

Form Codes AECB, BWCB, DFCB

# SAT Reasoning Test™

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Question-and-Answer Service  
May 2006 Administration

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## INSIDE:

- The test questions that counted toward the critical reading, math, and writing scores on the SAT Reasoning Test
- Your essay prompt and all other essay prompts administered on test day
- The correct answers
- The difficulty level of each question
- The instructions for scoring your test

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## How to Make the Best Use of the Question-and-Answer Service (QAS)

This booklet contains the SAT Reasoning Test™ you took in May 2006. All the essay prompts from the day you took the test are included, in addition to scoring instructions and tables you can use to look up your scores. This booklet does not include the unscored, or equating, section that you took on test day.

The version of the test, or "Form Code," is shown at the top of your personalized QAS report. You will need your Form Code to locate your particular score tables. To the right of your Form Code on your QAS report are your test scores for your critical reading, math, and writing sections, as well as the multiple-choice writing subscore and the essay subscore.

To make the best use of the QAS report, read what it tells you about each section of the test. Read each section, top to bottom, starting with the question number, down through the correct answer, your answer, type of question, and difficulty level of each question. Analyze your strengths and weaknesses by types of questions (listed below) and difficulty levels. Analyze each test question you answered incorrectly to see why the correct answer is better than yours. Check to see that you did not misread questions or misgrid the answer on the answer sheet.

### SECTION

### TYPE OF QUESTION

Critical Reading	sentence completion
Critical Reading	passage-based reading
Math	number and operations
Math	algebra and functions
Math	geometry and measurement
Math	data analysis, statistics, probability
Writing Multiple-Choice	identifying sentence errors
Writing Multiple-Choice	improving sentences
Writing Multiple-Choice	improving paragraphs
Writing	See the Essay Scoring Guide in this booklet

The College Board is providing all of the May 2006 essay prompts so that you can practice and improve your writing skills. In the writing tables, look up your Form Code to see the composite score for your essay topic and writing multiple-choice section. You can view a copy of your own essay online at [www.collegeboard.com/viewessay](http://www.collegeboard.com/viewessay). On the practice sheets in the back of this booklet, you can try writing your essay again from another viewpoint. Then try your hand at the other topics. The more you write, the better your writing will be.

If you would like to score your own test, you will find some tools in this booklet: the guidelines for the readers who scored your essay (page 51), a worksheet for calculating raw scores (page 52), the conversion table from raw scores to scaled scores (page 53), and more.



## ESSAY

Time — 25 minutes

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

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

**Important Reminders:**

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

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

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

Some people claim that each individual is solely responsible for what happens to him or her. But the claim that we ought to take absolute responsibility for the kinds of people we are and the kinds of lives we lead suggests that we have complete control over our lives. We do not. The circumstances of our lives can make it more or less impossible to make certain kinds of choices.

Adapted from Gordon D. Marino, "I Think You Should Be Responsible; Me, I'm Not So Sure"

**Assignment:** Are we free to make our own decisions or are we limited in the choices we can make? 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.



## ESSAY

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- An off-topic essay will receive a score of zero.

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

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

Certainly anyone who insists on condemning all lies should think about what would happen if we could reliably tell when our family, friends, colleagues, and government leaders were deceiving us. It is tempting to think that the world would become a better place without the deceptions that seem to interfere with our attempts at genuine communication. On the other hand, perhaps there is such a thing as too much honesty.

Adapted from Allison Kornet, "The Truth About Lying"

**Assignment:** Would the world be a better place if everyone always told the complete truth? 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.



## ESSAY

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

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

**Important Reminders:**

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- Do not write your essay in your test book. You will receive credit only for what you write on your answer sheet.
- An off-topic essay will receive a score of zero.

The supervisor will tell you how much time you have to write an essay on the topic assigned below.

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

It is not that people dislike being part of a community; it is just that they care about their individual freedoms more. People value neighborliness and social interaction—until being part of a group requires them to limit their freedom for the larger good of the group. But a community or group cannot function effectively unless people are willing to set aside their personal interests.

Adapted from Warren Johnson, *The Future Is Not What It Used To Be*

**Assignment:** Does the success of a community—whether it is a class, a team, a family, a nation, or any other group—depend upon people's willingness to limit their personal interests? 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.

**ESSAY**

Time — 25 minutes

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

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

**Important Reminders:**

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

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

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

There is an old saying: "A person with one watch knows what time it is; a person with two watches isn't so sure." In other words, a person who looks at an object or event from two different angles sees something different from each position. Moreover, two or more people looking at the same thing may each perceive something different. In other words, truth, like beauty, may lie in the eye of the beholder.

Adapted from Gregory D. Foster, "Ethics: Time to Revisit the Basics"

**Assignment:** Does the truth change depending on how people look at things? 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.



## SECTION 3

Time — 25 minutes

24 Questions

Turn to Section 3 (page 4) of your answer sheet to answer the questions in this section.

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

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

**Example:**

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

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

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

1. Her political ----- came from her ----- vision of the nation, a vision that included and drew strength from every social constituency.

- (A) autonomy . . sweeping  
(B) reticence . . mystical  
(C) triumph . . restricted  
(D) rebellion . . conventional  
(E) success . . comprehensive

2. As one would expect, the reclusive poet ----- public appearances and invasions of privacy.

- (A) rewarded (B) endorsed (C) neglected  
(D) invited (E) detested

3. Turn-of-the-century actress Sarah Bernhardt had so ----- a talent that she ----- audiences with her diverse and utterly convincing characterizations.

- (A) unrealized . . enchanted  
(B) protean . . bedazzled  
(C) eclectic . . wearied  
(D) quixotic . . confounded  
(E) mediocre . . spellbound

4. In the classroom, Carol was unusually -----; on the playground, however, she became as intractable as the other children.

- (A) optimistic (B) mercurial (C) magnanimous  
(D) taciturn (E) docile

5. Bubble gum is not a topic usually treated seriously, so it is appropriate that this new book tracing the cultural history of bubble gum has a ----- tone.

- (A) morbid (B) cathartic (C) pedantic  
(D) flippant (E) reticent

6. Jamake Highwater manages to touch on the arts of almost every American Indian nation in one reasonably sized book that makes up for its occasional lack of ----- with its remarkable -----.

- (A) specificity . . detail  
(B) discontinuity . . concreteness  
(C) loftiness . . inaccessibility  
(D) profundity . . inclusiveness  
(E) uniqueness . . comparability

7. Though Judd is typically ----- and reserved in social gatherings, at last night's reception he spoke and acted with uncharacteristic -----.

- (A) loquacious . . alacrity  
(B) querulous . . languor  
(C) disaffected . . resentment  
(D) diplomatic . . decorum  
(E) diffident . . aplomb

8. Most politicians find television ----- to the ----- of their messages: the medium plays an essential role in propagating their ideas.

- (A) crucial . . renunciation  
(B) indispensable . . dissemination  
(C) detrimental . . communication  
(D) tangential . . interpretation  
(E) relevant . . legislation

GO ON TO THE NEXT PAGE



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

Questions 9-10 are based on the following passage.

Line 5 Jazz musician Benny Carter, known for his sophisticated compositions and arrangements, was also a virtuoso alto saxophone player. Fellow musicians frequently cited Carter's groundbreaking improvisational style, which avoided the expected run up and down the chord changes and instead spread out phrase fragments over the chord progression. In 1934, just six years after his first recording, Carter played at the opening of the Apollo Theater in Harlem and then led the first interracial big band to tour Europe. In the ensuing quarter century, Carter wrote music for film and television in Hollywood, where he played a key role in the merger of the trade unions of Black musicians and White musicians.

9. The author suggests that Carter was not only an outstanding jazz composer but also
- (A) a talented composer of classical music
  - (B) a highly imitative performer
  - (C) an opponent of organized labor
  - (D) an effective participant in social change
  - (E) an astute critic of other musicians' work
10. The passage supports which of the following statements about Carter as a saxophone player?
- (A) He impressed other musicians with his technique.
  - (B) He was less celebrated as an instrumentalist than as a bandleader.
  - (C) He did not perform in public after the 1930's.
  - (D) He confused critics with his unusual technique.
  - (E) He preferred to perform in local venues.

Questions 11-12 are based on the following passage.

Line 5 David Stahle is an expert on the imprints that climate, fire, and pestilence leave in a tree's growth rings. His pulse rises when he spots a stand of beat-up old trees because they have stories to tell. For reasons not fully understood, such trees, growing under harsh conditions, often live longer and are more sensitive to fluctuations in weather than healthier trees growing on better land. Recently, Stahle concluded from rings in bald cypress trees that a severe drought struck Roanoke Island, North Carolina, in the late sixteenth century. This might explain why the so-called Lost Colony of Roanoke died out by 1590.

11. The reference to Stahle's "pulse" (line 3) serves to indicate his level of
- (A) vitality
  - (B) frustration
  - (C) anger
  - (D) playfulness
  - (E) excitement
12. The statement in lines 11-12 ("This . . . 1590") serves primarily to
- (A) advocate a cause
  - (B) offer a theory
  - (C) question a belief
  - (D) modify a claim
  - (E) predict an outcome





Questions 13-24 are based on the following passages.

The first of the following excerpts is adapted from a 1996 essay about an exhibit of paintings by the Dutch artist Johannes Vermeer (1632-1675); the second is from an autobiography written in 1962.

### Passage 1

Line  
5 Anyone who has read Edward Snow's highly personal and poetic *Study of Vermeer* is unlikely to be able to meet the gaze of the young woman in *The Girl with the Pearl Earring* without feeling something of the confusion and  
5 complicity he so eloquently describes. "To meet this young girl's gaze is to be implicated in its urgency," Snow writes. "It is *me* at whom she gazes, with real, unguarded human emotions, and with an intensity that demands something just as real and human in return." Snow describes the girl's  
10 gaze as a stew of unresolved contradictions, which only leaves the captivated viewer all the more guilty and confused. Surprise, bewilderment, yearning, acceptance, understanding—in sequence, or all at once—her glance seems to convey all of these. "Suddenly, the most personal  
15 responses, drawn from the most private, well-protected regions of the self, are required."

My responses to this and other Vermeer paintings were rarely as personal and passionate as Snow's. To his private testimony regarding *The Girl with the Pearl Earring*, I  
20 would only add that a great deal of whatever impact it has on the viewer seems to me to derive from very specific, very visible painterly techniques. The light-colored spots that appear to round her lip; the shift from light paint to darker that forms the ridge below her nose; the dots of  
25 white on her pupils that make her eyeballs seem to bulge; the brusque, Cézanne-like rounding of her turban by shifting the blue strokes to black—all of these are as vivid as fingerprints, evidence of Vermeer's presence, of his attempts (as Snow put it) to nurse this face into being.

30 Today the entire painted surface of this work is spider-webbed with a fine network of cracks—what art critics call *cracquelure*—which makes the ability of this imaginary girl to reach out and disturb us from her paint-created, 330-year-old flatness all the more astonishing.

### Passage 2

35 There was an empty room at the top of our house and on the wall, between the fireplace and the window, almost hidden in the gloom, hung a small portrait in oils. Dim and yellowed by time, that picture showed the head of a man of strange appearance, for he had long hair and below his  
40 pointed beard was some kind of wide collar brim. His face was melancholy and yet it always seemed to me that there was a sneer upon those bearded lips.

Children rarely look up when they are playing with toys on the floor, for they are too busy with their own  
45 imaginings, but one day, when I had strayed into that

vacant room and was amusing myself, I happened to glance toward the portrait and saw, to my astonishment, that the eyes of the man were watching me. I turned away, then looked up, and once more his eyes met mine. I got to my  
50 feet and, as I did so, those eyes turned to watch every movement I made. I backed toward the door and that look still followed me, half-mournful, half-accusing.

