	460-520		

Table 3. Writing Conversion Table							
MC Raw Score	Essay Score						
	0	1	2	3	4	5	6
49	650-690	670-720	690-740	710-770	750-800	780-800	800
48	630-690	640-720	660-740	690-770	720-800	760-800	780-800
47	600-690	620-720	640-740	660-770	700-800	730-800	760-800
46	580-690	600-720	620-740	650-770	680-800	710-800	740-800
45	570-690	580-720	600-740	630-770	670-800	700-800	730-800
44	560-680	570-710	590-730	620-760	660-790	690-800	720-800
43	540-660	560-690	580-710	610-740	640-780	670-800	700-800
42	530-660	550-690	570-700	600-730	630-770	660-800	690-800
41	530-650	540-680	560-700	590-720	620-760	660-790	680-800
40	520-640	530-670	550-690	580-710	620-750	650-780	680-800
39	510-630	520-660	540-680	570-710	610-740	640-770	670-800
38	500-620	520-650	540-670	560-700	600-730	630-770	660-790
37	490-610	510-640	530-660	560-690	590-720	620-760	650-780
36	480-600	500-630	520-650	550-680	580-720	610-750	640-770
35	480-590	490-620	510-640	540-670	570-710	610-740	640-770
34	470-590	480-620	500-630	530-660	570-700	600-730	630-760
33	460-580	470-610	490-630	520-650	560-690	590-720	620-750
32	450-570	470-600	490-620	510-640	550-680	580-710	610-740
31	440-560	460-590	480-610	510-640	540-670	570-700	600-730
30	430-550	450-580	470-600	500-630	530-660	560-700	590-720
29	430-540	440-570	460-590	490-620	520-650	560-690	590-710
28	420-530	430-560	450-580	480-610	520-650	550-680	580-700
27	410-520	420-550	440-570	470-600	510-640	540-670	570-700
26	400-520	420-550	430-560	460-590	500-630	530-660	560-690
25	390-510	410-540	430-560	450-580	490-620	520-650	550-680
24	380-500	400-530	420-550	450-570	480-610	510-640	540-670
23	370-490	390-520	410-540	440-570	470-600	500-630	530-660
22	370-480	380-510	400-530	430-560	460-590	500-630	520-650
21	370-480	380-510	400-530	430-560	460-590	500-630	520-650
20	360-470	370-500	390-520	420-550	460-580	490-620	520-640
19	350-460	360-490	380-510	410-540	450-580	480-610	510-630
18	340-450	350-480	370-500	400-530	440-570	470-600	500-630
17	330-450	350-480	360-490	390-520	430-560	460-590	490-620
16	320-440	340-470	360-490	390-510	420-550	450-580	480-610
15	310-430	330-460	350-480	380-510	410-540	440-570	470-600
14	300-420	320-450	340-470	370-500	400-530	430-560	460-590
13	300-410	310-440	330-460	360-490	390-520	430-560	450-580
12	290-400	300-430	320-450	350-480	390-510	420-550	450-570
11	280-390	290-420	310-440	340-470	380-510	410-540	440-570
10	270-390	280-420	300-430	330-460	370-500	400-530	430-560
9	260-380	280-410	290-430	320-450	360-490	390-520	420-550
8	250-370	270-400	290-420	320-450	350-480	380-510	410-540
7	240-360	260-390	280-410	310-440	340-470	370-510	400-530
6	230-350	250-380	270-400	300-430	330-460	360-500	390-520
5	230-340	240-370	260-390	290-420	320-460	360-490	380-520
4	220-340	230-370	250-380	280-410	320-450	350-480	380-510
3	210-330	220-360	240-380	270-400	310-440	340-470	370-500
2	200-320	210-350	230-370	260-400	300-430	330-460	360-490
1	200-300	200-330	220-350	250-380	280-410	310-450	340-470
0	200-290	200-320	210-340	240-370	270-410	300-440	330-470
-1	200-280	200-310	200-330	220-350	250-390	290-420	310-450
-2	200-260	200-290	200-310	200-340	240-370	270-410	300-430
-3	200-240	200-270	200-290	200-320	240-360	270-390	300-420
-4	200-230	200-260	200-280	200-300	240-340	270-370	300-400
-5	200	200-230	200-250	200-280	240-320	270-350	300-370
-6	200	200-220	200-240	200-270	240-310	270-340	300-370
-7	200	200-220	200-230	200-260	240-300	270-330	300-360
-8	200	200-210	200-230	200-250	240-290	270-320	300-350
-9	200	200-210	200-230	200-250	240-290	270-320	300-350
-10	200	200-210	200-230	200-250	240-290	270-320	300-350
-11	200	200-210	200-230	200-250	240-290	270-320	300-350
-12	200	200-210	200-230	200-250	240-290	270-320	300-350

Table 4. Writing Multiple-Choice Conversion Table			
Raw Score	Scaled Score	Raw Score	Scaled Score
49	78-80	21	46-56
48	77-80	20	45-55
47	74-80	19	44-54
46	72-80	18	43-53
45	70-80	17	42-52
44	69-79	16	41-51
43	67-77	15	40-50
42	66-76	14	39-49
41	65-75	13	38-48
40	64-74	12	37-47
39	63-73	11	36-46
38	62-72	10	35-45
37	61-71	9	34-44
36	60-70	8	33-43
35	59-69	7	32-42
34	58-68	6	31-41
33	57-67	5	30-40
32	56-66	4	29-39
31	55-65	3	28-38
30	54-64	2	27-37
29	53-63	1	25-35
28	52-62	0	24-34
27	51-61	-1	22-32
26	50-60	-2	20-30
25	49-59	-3	20-28
24	48-58	-4	20-26
23	47-57	-5	20-23
22	46-56	-6 and below	20-22