I did not tell anyone what had happened, but I did not venture into the room again for more than a few seconds at a time, except when I was with grown-ups. Emboldened by  
55 their company, I learned to play a fearful but exciting game. I moved slowly here and there about the room, knowing that wherever I went, those eyes followed me. I pretended not to look, I talked with my elders, then swung  
60 around sharply. I was still being watched. The searching gaze was always the same, so melancholy and accusing that I began to feel a sense of guilt, began to wonder what evil I could have committed. Guilt and fear mingled in my mind and I was certain that the stranger was treacherous, that his  
65 anger could be terrible when it was aroused. Sometimes greatly daring, I crept up the stairs and opened the door very quietly, very quickly, and peeped in. Every time I did so, his eyes were looking straight at me.

13. Which of the following statements best characterizes the individual perspectives presented in the two passages?

- (A) The first passage presents a critical perspective, whereas the second presents the view of an uneducated art lover.
- (B) The first passage offers the perspective of art historians, whereas the second offers that of an art student.
- (C) The first passage offers the perspective of adult art collectors, whereas the second contains the views of a child prodigy.
- (D) The first passage offers the views of two adults, whereas the second presents a child's perspective.
- (E) The first passage offers the views of two successful artists, whereas the second presents the view of a failed artist.



14. The first paragraph of Passage 1 (lines 1-16) primarily serves to
- (A) indicate how critics have tended to see Vermeer's work in the past
  - (B) outline the major events in the life of Vermeer
  - (C) demonstrate the modern qualities of Vermeer's *The Girl with the Pearl Earring*
  - (D) highlight the significance of Snow's *Study of Vermeer*
  - (E) discuss Snow's response to a painting by Vermeer
15. According to the author of Passage 1, the "confusion" mentioned in line 4 refers to the
- (A) author's initial misunderstanding of Vermeer's painting
  - (B) arcane language Snow uses in his study of Vermeer
  - (C) facial expression of the figure depicted in the painting
  - (D) complex emotions experienced by someone viewing the Vermeer painting
  - (E) intricate arguments a critic has made about Vermeer's genius
16. In context, which of the following observations from Passage 1 most nearly parallels an observation the narrator of Passage 2 might make?
- (A) "To meet this young girl's gaze is to be implicated in its urgency" (lines 5-6)
  - (B) "My responses to this and other Vermeer paintings were rarely as personal and passionate as Snow's" (lines 17-18)
  - (C) "whatever impact it has on the viewer seems to me to derive from very specific, very visible painterly techniques" (lines 20-22)
  - (D) "all of these are as vivid as fingerprints, evidence of Vermeer's presence" (lines 27-28)
  - (E) "Today the entire painted surface of this work is spider-webbed with a fine network of cracks" (lines 30-31)
17. The second paragraph of Passage 1 (lines 17-29) primarily serves to
- (A) illustrate the narrator's emotional response to the painting
  - (B) outline the different ways critics have viewed Vermeer
  - (C) compare the artistic achievement of Cézanne and Vermeer
  - (D) discuss how Vermeer achieved specific effects in his painting
  - (E) describe the materials Vermeer used in his painting
18. In relation to the reaction of the narrator of Passage 2 to the painting, the reaction of the author of Passage 1 can best be described as
- (A) more emotional
  - (B) more analytical
  - (C) more fearful
  - (D) less idealistic
  - (E) less complimentary
19. The first paragraph of Passage 2 (lines 35-42) is primarily concerned with
- (A) providing a physical description of the portrait
  - (B) showing the child's growing fear of being watched
  - (C) revealing how the child overcame an irrational dislike of the portrait
  - (D) discussing some techniques used in the painting
  - (E) explaining the significance of the man in the portrait
20. The reaction of the child in Passage 2 to the painting (lines 43-52) was primarily one of
- (A) abject terror
  - (B) overwhelming curiosity
  - (C) growing unease
  - (D) cool indifference
  - (E) unconcealed admiration



21. The narrator of Passage 2 looks to adults for

- (A) companionship
- (B) amusement
- (C) security
- (D) guidance
- (E) approval

22. The narrator of Passage 2 experiences emotions that are most similar to those of the

- (A) "young woman" (line 3)
- (B) "viewer" (line 11)
- (C) "man" (line 38)
- (D) "grown-ups" (line 55)
- (E) "stranger" (line 64)

23. In line 60, "searching" most nearly means

- (A) hidden
- (B) beseeching
- (C) resourceful
- (D) forlorn
- (E) penetrating

24. The descriptions of the paintings in both passages suggest that paintings

- (A) require critical understanding to be appreciated fully
- (B) cannot withstand the test of time
- (C) can have a powerful impact on the life of a viewer
- (D) need careful restoration to achieve their full power
- (E) may fill viewers with a feeling of nostalgia

NOTE: The reading passages in this test are brief excerpts or adaptations of excerpts from the published material. The ideas contained in them do not necessarily represent the opinions of the College Board or Educational Testing Service. To make the test suitable for testing purposes, we may in some cases have altered the style, contents, or point of view of the original.

**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 4

Time — 25 minutes

20 Questions

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

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

Notes

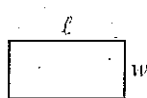
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is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

Reference Information



$$A = \pi r^2$$

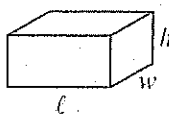
$$C = 2\pi r$$



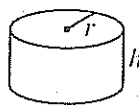
$$A = \ell w$$



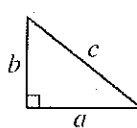
$$A = \frac{1}{2}bh$$



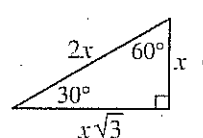
$$V = \ell wh$$



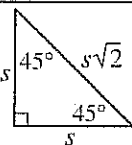
$$V = \pi r^2 h$$



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



Special Right Triangles

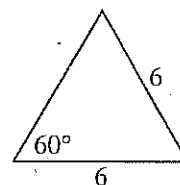


The number of degrees of arc in a circle is 360.

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

1. Which of the following triples  $(x, y, z)$  does NOT satisfy the equation  $\frac{xy}{z} = 6$ ?

- (A) (9, 2, 3)  
(B) (6, 6, 6)  
(C) (6, 4, 4)  
(D) (6, 3, 2)  
(E) (4, 3, 2)



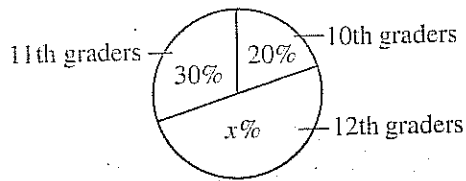
2. What is the perimeter of the triangle shown above?

- (A) 18  
(B) 16  
(C) 15  
(D) 12  
(E) 9

GO ON TO THE NEXT PAGE



## DEBATING TEAM MEMBERSHIP



3. Based on the information in the graph above, what percent of the membership of the debating team is made up of 11th and 12th graders?

(A) 40%  
(B) 50%  
(C) 60%  
(D) 70%  
(E) 80%

4. Points  $P$ ,  $Q$ ,  $R$ , and  $S$  lie on a line in that order.  $Q$  is the midpoint of  $\overline{PR}$ . If the length of  $\overline{RS}$  is 3 and the length of  $\overline{PS}$  is 13, what is the length of  $\overline{QR}$ ?


(A) 5  
(B) 6  
(C) 8  
(D) 9  
(E) 10

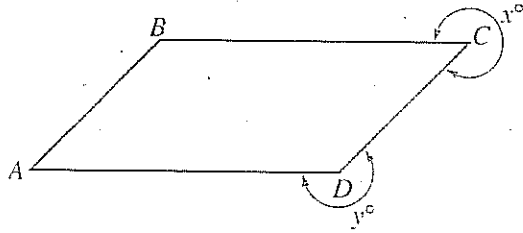
5. If three times a number  $x$  is twelve more than  $x$ , what is  $x$ ?

(A) 2  
(B) 3  
(C) 4  
(D) 6  
(E) 9

6. Today, Joaquín has 45 cents in his piggy bank and Marcy has 93 cents in her piggy bank. Starting tomorrow, Joaquín will add 6 cents to his bank each day and Marcy will add 4 cents to her bank each day. In how many days will the amount in Joaquín's bank first be greater than the amount in Marcy's bank?

(A) 5  
(B) 15  
(C) 20  
(D) 25  
(E) 58

GO ON TO THE NEXT PAGE 



Note: Figure not drawn to scale.

7. In the figure above,  $ABCD$  is a parallelogram. If  $x = 300$ , what is the value of  $y$ ?

(A) 200  
(B) 240  
(C) 280  
(D) 320  
(E) 330

8. If  $xy = 2$ ,  $yz = 5$ ,  $xz = 10$ , and  $x > 0$ , then  $xyz =$

(A) 5  
(B) 10  
(C) 17  
(D) 50  
(E) 100

	$x$	$y$	$x$	$y$	$x$
$m$					
$m$					
$m$					
$m$					

9. In the figure above, all angles are right angles and  $y = 2x$ . If  $m$ ,  $x$ , and  $y$  are lengths of the segments indicated, what fraction of the figure is shaded?

(A)  $\frac{1}{7}$   
(B)  $\frac{1}{5}$   
(C)  $\frac{3}{14}$   
(D)  $\frac{3}{10}$   
(E)  $\frac{5}{14}$

10. When a certain odd number is divided by 5, the remainder is 1. Which digit must be in the units place of this odd number?

(A) 1  
(B) 3  
(C) 5  
(D) 7  
(E) 9

GO ON TO THE NEXT PAGE 



11. Let the functions  $f$ ,  $g$ , and  $h$  be defined by  $f(x) = x^2$ ,  $g(x) = x$ , and  $h(x) = f(x) - g(x)$ . For  $x > 10$ , which of the following describes what happens to  $h$  as  $x$  gets farther from 10?

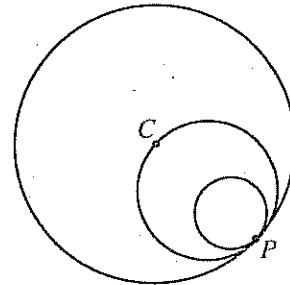
(A)  $h$  increases only.  
 (B)  $h$  decreases only.  
 (C)  $h$  stays the same.  
 (D)  $h$  decreases at first and then increases.  
 (E)  $h$  increases at first and then decreases.

12. A certain physical fitness test lasts a total of 3 hours. Each part of the test requires the same amount of time, and 12-minute breaks are included between consecutive parts. If there are a total of 3 breaks during the 3 hours, what is the required time, in minutes, for each part of the test?

(A) 33  
 (B) 36  
 (C) 38  
 (D) 45  
 (E) 48

If  $x$  is an integer between 2,000 and 2,016 and if the sum of the digits of  $x$  is even, then  $x$  must be even.

13. Which of the following is one possible value of  $x$  that proves that the statement above is FALSE?
- (A) 2,008  
 (B) 2,009  
 (C) 2,010  
 (D) 2,011  
 (E) 2,012



14. The centers of the three circles above lie on segment  $\overline{CP}$  (not shown), and the three circles are mutually tangent at point  $P$ . The center of the largest circle is point  $C$ , and the center of the middle circle lies on the smallest circle. If the radius of the smallest circle is 5, what is the circumference of the largest circle?
- (A)  $10\pi$   
 (B)  $20\pi$   
 (C)  $30\pi$   
 (D)  $40\pi$   
 (E)  $60\pi$



15. Let a "prd" number be defined as one in which the product of the positive divisors of the number, not including the number itself, is greater than the number. Which of the following is a prd number?

(A) 8  
(B) 15  
(C) 18  
(D) 21  
(E) 27

16. If  $k^2x = kx$  for every value of  $x$ , what are all possible values of  $k$ ?

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

17. Tickets for a community play cost \$2.00 for a child and \$4.00 for an adult. If 200 tickets were sold for a total of \$700, what was the ratio of the number of children's tickets sold to the number of adults' tickets sold?

(A) 1 to 4  
(B) 1 to 3  
(C) 1 to 2  
(D) 4 to 7  
(E) 2 to 3

18. The average (arithmetic mean) of 3 numbers is  $x$ . If one of the numbers is  $y$ , what is the average of the remaining 2 numbers in terms of  $x$  and  $y$ ?

(A)  $\frac{x}{3}$   
(B)  $\frac{2y - x}{3}$   
(C)  $\frac{2x - y}{3}$   
(D)  $\frac{3y - x}{2}$   
(E)  $\frac{3x - y}{2}$

GO ON TO THE NEXT PAGE 





19. A container in the shape of a right circular cylinder has an inside base radius of 4 inches and an inside height of 9 inches. This cylinder is completely filled with water. All of the water is then poured into a second right circular cylinder with a larger inside base radius of 9 inches. What must be the minimum inside height, in inches, of the second container?

(A)  $\frac{4}{3}$   
(B)  $\frac{16}{9}$   
(C)  $\frac{9}{4}$   
(D) 4  
(E) 6

20. In the  $xy$ -plane, the graph of the function  $f$  is a line. If  $f(2) = 7$  and  $f(12) = 1$ , what is the value of  $f(7)$ ?

(A) 5.2  
(B) 5  
(C) 4.6  
(D) 4  
(E) 3.4

**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.

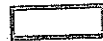
**Example:**

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. Canaries are often said to have ----- voices because they make such sweet, harmonious sounds.
  - (A) insistent (B) unnatural (C) melodious
  - (D) inaudible (E) strident
2. The ----- plots of Agatha Christie's detective stories reflect the complexities hidden beneath the simple appearances of English village life.
  - (A) intricate (B) discrete (C) straightforward
  - (D) elementary (E) vacuous
3. Government officials authorized ----- because they wanted to have a complete enumeration of the country's population.
  - (A) a discontinuance (B) an appointment
  - (C) a waiver (D) a census (E) a levy
4. Even in her fiction writing, Denise Chavez functions as a kind of historian in that she ----- the real experiences of Hispanic women through her characters.
  - (A) predicts (B) defends (C) chronicles
  - (D) averts (E) surmises
5. Fanatically committed to one political cause, Anderson was a -----, maintaining an exclusively ----- outlook.
  - (A) libertine . . provincial
  - (B) zealot . . partisan
  - (C) patriot . . indulgent
  - (D) maverick . . altruistic
  - (E) rebel . . vicarious



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

Questions 6-9 are based on the following passages.

### Passage 1

Line Many scientists tend to split the universe into two  
5 realms: science and irrationality. They believe that  
"truth" is only what can be experimentally proved and  
that "understanding" is only what fits into the straitjacket  
of logic. This approach may work beautifully within the  
15 scope of questions that science can answer, but life is a far  
richer tapestry than the threads of logic alone can weave.  
It is myopic to define "reason" so narrowly that one can't  
see the other threads. Science can teach us many things,  
20 but there are some truths science cannot measure.

### Passage 2

After spending years training in Buddhist meditative  
practices, neurologist James Austin got his first taste of  
spiritual enlightenment while waiting on a London train  
platform, idly glancing toward the Thames River. Instantly,  
15 the panorama of sky and buildings acquired a sense of what  
he calls "absolute reality, intrinsic rightness, and ultimate  
perfection." He suddenly shed his formerly unshakable  
assumption that he was an individual, separated from  
the rest of the world by a skin suit. Within seconds, other  
20 insights dawned.

Austin described in a book how this experience spurred  
him to study brain processes that underlie spiritual  
experiences. But the harsh reality of science is that those  
who study mysticism are rarely taken seriously. For  
25 scientists, claims of mystical enlightenment have long  
smacked of self-deception, charlatanism, or both.

6. The "scientists" referred to in line 1, Passage 1, would  
most likely view the "book" mentioned in line 21,  
Passage 2, with

- (A) respect
- (B) curiosity
- (C) objectivity
- (D) ambivalence
- (E) skepticism

7. James Austin (in Passage 2) would most likely respond  
to the assertion in lines 6-7 of Passage 1 ("life is . . .  
weave") by

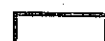
- (A) agreeing and citing his own experience as evidence
- (B) agreeing and citing specific scientific findings as proof
- (C) declining to offer an opinion either way
- (D) disagreeing and citing the beliefs of most scientists
- (E) disagreeing and citing Buddhist texts for support

8. The author of Passage 1 would most likely characterize  
the "insights" mentioned in Passage 2, line 20, as

- (A) mystical experiences that have little relevance to most people's lives
- (B) truths that can be arrived at only through rigorous scientific studies
- (C) potentially valuable perceptions that most scientists would not consider legitimate
- (D) sensory impressions that are unlikely to yield meaningful information
- (E) personal experiences that scientists should not attempt to study

9. Unlike Passage 1, Passage 2 makes use of

- (A) generalization
- (B) anecdote
- (C) figurative language
- (D) literary allusion
- (E) technical jargon

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

*The following passage by an Asian American author has been adapted from a short story published in 2000. Caroline and Marcella are former friends; Dean is Caroline's current boyfriend.*

Caroline Yip and Marcella Ahn had a history. They had both lived in Cambridge, Massachusetts, in their twenties, and for several years they had been the best of friends—  
 Line inseparable, really. But then their first books had come  
 5 out at the same time, Marcella's from a major New York publisher, Caroline's from a small, albeit respected press. Both had very similar jacket photos, the two women looking solemn and precious, hair flowing in full regalia. An unfortunate coincidence. Critics couldn't resist  
 10 reviewing them together, mocking the pair, even then, as "The Hair Poets," "The Braids of the East," and "The New Asian Poe-tresses."

But Marcella escaped these barbs relatively unscathed. Her book was taken seriously, and she was even compared  
 15 to Marianne Moore and Emily Dickinson. Her poetry was highly erudite, usually beginning with mundane observations about birds or plant life, then slipping into long, abstract meditations on entropy and inertia, the Bible, evolution, and death, punctuated by the briefest mention of  
 20 personal deprivations. Or so the critics said. Dean still had the book from the library, and he couldn't make heads or tails of it.

In contrast, Caroline's book had been skewered. She wrote in a slangy, contemporary voice, full of topical,  
 25 popculture allusions. She wrote about Marilyn Monroe and moo goo gai pan, about alien babies and her strange, loopy obsession with poultry. She was roundly dispatched as a mediocre talent.

Worse, Caroline said, was what happened afterwards. Marcella began to thwart her at every turn. Teaching jobs,  
 30 coveted magazine publications, awards—everything Caroline applied for, Marcella got. It didn't hurt that Marcella was a shameless schmoozer, flirting and networking with anyone who might be of use, all the while  
 35 ridiculing them behind their backs. The fact was, Marcella was rich. Her father was a shipping tycoon, and she had a trust fund in the millions. She didn't need any of these pitifully small sinecures which would have meant a livelihood to Caroline, and it became obvious that the only  
 40 reason Marcella was pursuing them at all was to taunt her.

"She's a vulture, a vampire," Caroline told Dean. "You know she won't go out in the light of day? She stays up until four, five in the morning and doesn't wake up until past noon."

45 And then there was the matter of Evan Paviromo, the English-Italian editor of a literary journal whom Caroline had dated for seven years, waiting patiently for them to get

married and have children. He broke it off one day without explanation. She dogged him. Why? Why was he ending it?  
 50 She refused to let him go without some sort of answer. Finally he complied. "It's something Marcella said," he admitted.

At first Caroline feared they were involved romantically, but the truth was more vicious. "Marcella told me she  
 55 admired me," Evan said, "that I was far more generous than she could ever be. She said she just wouldn't be able to stay with someone whose work she didn't really respect. I thought about that, and I decided I'm not that generous after all. It's something that would eat away at me, that's  
 60 bothered me all along. It's something I can't abide."

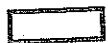
Caroline fled to California, eventually landing in the little nondescript town of Rosarita Bay. She completely disengaged herself from the poetry world. She was still writing every day, excruciating as it was for her, but she  
 65 had not attempted to publish anything in six years. She was thirty-seven now, and a waitress—the breakfast shift at a diner, the dinner shift at a barbecue joint. Her feet had grown a full size from standing so much, and she was broke. But she had started to feel like her old self again,  
 70 healthier, more relaxed, sleeping better. Dean had a lot to do with it, she said. She was happy—or as happy as it was possible for a poet to be. Until now. Until Marcella Ahn suddenly arrived.

10. The word "history" (line 1) refers to a

- (A) chronological record of actual occurrences
- (B) long-standing and noteworthy relationship
- (C) formal written account of an incident
- (D) branch of knowledge focused on the past
- (E) creative work based on historical events

11. In context, what is the primary significance of the two similar "jacket photos" (line 7) ?

- (A) They served as a way for critics to link two newly published poets.
- (B) They provided an opportunity for two poets to announce their friendship.
- (C) They revealed the animosity that had always existed between the two poets.
- (D) They mirrored the similarity of topics in the two books of poetry.
- (E) They reflected the casualness and informality of the language used in the poems.



12. The tone of the characterizations quoted in lines 11-12 is best described as

- (A) morose
- (B) curious
- (C) sardonic
- (D) threatening
- (E) incredulous

13. The tone of the statement in line 20 ("Or . . . said") is best described as

- (A) impatient
- (B) apologetic
- (C) reflective
- (D) anxious
- (E) unconvinced

14. Lines 25-27 ("She . . . poultry") serve to provide examples of

- (A) particular references found in Caroline's poetry
- (B) diverse subjects about which Caroline knew surprisingly little
- (C) allusions in Caroline's poetry that puzzled critics
- (D) topics that should not be mentioned even in modern poetry
- (E) images that are found also in Marcella's poetry

15. The "reason" mentioned in line 40 was most "obvious" (line 39) to

- (A) magazine publishers
- (B) award committees
- (C) Marcella's father
- (D) Dean
- (E) Caroline

16. In context, lines 45-50 ("And . . . answer") suggest that Caroline's response to Evan's action encompassed all of the following EXCEPT

- (A) shock
- (B) disbelief
- (C) confusion
- (D) persistence
- (E) retaliation

17. Which is most analogous to the situation described in lines 62-70 ("She . . . better")?

- (A) A ballerina achieves early success and fame but then is forced by personal problems to stop dancing.
- (B) A novelist, undaunted by many initial rejections, continues to try to publish her stories.
- (C) An artist is unable to support himself with his painting but finds contentment working as a clerk.
- (D) A scholar, discouraged by continuous harsh criticism of his writings, gradually becomes despondent.
- (E) A violinist, skilled at interpreting the works of others, is unsuccessful at composing her own music.

18. The statement in lines 71-72 ("She . . . be") suggests which of the following about poets?

- (A) They tend to be reclusive and uncommunicative.
- (B) They are by nature inclined to be discontented.
- (C) They rarely reveal their true feelings.
- (D) Their poetry is shaped by real and imaginary experiences.
- (E) Those who are most successful express a range of emotions in their poems.



Questions 19-24 are based on the following passage.

*This passage is excerpted from a 1996 book about Thomas Jefferson, statesman and third President of the United States.*

According to the National Park Service, about a million tourists pay their respects to Thomas Jefferson in his memorial each year. On the March day in 1993 that I visited, several hundred tourists walked up the marble steps and looked up to the four inscribed panels on the walls and read the words, often moving their lips and murmuring the famous phrases to themselves. The first panel, which attracted more attention than the others, contained the most famous and familiar words in American history: "We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain inalienable Rights, that among these are Life, Liberty, and the pursuit of Happiness."

But what do these words mean? How do they create magic?