# SAT Practice Test #5 Answer Key

CRITICAL READING								
Section 2			Section 5			Section 8		
Multiple-Choice Questions			Multiple-Choice Questions			Multiple-Choice Questions		
COR. ANS.	DIFF. LEV.		COR. ANS.	DIFF. LEV.		COR. ANS.	DIFF. LEV.	
1.	A	E	1.	C	E	1.	E	E
2.	A	M	2.	E	E	2.	D	E
3.	C	M	3.	D	E	3.	D	E
4.	A	H	4.	A	E	4.	C	E
5.	E	H	5.	C	E	5.	C	E
6.	E	M	6.	A	E	6.	D	H
7.	D	M	7.	E	H	7.	D	E
8.	B	M	8.	C	H	8.	A	E
9.	A	E	9.	B	E	9.	E	M
10.	A	E	10.	E	M	10.	C	M
11.	E	M	11.	B	E	11.	E	H
12.	B	M	12.	D	M	12.	A	E
13.	C	E	13.	E	M	13.	B	H
14.	D	M	14.	C	H	14.	B	E
15.	C	E	15.	D	M	15.	D	M
16.	D	M	16.	E	M	16.	E	H
17.	C	M	17.	A	M	17.	A	M
18.	E	M	18.	B	M	18.	E	M
19.	E	M	19.	B	M	19.	D	H
20.	D	M	20.	E	M			
21.	B	M	21.	B	H			
22.	D	E	22.	D	E			
23.	E	M	23.	C	M			
24.	A	M	24.	C	M			
no. correct			no. correct			no. correct		
no. incorrect			no. incorrect			no. incorrect		

MATH								
Section 3			Section 7			Section 9		
Multiple-Choice Questions			Multiple-Choice Questions			Multiple-Choice Questions		
COR. ANS.	DIFF. LEV.		COR. ANS.	DIFF. LEV.		COR. ANS.	DIFF. LEV.	
1.	A	E	1.	C	E	1.	B	E
2.	E	E	2.	D	E	2.	A	E
3.	B	E	3.	D	E	3.	B	E
4.	C	M	4.	C	E	4.	E	E
5.	D	M	5.	B	E	5.	D	E
6.	A	M	6.	D	E	6.	D	M
7.	C	M	7.	C	E	7.	B	M
8.	A	H	8.	C	M	8.	C	M
			9.	A	M	9.	D	M
			10.	D	M	10.	B	M
			11.	C	M	11.	B	M
			12.	E	M	12.	A	M
			13.	A	M	13.	D	M
			14.	C	M	14.	E	M
			15.	E	M	15.	D	H
			16.	C	M	16.	C	H
			17.	D	M			
			18.	B	H			
			19.	A	H			
			20.	E	H			
no. correct			no. correct			no. correct		
no. incorrect			no. incorrect			no. incorrect		

Section 3		
Student-Produced Response Questions		
	COR. ANS.	DIFF. LEV.
9.	2/5, 4	E
10.	128	E
11.	2400	E
12.	3	M
13.	8/3, 2.66, 2.67	M
14.	$22.5 < x < 27.5$ , $45/2 < x < 55/2$	M
15.	24	H
16.	10	H
17.	8	H
18.	70	H
no. correct (9-18)		

NOTE: Difficulty levels are E (easy), M (medium), and H (hard).

WRITING						
Section 1	Section 4			Section 10		
Essay	Multiple-Choice Questions			Multiple-Choice Questions		
	COR.	DIFF.		COR.	DIFF.	
	ANS.	LEV.		ANS.	LEV.	
Essay Score* (0-6)	1. B	E	1. B	E		
	2. E	E	2. B	E		
	3. C	E	3. C	M		
	4. B	E	4. D	M		
	5. C	M	5. B	M		
	6. C	M	6. B	M		
	7. C	M	7. A	M		
	8. D	M	8. D	M		
	9. C	M	9. B	M		
	10. A	M	10. E	M		
	11. E	H	11. E	M		
	12. B	E	12. A	M		
	13. D	E	13. E	M		
	14. A	E	14. D	M		
	15. D	E				
	16. E	E				
	17. E	E				
	18. C	E				
	19. A	E				
	20. C	E				
	21. C	E				
	22. C	E				
	23. C	M				
	24. E	M				
	25. B	M				
	26. A	M				
	27. B	M				
	28. D	H				
	29. E	H				
	30. B	M				
	31. A	M				
	32. C	M				
	33. D	M				
	34. E	M				
	35. E	M				
	no. correct			no. correct		
	no. incorrect			no. incorrect		

\* To score your essay, use the SAT scoring guide in Chapter 9 and the free sample essays available online at [www.collegeboard.com/satonlinecourse](http://www.collegeboard.com/satonlinecourse). On this practice test, your essay score should range from 0 to 6. (Keep in mind that on the actual SAT, your essay will be read by two readers and you will receive a score of 0 to 12 on your score report.)

NOTE: Difficulty levels are E (easy), M (medium), and H (hard).