Merely to ask these questions is to risk being accused of some combination of treason and sacrilege, since self-evident truths are not meant to be analyzed: that is what being self-evident is all about. But when these words are stripped of the patriotic haze, read straightaway and literally, two monumental claims are being made here. The explicit claim is that the individual is the sovereign unit in society; the individual's natural state is freedom from and equality with all other individuals; this is the natural order of things. The implicit claim is that all restrictions on this order are immoral transgressions, violations of what God intended; individuals liberated from such restrictions will interact with their fellows in a harmonious scheme requiring no external discipline and producing maximum happiness.

This is a wildly idealistic message, the kind of good news simply too good to be true. It is, truth be told, a recipe for anarchy. Any national government that seriously attempted to operate in accord with these principles would be committing suicide. But, of course, the words were not intended to serve as an operational political blueprint. Jefferson was not a profound political thinker. He was, however, an utterly brilliant rhetorician and visionary. The genius of his vision is to propose that our deepest yearnings for freedom are in fact attainable. The genius of his rhetoric is to articulate irreconcilable human urges at a sufficiently abstract level to mask their mutual exclusiveness. Jefferson guards the American Creed at this inspirational level, which is inherently immune to scholarly skepticism and a place where ordinary Americans can congregate to speak the magic words together. The

Jeffersonian magic works because we permit it to function at a rarified region where real-life choices do not have to be made.

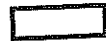
Jefferson's words allow American citizens to come together and simultaneously embrace seemingly opposite propositions. They can believe, for example, that health care and a clean environment for all Americans are natural rights, but that the federal bureaucracies and taxes required to implement medical and environmental programs violate individual independence. The primal source of Jefferson's modern-day appeal is that he provides the sacred space—not really common ground but more a midair location floating above all the political battle lines—where Americans can come together on such issues and, at least for that moment, become a chorus instead of a cacophony.

19. Lines 3-7 ("On the . . . themselves") primarily serve to

- (A) emphasize the austere beauty of the Jefferson Memorial
- (B) suggest that many Americans are unfamiliar with Jefferson's philosophy
- (C) indicate the reverence people feel for Jefferson's words
- (D) show the strong regard that people have for history
- (E) point out that Americans experience different degrees of patriotism

20. The author suggests that "to ask these questions" (line 16) is to risk being considered

- (A) ignorant
- (B) insincere
- (C) heretical
- (D) sentimental
- (E) impractical



21. The passage as a whole suggests that the "two monumental claims" (line 21) are

- (A) evidence of Jefferson's profound political thinking
- (B) useful principles that can help to solve everyday problems
- (C) more important to Americans than they probably should be
- (D) incompatible when put into practice
- (E) irrelevant at this point in American history

22. The author's view of "the implicit claim" (line 25) might best be characterized as

- (A) dismissive
- (B) defensive
- (C) reverent
- (D) resentful
- (E) skeptical

23. The author uses the phrase "rarified region" (line 48) to

- (A) hint that only a few people truly appreciate the originality of Jefferson's philosophy
- (B) indicate that Jefferson accurately predicted the political problems of the future
- (C) suggest that Jefferson's world was remote from the realities faced by Americans today
- (D) imply that Jefferson's ideas are too obscure for the average person to grasp
- (E) emphasize the unique status that Jefferson's assertions enjoy

24. The author would most likely describe the "federal bureaucracies and taxes" (line 54) as

- (A) measures that limit some rights in order to safeguard other rights
- (B) excessive and unnecessary violations of individual freedom
- (C) examples of the kinds of governmental infringement that Jefferson could not foresee
- (D) proof that Jefferson's words have an influence on public policy today
- (E) regulations that reveal the true lack of freedom in America

**STOP**

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



## SECTION 6

Time — 25 minutes

35 Questions

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

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

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

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

## EXAMPLE:

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

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

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

1. It being agreed by world leaders that there should be a major organized effort to address poverty, illiteracy, and disease; they then set goals by which progress could be measured.

- (A) It being agreed by world leaders
- (B) World leaders agreed
- (C) World leaders who should agree
- (D) World leaders being in agreement
- (E) World leaders, in agreement

2. At lunchtime, Kevin paid for Anita's hamburger: the reason is because he owed her money.

- (A) hamburger; the reason is because he owed
- (B) hamburger; this was because he owed
- (C) hamburger, in that he owed
- (D) hamburger because he owed
- (E) hamburger because of owing

3. Reading poetry aloud usually helps me understand it better.

- (A) Reading poetry aloud
- (B) Poetry, read aloud,
- (C) To read poetry aloud, this
- (D) If one reads poetry aloud it
- (E) I read poetry aloud, it

4. One of the most beautiful trees in North America, the chestnut tree brought nearly to extinction by a fungus during the chestnut blight of 1909.

- (A) tree brought nearly to extinction by a fungus
- (B) tree, which a fungus brought nearly to extinction
- (C) tree, but a fungus brought it nearly to extinction
- (D) tree was brought nearly to extinction by a fungus
- (E) tree, having been brought nearly to extinction by a fungus

5. A hot-air balloon rises when the air inside it becomes warm, drops when that air cools, and moves sideways when blown by the wind.

- (A) moves sideways when blown by the wind
- (B) moving sideways when the wind blows
- (C) when the wind blows, the movement is sideways
- (D) caused to move sideways when blown by the wind
- (E) it is blown by the wind, causing sideways movement





6. The supply clerk was careless in taking inventory, its leading to a shortage of some items and an excess of others.

- (A) The supply clerk was careless in taking inventory, its leading
- (B) In taking inventory the supply clerk was careless, this carelessness led
- (C) The supply clerk was careless in taking inventory and it led
- (D) The supply clerk's carelessness in taking inventory led
- (E) The inventory, it was taken carelessly by the supply clerk, which led

7. In 1903, physicist Marie Curie was the first woman to win the Nobel Prize, moreover, in 1911, she became the first person to win it a second time.

- (A) physicist Marie Curie was the first woman to win the Nobel prize, moreover,
- (B) Marie Curie, a physicist, won the Nobel prize, which was the first time a woman won it, then,
- (C) physicist Marie Curie became the first woman to win the Nobel Prize;
- (D) Marie Curie won the Nobel Prize for the first time as a woman who was a physicist, and
- (E) physicist Marie Curie became the first winner of the Nobel Prize among women, moreover,

8. Sometimes called "the founder of art in Texas," a sculpture of William Jennings Bryan was completed by Elisabet Ney in her Austin studio in 1899.

- (A) a sculpture of William Jennings Bryan was completed by Elisabet Ney in her Austin studio in 1899
- (B) William Jennings Bryan's sculpture was completed by Elisabet Ney in her Austin studio in 1899
- (C) in her Austin studio, Elisabet Ney having completed a sculpture of William Jennings Bryan in 1899
- (D) because a sculpture of William Jennings Bryan was completed in 1899 in her Austin studio by Elisabet Ney
- (E) Elisabet Ney completed a sculpture of William Jennings Bryan in her Austin studio in 1899

9. Professor Brand, who enjoys welcoming international students to her home on Thanksgiving, served the traditional turkey dressed in Pilgrim clothing.

- (A) served the traditional turkey dressed in Pilgrim clothing
- (B) served the traditional turkey, dressing in Pilgrim clothing
- (C) serving the traditional turkey and dressed in Pilgrim clothing
- (D) dressed in Pilgrim clothing to serve the traditional turkey
- (E) dressed in Pilgrim clothing and the traditional turkey was served

10. Chop suey originated in the United States, and many people assume that it was China.

- (A) and many people assume that it was
- (B) many people assuming
- (C) not, as many people assume, in
- (D) not what many people assume being
- (E) but many people assume it to be

11. The discrepancy between the richness of Shakespeare's works and how much biographical information is lacking has not diminished over centuries.

- (A) how much biographical information is lacking
- (B) the lacking of much biographical information
- (C) the lack of biographical information about Shakespeare
- (D) there is a lack of biographical information
- (E) Shakespeare's biography



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. Global warming trends, what play a big role in  
A

the melting of tropical glaciers like those on  
B

Mt. Kilimanjaro, may cause many ice caps  
C

to vanish within 20 years. No error  
D E

13. Charles Dickens' *Great Expectations* is a novel

in which the main character becomes so obsessed with  
A B

the idea of becoming a gentleman that his moral  
C D

judgment is temporarily affected. No error  
E

14. The candidate called for medical insurance reform,  
A

but to me he seemed less interested in

the plight of uninsured citizens than in whether  
B

enough is registered to vote. No error  
C D E

15. Our new neighbors are the most sociable people we  
A

have ever met, and our chief interests, cooking and  
B C

politics, are similar to them. No error  
D E

16. Katherine felt that she has not had  
A

any understanding of the highly intricate workings  
B C

of the stock market until her uncle took her to the  
D

New York Stock Exchange. No error  
E

17. It was fortunate that the police officer arrived quickly  
A

because she was the only person at the scene who  
B

was able to investigate the accident calm and  
C D

dispassionately. No error  
E

18. During rehearsals, the director praised the actors

which had supporting roles more often than those  
A B C

with the most demanding roles. No error  
D E

19. What becomes apparent from assessing scientific  
A B

accomplishments is that only relatively recently have  
C

the necessary technology been developed for solving  
D

the mysteries of genetics. No error  
E



20. Because his experience in the naval medical corps had

A  
been rewarding, Bob applied to medical school after  
B C  
he was discharged from the navy. No error  
D E

21. Ocean currents that start in the warm waters of the

Pacific and Indian Oceans are initially low in salt  
A B  
content but become more saline as it flows northward  
C D  
into colder regions. No error  
E

22. Plants grown for their flowers should be treated with

A B  
a low-nitrogen fertilizer because excessive nitrogen  
promotes the growth of leaves at the expense of  
C D  
flowers. No error  
E

23. Those who defend sequoia trees from loggers

A B  
justified doing so on the grounds that such trees  
C D  
are irreplaceable. No error  
E

24. Extending along several city blocks are a row of

A B  
ginkgo trees, their leaves turning a brilliant yellow  
C D  
now that summer is over. No error  
E

25. Africa's Kanem empire, after enduring for over a

A  
thousand years, is believed to have fallen into decline  
B C  
when trade centers shift outside its boundaries.  
D  
No error  
E

26. Opposite to most people I know, Annie, a good

A  
photographer herself, actually enjoys seeing  
B C  
the photographs that her friends take on their  
D  
vacations. No error  
E

27. My roommate, a drama major, claimed that Ibsen's

A  
plays, unlike Ionesco, are totally conventional in  
B C  
their style. No error  
D E

28. Not very particular in nesting sites, house wrens

A B  
may nest in birdhouses, mailboxes, building  
C  
crevices—even in the pockets of hanging laundry.  
D  
No error  
E

29. At the reception were the chattering guests, the

A B C  
three-tiered cake, and the lively music that have  
become characteristic of many wedding celebrations.  
D  
No error  
E

GO ON TO THE NEXT PAGE



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

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

Questions 30-35 refer to the following passage.

(1) History is the study not only of cataclysmic events but also of seemingly insignificant things, like the chili pepper.

(2) The chili pepper was known only in the Americas.

(3) When Columbus ran into the chili pepper, he mistakenly thought it was related to black pepper, which was widely traded in Europe. (4) Once Columbus introduced the chili pepper to Europe, it spread quickly throughout Europe and Asia.

(5) The introduction of the chili pepper had a tremendous impact on the balance of power among the European countries that were already involved in the black pepper trade, and, what was even larger in scope, on Asian and European cultures. (6) Before the discovery of chili pepper, black pepper was considered so valuable that it was the focus of international rivalry. (7) Egypt and the Italian city-states, Venice and Genoa, wanted to retain exclusive control of the black pepper trade and the economic power that went along with it.

(8) Spain's explorers went to sea, and one reason for it was black pepper. (9) They wanted to get it by bypassing the trade route controlled by the Arabs and Italians. (10) But instead of black pepper, they found the chili pepper and discovered that it had many advantages over black pepper. (11) Among them was that it was a lot easier to grow than black pepper: it could grow in cool regions as well as hot ones.

30. In context, which should be added to the beginning of sentence 2 ?

- (A) Because it was unknown in Europe and Asia,
- (B) To the astonishment of most people,
- (C) Until the expeditions of the European explorer, Columbus,
- (D) Moreover, after the years of European exploration
- (E) Why chili peppers have turned out to be so important is that

31. Which is the best replacement for "ran into" in sentence 3 ?

- (A) encountered
- (B) met up with
- (C) observed
- (D) confronted
- (E) got hold of

32. Of the following, which is the best revision for the underlined part of sentence 5 (reproduced below) ?

*The introduction of the chili pepper had a tremendous impact on the balance of power among the European countries that were already involved in the black pepper trade, and, what was even larger in scope, on Asian and European cultures.*

- (A) trade, not to mention on
- (B) trade, but also
- (C) trade, an impact also on
- (D) trade; it also was affecting
- (E) trade, and they also affected

33. Which of the following would most improve the third paragraph (sentences 5-7) ?

- (A) A more detailed discussion of how the introduction of the chili pepper influenced Asian and European cultures
- (B) An account of earlier attempts to take control of the black pepper trade away from Egypt and the Italian city-states
- (C) More information about how black pepper came to be so expensive
- (D) A list of the countries that were affected by the introduction of the chili pepper
- (E) A comparison of the price of black pepper in different countries in Europe during the Middle Ages



34. In context, which is the best way to combine sentences 8 and 9 (reproduced below) ?

*Spain's explorers went to sea, and one reason for it was black pepper. They wanted to get it by bypassing the trade route controlled by the Arabs and Italians.*

- (A) Spain's explorers went to sea, and one reason for that was they wanted to bypass the trade route controlled by the Arabs and Italians for black pepper.
- (B) Spain's explorers went to sea, one reason for this was to find black pepper, bypassing the trade route controlled by the Arabs and Italians.
- (C) For black pepper, Spain's explorers went to sea, one reason for which was to bypass the trade route controlled by the Arabs and Italians.
- (D) Because the Arabs and Italians controlled the trade route of black pepper, Spain's explorers went to sea as a bypass.
- (E) One reason that Spain's explorers went to sea was to get black pepper by bypassing the trade route controlled by the Arabs and Italians.

35. Which is the best sentence to put after sentence 11 ?

- (A) In the United States you can even grow chili peppers in northern states like Minnesota.
- (B) Suddenly, there was a hardy alternative to black pepper.
- (C) In the end, the Europeans never found a passage to the spice countries through the American continents.
- (D) Black pepper is still popular today, and much less expensive than it was a few centuries ago.
- (E) The majority of peppers are grown and consumed in Mexico and Latin America.

**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

18 Questions

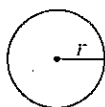
Turn to Section 7 (page 6) of your answer sheet to answer the questions in this section.

**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

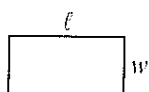
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is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

Reference Information

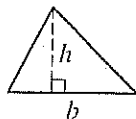


$$A = \pi r^2$$

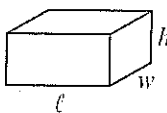
$$C = 2\pi r$$



$$A = \ell w$$



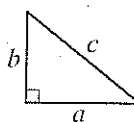
$$A = \frac{1}{2}bh$$



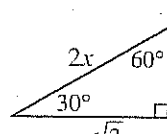
$$V = \ell wh$$



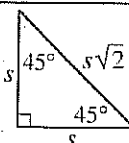
$$V = \pi r^2 h$$



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



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. For all positive integers  $x$  and  $y$ , let  $\boxed{x|y}$  be defined

as  $\boxed{x|y} = x + 2y$ . What is the value of  $\boxed{4|3}$ ?

- (A) 7  
(B) 8  
(C) 9  
(D) 10  
(E) 11

$$y = kx$$

2. In the equation above,  $k$  is a constant. When  $y = 12$ , then  $x = 5$ . When  $y = 60$ , what does  $x$  equal?

- (A) 10  
(B) 17  
(C) 25  
(D) 53  
(E) 144

GO ON TO THE NEXT PAGE

3. Which of the following numbers is between 0.499 and 0.500?

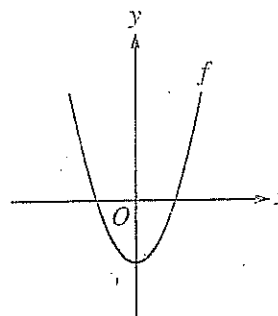
I. 0.4955  
II. 0.4994  
III. 0.5001

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

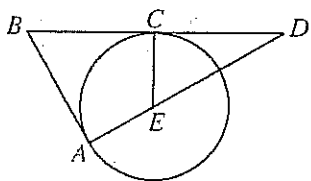
2, 6, 12, ...

4. The first term of the sequence above equals  $1 \times 2$ , the second term equals  $2 \times 3$ , and the third term equals  $3 \times 4$ . In general the  $n$ th term of the sequence equals  $n(n + 1)$ . What is the 20th term minus the 19th term?

- (A) 2  
(B) 38  
(C) 40  
(D) 42  
(E) 400



5. The figure above shows the graph of the function  $f$ . If  $g(x) = -f(x)$  for all values of  $x$ , which of the following is a true statement describing the graph of  $g$  in comparison with the graph of  $f$ ?
- (A) It is wider than the graph of  $f$  and opens upward.  
(B) It is wider than the graph of  $f$  and opens downward.  
(C) It is narrower than the graph of  $f$  and opens upward.  
(D) It is narrower than the graph of  $f$  and opens downward.  
(E) It has the same shape as the graph of  $f$  but opens downward.



6. In the figure above, line segments  $\overline{BD}$  and  $\overline{AB}$  are tangent to the circle at points  $C$  and  $A$ , respectively. If the circle is centered at  $E$ , what angle must have the same measure as  $\angle ABD$ ?

- (A)  $\angle BAD$
- (B)  $\angle BCE$
- (C)  $\angle CDE$
- (D)  $\angle CEA$
- (E)  $\angle CED$

YEAR	STUDENT POPULATION
1990	1,800
1992	2,050
1994	2,275
1996	2,525
1998	2,750

7. The chart above shows the student population at Johnston High School from 1990 through 1998. Beginning in 1990, the student population increased by a constant amount every 4 years. What was the student population in the year 2002?

- (A) 3,000
- (B) 3,225
- (C) 3,250
- (D) 3,500
- (E) 3,700

8. In  $\triangle PQR$ ,  $PQ = 4$ ,  $QR = 3$ ,  $PR = 6$ , and the measure of angle  $PQR$  is  $x^\circ$ . Which of the following must be true about  $x$ ?

- (A)  $45 \leq x < 60$
- (B)  $x = 60$
- (C)  $60 < x < 90$
- (D)  $x = 90$
- (E)  $x > 90$



**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
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○

← Fraction line

Grid in result. →

Answer: 2.5

2	.	5	
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○

← Decimal point

Answer: 201  
Either position is correct.

2	0	1	
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○

2	0	1	
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○

**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	
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○

.	6	6	6
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○

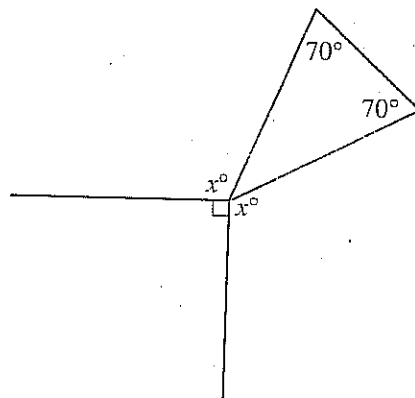
.	6	6	7
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○
○	○	○	○

9. The amount of liquid that has been pumped from a tank after  $t$  minutes is  $2t + t^2$  gallons. How many gallons of liquid have been pumped from the tank after 3 minutes?

10. If  $\sqrt{x-6} = 2$ , what is the value of  $\sqrt{x+6}$ ?

11. Of all the students in a high school, on a certain day  $\frac{2}{3}$  rode the bus to school,  $\frac{1}{6}$  rode in a car, and the remaining students walked. What fraction of the school's students walked to school on that day?

12. What is one possible value of  $x$  for which  $2x < 2 < 3x$ ?

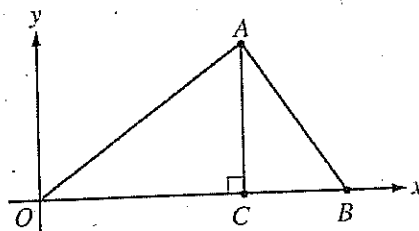


13. What is the value of  $x$  in the figure above?

14. In an assortment of cereals, 23 types contain oats and 25 types contain rice. Some of these cereals contain both oats and rice. If 16 cereals in this assortment contain oats but not rice, how many cereals contain rice but not oats?

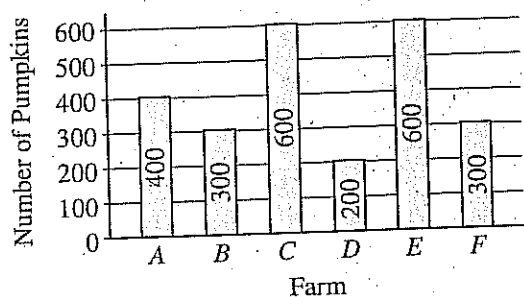
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15. If  $a > 1$  in the equations  $\frac{a^x}{a^y} = a^{-6}$  and  $a^x \cdot a^y = a^{12}$ , what is the value of  $y$ ?



17. In the  $xy$ -plane above,  $\triangle OAB$  has area 9, the length of  $\overline{OC}$  is 4, and the coordinates of point  $B$  are  $(6, 0)$ . What is the slope of segment  $\overline{OA}$ ?

NUMBER OF PUMPKINS HARVESTED  
AT SIX FARMS



16. Based on the bar chart above, what is the total number of pumpkins harvested at those farms for which the number of pumpkins harvested was greater than the median number of pumpkins harvested at the 6 farms?

18. In the integer 3,589 the digits are all different and increase from left to right. How many integers between 4,000 and 5,000 have digits that are all different and that increase from left to right?

**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. The outbreak of disease could not be labeled pandemic, since despite its rapid ----- it remained confined to one small region.

(A) spread (B) concentration (C) fading  
(D) symptoms (E) improvement

2. The author's theory about modern design had an enormous impact when first published, but as ----- as it was then, it is now clearly -----.

(A) scholarly . . . erudite  
(B) lackluster . . . impressive  
(C) influential . . . outdated  
(D) primitive . . . antiquarian  
(E) prestigious . . . masterful

3. Texas is known for its wild orchids, whose ----- is evident in their ----- colors: 52 species have been catalogued, ranging from pure white to bright red.

(A) novelty . . . traditional  
(B) diversity . . . myriad  
(C) stature . . . uniform  
(D) starkness . . . vibrant  
(E) toxicity . . . varying

4. In 1974 the committee overseeing the Pulitzer Prize in Literature was ----- so much ----- that it bestowed no award at all that year.

(A) plagued by . . . concordance  
(B) afforded with . . . esteem  
(C) exempt from . . . debate  
(D) racked with . . . dissension  
(E) emboldened by . . . scrutiny

5. Pablo Picasso was ----- youth: his extraordinary artistic talent was obvious at a very early age.

(A) an articulate (B) an immature  
(C) a disturbed (D) a precocious  
(E) a callow

6. Jared has the habits of -----: he lives simply and donates most of his income to local charities.

(A) a skeptic (B) a pundit (C) a dilettante  
(D) an insurgent (E) an ascetic



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.

*This passage about the survival of cheetahs is from a book published in 1995.*

Line The cheetah may be a gorgeous, sleek sports car among  
5 mammals, able to sprint at speeds approaching seventy miles  
an hour, yet it has not been able to run away from its many  
miseries. Once the cat ranged throughout the African con-  
5 tent, the Near East, and into southern India; now it is  
extinct almost everywhere but in scattered patches of sub-  
Saharan Africa. Farmers in Namibia shoot cheetahs as  
vermin. On reserves, where cheetahs are often forced into  
unnatural proximity with other predators, they are at the  
10 bottom of the meat eaters' grim hierarchy; lions will go out  
of their way to destroy cheetah cubs, while hyenas, leopards,  
and even vultures can easily chase away a cheetah from  
its hard-caught prey. To make the magnificent cat's story  
more poignant still, many scientists have concluded that the  
15 species is severely inbred, the result of a disastrous popu-  
lation crash thousands of years ago from which the poor  
animals have hardly had a chance to recover.

Studies of cheetah chromosomes show a surprising lack  
of genetic diversity from one individual to the next, and as  
20 a result the cheetah is widely portrayed as sitting under an  
evolutionary guillotine, the population so monochromatic  
that, in theory, a powerful epidemic could destroy many if  
not all of the approximately fifteen thousand cheetahs that  
currently exist in the wilderness.

25 Some zoos have complained that cheetahs are infertile,  
and they attribute the problem to the cheetah's bleak genetic  
makeup, calling into question the long-term prognosis even  
for cats living in the pampered confines of a park. Now some  
maverick biologists argue that this widely held notion of  
30 the inbred cheetah may be wrong, an artifact of test-tube  
manipulations with little relevance to the cat's workaday  
world. They insist that, far from displaying the negative  
effects of lethargy and feebleness seen in other animals  
known to be genetically homogeneous, cheetahs are in  
35 many ways quite robust.

The significance of the debate extends far beyond the  
cat itself. Scientists are seeking to calculate the odds that  
any number of endangered or threatened species are likely

40 to survive into the twenty-first century, and among the many  
questions they ask is how much genetic diversity a crea-  
ture requires if it is to rebound from the brink of extinction.  
Inbreeding is thought to be harmful to a species for two  
reasons: first, it allows hazardous recessive traits to come  
to the fore, resulting in physical problems and, in some  
45 cases, infertility; and second, it leads to a genetically uni-  
form population without the diversity to resist epidemics  
and environmental changes.

But the scientists who resist the inbred cheetah dogma  
point out that many zoo cats bear healthy cubs, are per-  
fectly fertile and vigorous, and have great variation in their  
50 immune systems. While the cheetah may look genetically  
tenuous when its DNA is appraised, by such real-life mea-  
surements as litter size, cub health, and immune response,  
the cheetah is perfectly fit for the millennium. The work of  
55 these scientists calls into question the validity of a strictly  
molecular approach to the sometimes murky science of  
species preservation, and it strongly suggests that scientists  
do not yet understand why certain genetic patterns detected  
in laboratory tests translate into the genuine strengths and  
60 weaknesses of a wild animal. The work also indicates that  
zoos having trouble propagating cheetahs in captivity per-  
haps should not blame the animal's DNA, but rather their  
own ineptitude at the science of animal breeding.

In the final analysis, the cheetah's long-term future very  
65 likely rests not on genetic research, but on old-fashioned  
remedies like preserving its remaining habitat and enlisting  
the help of those who live alongside it. In Namibia, where  
the cheetah does not have to compete with many other  
carnivores, as it does elsewhere in Africa, the feline fares  
70 reasonably well, and its biggest problem is ranchers who  
shoot it in the belief that the cat threatens their livestock.  
Biologists in Namibia are seeking to convince the cattle  
owners that cheetahs in fact kill very few livestock ani-  
mals, and to establish a compensatory program should  
75 a calf occasionally be lost. With its sizeable free-ranging  
population now confined to Namibia, the cheetah is being  
pitched as a uniquely Namibian cat and thus a source of  
national pride. More than an ideal genetic profile, the  
cheetah needs a bit of panting room and all the public  
80 relations its noble bearing can buy.



7. The author refers to a "grim hierarchy" (line 10) in order to
- (A) suggest the nature of the intense competition among carnivorous animals
  - (B) emphasize the brutality of predators in the wild as opposed to those on reserves
  - (C) explain the difficulty cheetahs have catching prey on animal reserves
  - (D) highlight the speed and power of cheetahs contrasted to that of other carnivorous animals
  - (E) exemplify the result of severe inbreeding among cheetahs over the past several thousand years
8. In lines 8-13 ("On . . . prey"), the author suggests that the reserves established to preserve wildlife are
- (A) losing public support because they are not adequately safeguarding the cheetah population
  - (B) disdained by scientists who prefer habitats where species can be carefully bred and shielded from predators
  - (C) facing imminent danger from ranchers who aggressively oppose protecting wild animals that destroy their livestock
  - (D) undermining their mission by grouping animals together in conditions that are unlike those found in the wild
  - (E) manipulating the environment to favor animals at the bottom of the meat eaters' hierarchy
9. In the opening paragraph, the cheetah is portrayed primarily as a
- (A) poignant example of how animals live and die in the wild
  - (B) gentle creature that has been wrongly stereotyped as a fierce predator
  - (C) cat that is both revered and despised in its African homeland
  - (D) species whose future is grim despite the optimism of many scientists
  - (E) mammal whose beauty and swiftness cannot compensate for its weaknesses
10. In line 16, "crash" most nearly means
- (A) accident
  - (B) intensity
  - (C) decline
  - (D) noise
  - (E) extinction
11. The intended effect of the portrayal of the cheetah in lines 18-24 is to
- (A) suggest an inescapable fate
  - (B) persuade scientists to abandon genetic research
  - (C) illustrate the uniqueness of a trait
  - (D) convey a creature's remarkable resilience
  - (E) idealize the true nature of a beast
12. The "maverick biologists" (line 29) would most likely believe that the reason some zoos have found their cheetahs to be infertile is due to
- (A) the cheetahs' "bleak genetic makeup" (lines 26-27)
  - (B) the "pampered confines" (line 28) of the parks that many cheetahs inhabit
  - (C) a development of "hazardous recessive traits" (line 43) among surviving cheetahs
  - (D) the absence of "a strictly molecular approach" (lines 55-56) to species preservation
  - (E) an "ineptitude at the science of animal breeding" (line 63)
13. In lines 28-35, what does the critique of a widely held notion about cheetahs most directly suggest about common scientific practices?
- (A) Preconceived ideas are rarely put aside even though they may compromise scientific objectivity.
  - (B) Theories that may be supported in a controlled laboratory setting do not always reflect the reality of the outside world.
  - (C) Conventional scientific approaches overemphasize appearance and behavior in assessing a species' chances for survival.
  - (D) Scientists assume that the responses of animals in a study are predictive of their behavior in the wild.
  - (E) The necessity for quick results discourages the use of exciting but unproven approaches.



14. The aspect of the "debate" (line 36) that the author is most concerned with is
- (A) the idealistic belief that something can still be done to save endangered species from extinction
  - (B) the increasingly apparent differences in genetic diversity between cheetahs and other mammals
  - (C) the acceptance of a species' genetic profile as an accurate indicator of its chances for survival
  - (D) that scientists who argue against the inbreeding theory offer no valid alternative explanations for the cheetahs' problems
  - (E) that manipulating a species' genetic makeup will yield unpredictable results and is potentially dangerous
15. The "real-life measurements" (lines 52-53) primarily serve to
- (A) support an approach popularized by zoologists
  - (B) confirm the results of test-tube experiments
  - (C) substantiate the beliefs of maverick biologists
  - (D) question the motivations of genetic scientists
  - (E) discourage the hopes of animal preservationists
16. In lines 54-63, the author's observation about propagating cheetahs in captivity is best described as
- (A) a stereotypical response
  - (B) a candid assessment
  - (C) a categorical denial
  - (D) an unsettling anecdote
  - (E) an emotional plea
17. In lines 54-63, the author's discussion of the "science of species preservation" primarily suggests that
- (A) a focus on trivial details has sidetracked scientists from their chief aim
  - (B) a sterile laboratory setting is an unlikely place to observe wild animals
  - (C) genetic research is the key to enhancing a species' ability to reproduce
  - (D) scientists would be unwise to tamper with natural patterns of evolution
  - (E) much remains to be learned about what factors determine a species' survival
18. Which hypothetical approach is most similar to the author's proposal for the cheetahs?
- (A) Moving rare tropical birds from their native habitats to a controlled and protective zoo environment
  - (B) Eliminating stiff penalties for hunters in Africa who sell ivory taken from the tusks of endangered elephants
  - (C) Breeding genetically enhanced sea turtles to augment the species' dwindling numbers
  - (D) Funding scientific study of the magnificent but threatened beluga whale
  - (E) Instilling in people a sense of duty to preserve the endangered wolf as a symbol of North America's wilderness
19. In line 80, "bearing" most nearly means
- (A) relationship or interconnection
  - (B) the power of producing offspring
  - (C) something that supports weight
  - (D) demeanor or presence
  - (E) awareness of a situation

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**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

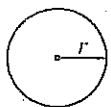
Turn to Section 9 (page 7) of your answer sheet to answer the questions in this section.

**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

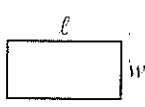
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is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

Reference Information

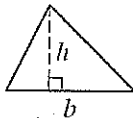


$$A = \pi r^2$$

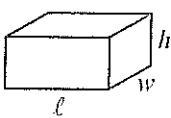
$$C = 2\pi r$$



$$A = \ell w$$



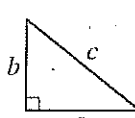
$$A = \frac{1}{2}bh$$



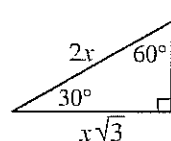
$$V = \ell wh$$



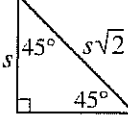
$$V = \pi r^2 h$$



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



Special Right Triangles

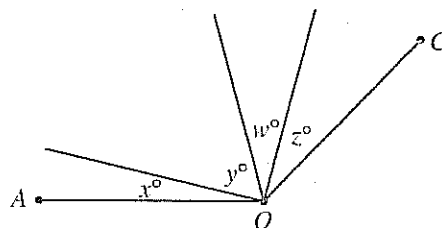


The number of degrees of arc in a circle is 360.

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

1. One hundred centimeters are equal to 1 meter, and 1,000 meters are equal to 1 kilometer. How many centimeters equal 1 kilometer?

- (A) 1,000  
(B) 10,000  
(C) 11,000  
(D) 11,100  
(E) 100,000



Note: Figure not drawn to scale.

2. In the figure above, the measure of  $\angle AOC$  is  $144^\circ$ . What is the average (arithmetic mean) of  $x$ ,  $y$ ,  $w$ , and  $z$ ?

- (A) 24  
(B) 32  
(C) 36  
(D) 44  
(E) 48

GO ON TO THE NEXT PAGE



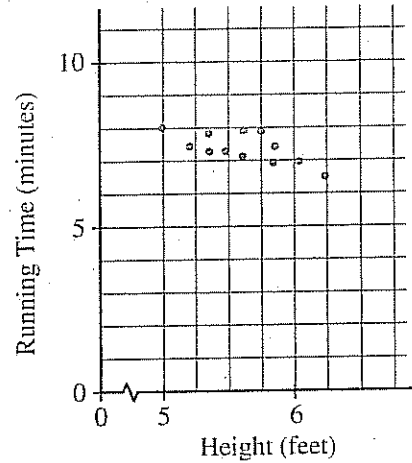


3. In the  $xy$ -plane,  $y = 2x + 3$  and  $y = mx + b$  are parallel lines. What is the value of  $m$ ?

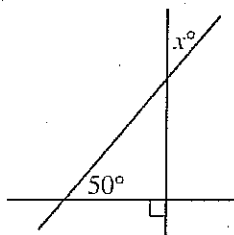
(A)  $-\frac{1}{2}$   
(B)  $\frac{1}{3}$   
(C)  $\frac{1}{2}$   
(D) 2  
(E) 3

4. If  $3x + 4 = 5$ , what is the value of  $6x + 7$ ?

(A) 8  
(B) 9  
(C) 10  
(D) 11  
(E) 13



5. Twelve people were asked to run a distance of 1 mile. The scatterplot above shows the height and running time for each of them. Which of the following is true about the line of best fit?
- (A) Its slope is positive.  
(B) Its slope is negative.  
(C) It goes through the point  $(0, 0)$ .  
(D) It goes through the point  $(0, m)$ , where  $m < 0$ .  
(E) It goes through the point  $(p, 0)$ , where  $p < 0$ .



6. In the figure above, three lines intersect as shown. What is the value of  $x$ ?

(A) 40  
(B) 45  
(C) 50  
(D) 55  
(E) 60

7. There are  $x$  books on a shelf. If one book is to be selected at random, the probability that a paperback will be selected is  $\frac{3}{4}$ . In terms of  $x$ , how many of the books are paperbacks?

(A)  $\frac{x}{4}$   
(B)  $\frac{3x}{4}$   
(C)  $\frac{4x}{3}$   
(D)  $\frac{7x}{4}$   
(E)  $4x$

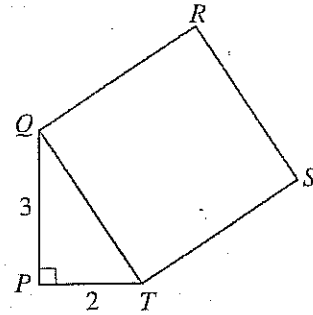
8. In the  $xy$ -coordinate plane, the distance from point  $P$  to point  $(1, 2)$  is 5. If the  $y$ -coordinate of  $P$  is 2, which of the following could be the  $x$ -coordinate of  $P$ ?

(A) 4  
(B) 5  
(C) 6  
(D) 7  
(E) 8



9. If  $x > 0$  and 10 percent of  $x$  is equal to 30 percent of  $y$ , then 20 percent of  $x$  equals what percent of  $y$ ?

(A) 15%  
 (B) 40%  
 (C) 50%  
 (D) 60%  
 (E) It cannot be determined without knowing the exact values of  $x$  and  $y$ .



11. In the figure above, what is the area of square  $QRST$ ?

(A) 11  
 (B) 12  
 (C) 13  
 (D) 20  
 (E) 25



10. A student practices the four musical notes above, starting with the note furthest left and continuing in order from left to right. If the student plays these notes over and over according to this pattern and stops immediately after playing the shaded note, which of the following could be the total number of notes played?

(A) 51  
 (B) 53  
 (C) 56  
 (D) 58  
 (E) 61



12. Barb's motor scooter has a 2-gallon gas tank and can travel  $m$  miles on 1 gallon of gas. If gas costs \$1.25 per gallon and Barb spends  $d$  dollars to fill the tank, which of the following represents the amount of gas, in gallons, that was in the tank before she filled it?
- (A)  $\frac{2}{1.25}$
- (B)  $\frac{d}{1.25} - 2$
- (C)  $2 - \frac{d}{1.25}$
- (D)  $2 - \frac{md}{1.25}$
- (E)  $2 - \frac{m}{d}$
13. If  $x^2 + kx + 15 = (x + t)(x + 5)$  for all values of  $x$  and if  $k$  and  $t$  are constants, what is the value of  $k$ ?
- (A) 8
- (B) 9
- (C) 10
- (D) 12
- (E) 15
14. The first of three numbers is 3 times the second number. The third number is 30 more than the second number. If the third number is represented by  $t$  and the sum of the first and second numbers is 180, which of the following equations could be used to find the value of  $t$ ?
- (A)  $3t + t = 180$
- (B)  $3t + (t - 30) = 180$
- (C)  $3(t - 30) + t = 180$
- (D)  $3(t - 30) + (t - 30) = 180$
- (E)  $3(t - 30) + (t - 30) + t = 180$



15. In  $\triangle PQR$ , the length of side  $\overline{QR}$  is 12 and the length of side  $\overline{PR}$  is 20. What is the greatest possible integer length of side  $\overline{PQ}$ ?

(A) 9  
(B) 16  
(C) 25  
(D) 27  
(E) 31

16. On the number line, the distance between the point whose coordinate is  $a$  and the point whose coordinate is  $b$  is greater than 100. Which of the following must be true?

I.  $a - b > 100$   
II.  $|a - b| > 100$   
III.  $|a| \cdot |b| > 100$

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

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

1. Known by millions for both his recordings and his roles in Hollywood movies, and Frank Sinatra was dubbed one of the most famous “crooners” in show business.

- (A) movies, and Frank Sinatra
- (B) movies, Frank Sinatra
- (C) movies; therefore, Frank Sinatra
- (D) movies; so it was Frank Sinatra who
- (E) movies, Frank Sinatra who

2. Our modern solar calendar, established in 1582, is based on the Julian calendar, Julius Caesar introduced it in 46 B.C.

- (A) calendar, Julius Caesar introduced it
- (B) calendar, which is what was introduced by Julius Caesar
- (C) calendar; then Julius Caesar introduced it
- (D) calendar, with an introduction by Julius Caesar
- (E) calendar, introduced by Julius Caesar

3. While describing his first attempt to learn surfing, Jamal would be pleased by the interest his classmates were showing.

- (A) While describing his first attempt to learn surfing, Jamal would be pleased
- (B) As he was describing his first attempt to learn surfing, Jamal was pleased
- (C) Jamal, describing his first attempt to learn surfing, he was pleased
- (D) When he described his first attempt to learn surfing, Jamal, pleased
- (E) At the same time when he described his first attempt to learn surfing, Jamal was pleased

4. Josephine Baker (1906-1975), one of the most versatile performers of the twentieth century, and who acquired fame as a dancer, singer, Broadway actress, and movie star.

- (A) and who acquired
- (B) she has acquired
- (C) and she has acquired
- (D) and who is acquiring
- (E) acquired



5. In a nearby resort community fewer accidents have been reported and the number of speeding tickets to be issued have decreased since speed bumps were installed.
- (A) to be issued have decreased  
(B) issued have been on the decrease  
(C) issued has decreased  
(D) that were issued have now decreased  
(E) issued decreasing
6. Having millions of gallons of freshwater underground, Florida environmentalists work to educate the public on the dangers of ground pollution.
- (A) Having millions of gallons of freshwater  
(B) Because millions of gallons of freshwater are  
(C) Because of freshwater in the millions of gallons  
(D) By considering that there are millions of gallons of freshwater  
(E) Awareness of the millions of gallons of freshwater
7. Because the meteorite Ahnighito, the centerpiece of the Hall of Meteorites, weigh 34 tons, supports for it go through the floor and foundation down to the bedrock beneath the museum.
- (A) weigh 34 tons, supports for it  
(B) weighs 34 tons, its supports  
(C) weighs 34 tons, and it has supports that  
(D) weighs 34 tons, supports are there for it, and they  
(E) weigh 34 tons, their supports
8. Watermelons have been cultivated for more than 4,000 years, and whereby thumping them to test for ripeness has an equally long history.
- (A) and whereby thumping them  
(B) whereby thumping them  
(C) because thumping them  
(D) thumping them as a way  
(E) and thumping them
9. In the eighteenth century, the English emphasis on the study of Greek and Latin allowed it to produce some fine poetry written in classical verse forms.
- (A) the English emphasis on the study of Greek and Latin allowed it  
(B) by emphasizing the study of Greek and Latin, this allowed England  
(C) English emphasis on the study of Greek and Latin allowed them  
(D) an emphasis in England on the study of Greek and Latin allowed them  
(E) an emphasis on the study of Greek and Latin allowed the English
10. As a child growing up on a farm, my sister and I visited many county fairs, where my parents would exhibit their prize livestock.
- (A) As a child growing up on a farm  
(B) A child who grew up on a farm  
(C) Farm children and growing up  
(D) Growing up on a farm  
(E) Since growing up on a farm
11. Bertha Lamme received her engineering degree in 1893, which she then specialized professionally in the design of motors and generators.
- (A) 1893, which she then specialized professionally  
(B) 1893, specializing as her profession  
(C) 1893 and, as a professional, specialized  
(D) 1893, then, for a profession, specializes  
(E) 1893, she has specialized as a professional
12. Even minor usage and spelling errors make the reading task harder and can cause readers to suspect that the content of the document is also flawed.
- (A) make the reading task harder and can cause readers to suspect  
(B) makes the reading task harder and causes readers to suspect  
(C) make reading hard and makes readers suspicious  
(D) will make the task of reading hard, it thus can cause readers to suspect  
(E) will have made the reading hard, which means that readers suspect



13. The name "transferware" comes from a nineteenth-century technique for which a pattern is engraved onto a copper roll, printed on tissue paper, and transferred onto earthenware dishes.
- (A) comes from a nineteenth-century technique for which
  - (B) comes from a nineteenth-century technique according to which
  - (C) comes from a nineteenth-century technique whereby
  - (D) is a nineteenth-century technique wherein
  - (E) means it is a nineteenth-century technique by which
14. Prized for their brilliance and durability, people will spend thousands of dollars on high-quality diamonds.
- (A) Prized for their brilliance and durability, people will spend thousands of dollars on high-quality diamonds.
  - (B) Prized for their brilliance and durability, thousands of dollars are spent by people on high-quality diamonds.
  - (C) Prizing them for their brilliance as well as their durability, thousands of dollars can be spent by people on high-quality diamonds.
  - (D) Prizing the brilliance and durability of high-quality diamonds, people will spend thousands of dollars for them.
  - (E) Prizing high-quality diamonds for their brilliance and durability are what makes people spend thousands of dollars for them.

## 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.



# Correct Answers and Difficulty Levels

## Form Codes AECB, BWCB, DFCB

### Critical Reading

Section 3				Section 5				Section 8			
COR. DIFF.		COR. DIFF.		COR. DIFF.		COR. DIFF.		COR. DIFF.		COR. DIFF.	
ANS. LEV.		ANS. LEV.		ANS. LEV.		ANS. LEV.		ANS. LEV.		ANS. LEV.	
1. E	1	13. D	3	1. C	1	13. E	1	1. A	1	11. A	2
2. E	3	14. E	3	2. A	2	14. A	3	2. C	1	12. E	4
3. B	3	15. D	3	3. D	1	15. E	2	3. B	3	13. B	3
4. E	3	16. A	3	4. C	3	16. E	3	4. D	4	14. C	5
5. D	4	17. D	3	5. B	5	17. C	3	5. D	5	15. C	4
6. D	5	18. B	3	6. E	3	18. B	3	6. E	5	16. B	4
7. E	5	19. A	1	7. A	2	19. C	3	7. A	3	17. E	4
8. B	5	20. C	3	8. C	3	20. C	4	8. D	3	18. E	4
9. D	3	21. C	2	9. B	5	21. D	5	9. E	3	19. D	3
10. A	1	22. B	3	10. B	1	22. E	5	10. C	1		
11. E	1	23. E	3	11. A	3	23. E	5				
12. B	2	24. C	2	12. C	3	24. A	5				
Number correct				Number correct				Number correct			
Number incorrect				Number incorrect				Number incorrect			

### Math

Section 4				Section 7				Section 9			
COR. DIFF.		COR. DIFF.		Multiple-Choice Questions		Student-Produced Response Questions		COR. DIFF.		COR. DIFF.	
ANS. LEV.		ANS. LEV.		COR. DIFF.		COR.		ANS. LEV.		ANS. LEV.	
1. D	1	11. A	3	1. D	1	9. 15	1	1. E	1	9. D	3
2. A	1	12. B	4	2. C	2	10. 4	2	2. C	1	10. A	3
3. E	1	13. D	3	3. B	2	11. $\frac{1}{6}$ , .166 or .167	2	3. D	2	11. C	3
4. A	1	14. D	3	4. C	2	12. $\frac{2}{3} < x < 1$ or .666 < x < 1	3	4. B	2	12. C	4
5. D	2	15. C	3	5. E	3	13. 115	3	5. B	2	13. A	4
6. D	2	16. C	4	6. E	3	14. 18	3	6. A	1	14. D	4
7. B	3	17. B	4	7. B	3	15. 9	4	7. B	3	15. E	5
8. B	3	18. E	4	8. E	5	16. 1600	3	8. C	3	16. A	5
9. C	3	19. B	4			17. $\frac{3}{4}$ or .75	4				
10. A	3	20. D	4			18. 10	5				
Number correct				Number correct		Number correct (9-18)		Number correct			
Number incorrect				Number incorrect				Number incorrect			

### Writing

Section 6				Section 10							
COR. DIFF. ANS. LEV.		COR. DIFF. ANS. LEV.		COR. DIFF. ANS. LEV.		COR. DIFF. ANS. LEV.		COR. DIFF. ANS. LEV.		COR. DIFF. ANS. LEV.	
1. B	1	10. C	4	19. C	3	28. A	5	1. B	1	6. B	3
2. D	1	11. C	3	20. E	2	29. E	5	2. E	1	7. B	3
3. A	1	12. A	1	21. D	3	30. C	3	3. B	1	8. E	3
4. D	2	13. E	1	22. E	3	31. A	2	4. E	1	9. E	4
5. A	1	14. C	2	23. C	3	32. A	4	5. C	2	10. D	3
6. D	2	15. D	2	24. B	3	33. A	3				
7. C	3	16. A	3	25. D	3	34. E	3				
8. E	3	17. D	2	26. A	4	35. B	4				
9. D	3	18. A	2	27. B	5						
Number correct				Number correct				Number correct			
Number incorrect				Number incorrect				Number incorrect			

NOTE: Difficulty levels are estimates of question difficulty for a reference group of college-bound seniors. Difficulty levels range from 1 (easiest) to 5 (hardest).

## The Scoring Process

Machine scoring is done in three steps:

- *Scanning.* Your answer sheet is scanned electronically, and the circle you filled in for each question is recorded in a computer file.
- *Scoring.* The computer compares the circle filled in for each question with the correct response.

Each correct answer receives one point.

Omitted questions do not count toward your score.

One-fourth of a point is subtracted for each wrong answer to multiple-choice questions.

The critical reading section, for example, has 67 questions with five answer choices each. If you have 37 right, 28 wrong, and 2 omitted, the resulting raw score of 30 is determined as follows:

$$37 - 28 (1/4) = 37 - 7 = 30$$

Obtaining raw scores frequently involves the rounding of fractional numbers to the nearest whole number. For example, a raw score of 36.25 is rounded to 36, the nearest whole number. A raw score of 36.50 is rounded upward to 37.

- *Converting to a scaled score.* Raw scores are then placed on the scale of 200–800 through a process that adjusts scores to account for minor differences in difficulty among different editions of the test. This process, known as equating, is performed so that a student's reported score is not affected by the edition of the test taken or by the abilities of the group with whom the student takes the test. As a result of placing SAT scores on the College Board scale, scores earned by students at different times can be compared. For example, an SAT math score of 400 on a test taken at one administration indicates the same level of developed math ability as a 400 score obtained on a different edition of the test taken at another time.
- *Essay scoring.* Using the scoring guide shown on page 51, experienced, trained high school and college faculty score the essay. Each essay is read independently by two readers who rate it on a scale of 1 to 6. (If the two scores differ by more than one point, a third reader scores the essay.) The two readers' scores are added together, and the essay subscore is reported on a scale of 2 to 12.

The essay section is worth approximately 30 percent of the raw score, and the multiple-choice writing section counts for approximately 70 percent. The total raw score is converted to a score on the 200–800 scale.

# SAT Essay Scoring Guide

## SCORE OF 6

An essay in this category demonstrates *clear and consistent mastery* although it may have a few minor errors. A typical essay

- effectively and insightfully develops a point of view on the issue and demonstrates outstanding critical thinking, using clearly appropriate examples, reasons, and other evidence to support its position
- is well organized and clearly focused, demonstrating clear coherence and smooth progression of ideas
- exhibits skillful use of language, using a varied, accurate, and apt vocabulary
- demonstrates meaningful variety in sentence structure
- is free of most errors in grammar, usage, and mechanics

## SCORE OF 3

An essay in this category demonstrates *developing mastery* and is marked by ONE OR MORE of the following weaknesses:

- develops a point of view on the issue, demonstrating some critical thinking, but may do so inconsistently or use inadequate examples, reasons, or other evidence to support its position
- is limited in its organization or focus, or may demonstrate some lapses in coherence or progression of ideas
- displays developing facility in the use of language, but sometimes uses weak vocabulary or inappropriate word choice
- lacks variety or demonstrates problems in sentence structure
- contains an accumulation of errors in grammar, usage, and mechanics

## SCORE OF 5

An essay in this category demonstrates *reasonably consistent mastery* although it will have occasional errors or lapses in quality. A typical essay

- effectively develops a point of view on the issue and demonstrates strong critical thinking, generally using appropriate examples, reasons, and other evidence to support its position
- is well organized and focused, demonstrating coherence and progression of ideas
- exhibits facility in the use of language, using appropriate vocabulary
- demonstrates variety in sentence structure
- is generally free of most errors in grammar, usage, and mechanics

## SCORE OF 2

An essay in this category demonstrates *little mastery* and is flawed by ONE OR MORE of the following weaknesses:

- develops a point of view on the issue that is vague or seriously limited, and demonstrates weak critical thinking, providing inappropriate or insufficient examples, reasons, or other evidence to support its position
- is poorly organized and/or focused, or demonstrates serious problems with coherence or progression of ideas
- displays very little facility in the use of language, using very limited vocabulary or incorrect word choice
- demonstrates frequent problems in sentence structure
- contains errors in grammar, usage, and mechanics so serious that meaning is somewhat obscured

## SCORE OF 4

An essay in this category demonstrates *adequate mastery* although it will have lapses in quality. A typical essay

- develops a point of view on the issue and demonstrates competent critical thinking, using adequate examples, reasons, and other evidence to support its position
- is generally organized and focused, demonstrating some coherence and progression of ideas
- exhibits adequate but inconsistent facility in the use of language, using generally appropriate vocabulary
- demonstrates some variety in sentence structure
- has some errors in grammar, usage, and mechanics

## SCORE OF 1

An essay in this category demonstrates *very little or no mastery* and is severely flawed by ONE OR MORE of the following weaknesses:

- develops no viable point of view on the issue, or provides little or no evidence to support its position
- is disorganized or unfocused, resulting in a disjointed or incoherent essay
- displays fundamental errors in vocabulary
- demonstrates severe flaws in sentence structure
- contains pervasive errors in grammar, usage, or mechanics that persistently interfere with meaning

Essays not written on the essay assignment will receive a score of zero.

# Scoring Worksheet

## Form Codes AECB, BWCB, DFCB

From your responses on your QAS report, fill in the blanks below and do the calculations to get your math, critical reading, and writing raw scores. Use the tables on the following pages to find your scaled scores.

### Get Your Math Score

How many math questions did you get **right**?

Section 4: Questions 1–20 \_\_\_\_\_

Section 7: Questions 1–18 + \_\_\_\_\_

Section 9: Questions 1–16 + \_\_\_\_\_

Total = \_\_\_\_\_ (A)

How many multiple-choice math questions did you get **wrong**?

Section 4: Questions 1–20 \_\_\_\_\_

Section 7: Questions 1–8 + \_\_\_\_\_

Section 9: Questions 1–16 + \_\_\_\_\_

Total = \_\_\_\_\_

$\times 0.25 =$  \_\_\_\_\_ (B)

A - B = \_\_\_\_\_  
Math Raw Score

Round math raw score to the nearest whole number.

\_\_\_\_\_

Use the table on page 53 to find your math scaled score.

\_\_\_\_\_

### Get Your Critical Reading Score

How many critical reading questions did you get **right**?

Section 3: Questions 1–24 \_\_\_\_\_

Section 5: Questions 1–24 + \_\_\_\_\_

Section 8: Questions 1–19 + \_\_\_\_\_

Total = \_\_\_\_\_ (A)

How many critical reading questions did you get **wrong**?

Section 3: Questions 1–24 \_\_\_\_\_

Section 5: Questions 1–24 + \_\_\_\_\_

Section 8: Questions 1–19 + \_\_\_\_\_

Total = \_\_\_\_\_

$\times 0.25 =$  \_\_\_\_\_ (B)

A - B = \_\_\_\_\_  
Critical Reading  
Raw Score

Round critical reading raw score to the nearest whole number.

\_\_\_\_\_

Use the table on page 53 to find your critical reading scaled score.

\_\_\_\_\_

### Get Your Writing Score

How many multiple-choice writing questions did you get **right**?

Section 6: Questions 1–35 \_\_\_\_\_

Section 10: Questions 1–14 + \_\_\_\_\_

Total = \_\_\_\_\_ (A)

How many multiple-choice writing questions did you get **wrong**?

Section 6: Questions 1–35 \_\_\_\_\_

Section 10: Questions 1–14 + \_\_\_\_\_

Total = \_\_\_\_\_

$\times 0.25 =$  \_\_\_\_\_ (B)

A - B = \_\_\_\_\_  
Writing multiple-choice  
Raw Score

Round writing multiple-choice raw score to the nearest whole number.

\_\_\_\_\_ (C)

Use the table on page 53 to find your writing multiple-choice scaled score.

\_\_\_\_\_

Copy your essay score from your QAS report.

\_\_\_\_\_ (D)

Use the appropriate writing composite table (pages 54–56) for your form code and look up your writing multiple-choice raw score (C) and your essay score (D) to find your writing composite scaled score.

\_\_\_\_\_

# SAT Score Conversion Table

## Form Codes AECB, BWCB, DFCB

Raw Score	Critical Reading Scaled Score	Math Scaled Score	Writing Multiple-Choice Scaled Score	Raw Score	Critical Reading Scaled Score	Math Scaled Score	Writing Multiple-Choice Scaled Score
67	800			31	500	540	55
66	800			30	500	530	54
65	800			29	490	530	53
64	800			28	490	520	52
63	780			27	480	510	51
62	760			26	470	500	50
61	750			25	470	490	49
60	730			24	460	490	48
59	720			23	450	480	48
58	710			22	450	470	47
57	700			21	440	460	46
56	690			20	440	460	45
55	680			19	430	450	44
54	670	800		18	420	440	43
53	660	790		17	420	430	42
52	650	760		16	410	430	41
51	640	740		15	400	420	40
50	630	720		14	400	410	39
49	630	710	80	13	390	400	39
48	620	700	80	12	380	390	38
47	610	690	79	11	380	390	37
46	600	680	76	10	370	380	36
45	600	670	74	9	360	370	35
44	590	660	72	8	350	360	34
43	580	650	70	7	340	350	33
42	580	640	69	6	330	330	32
41	570	630	67	5	320	320	31
40	560	620	66	4	310	310	29
39	560	610	64	3	300	290	28
38	550	600	63	2	290	280	27
37	540	590	62	1	280	260	25
36	540	580	61	0	260	240	23
35	530	580	60	-1	240	220	21
34	520	570	58	-2	220	200	20
33	520	560	57	-3	200	200	20
32	510	550	56	and below			

This table is for use only with the test in this booklet.

# SAT Writing Composite Score Conversion Table

## Form Code AECB

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

This table is for use only with the test in this booklet.

# SAT Writing Composite Score Conversion Table

## Form Code BWCB

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

This table is for use only with the test in this booklet.

# SAT Writing Composite Score Conversion Table

## Form Code DFCB

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

This table is for use only with the test in this booklet.