

Form Codes AEBH, BWBH, CFBH

SAT Reasoning Test™

Question-and-Answer Service
October 2005 Administration
Personal use only. Not for resale.

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 topics administered on test day
- The correct answers
- The difficulty level of each question
- The instructions for scoring your test

© 2005 The College Board. All rights reserved. College Board, SAT, and the acorn logo are registered trademarks of the College Board. Connect to college success and SAT Reasoning Test are trademarks owned by the College Board.

How to Make the Best Use of the Question-and Answer Service

This booklet contains the SAT Reasoning Test™ you took in October. 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 October 2005 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. 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 50), a worksheet for calculating raw scores (page 51), the conversion table from raw scores to scaled scores (page 52), and more.

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.

The supervisor will tell you how much time you have to write an essay on the topic assigned below. **DO NOT WRITE ON ANOTHER TOPIC. AN OFF-TOPIC ESSAY WILL RECEIVE A SCORE OF ZERO.**

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

1. Success in life is largely a matter of luck. It has little correlation with merit, and in all fields of life there have always been people of great merit who did not succeed.

Karl Popper, *Popper Selections*

2. As Colin Powell said, "There are no secrets to success. Don't waste time looking for them. Success is the result of preparation, hard work, and learning from failure."

Adapted from Barry Farber, "Selling Points"

Assignment: Is success in life earned or do people succeed because they are lucky? 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.

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

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

1. Celebrities have the power to attract “communities” of like-minded followers; they provide an identity that people can connect to and call their own. Celebrities are trusted; they stand for certain ideas and values to which followers can express allegiance.

Adapted from William Greider, *Who Will Tell the People?*

2. Admiration for celebrities is often accompanied by contempt for “average” people. As we focus on the famous, other people become less important to us. The world becomes populated with a few “somebodies” and an excess of “near-nobodies.”

Adapted from Norman Solomon and Jeff Cohen, *Wizards of Media Oz*

Assignment: Is society’s admiration for famous people beneficial or harmful? 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

Unauthorized copying or reuse of
any part of this page is illegal.



1

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.

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

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

Nowadays nothing is private: our culture has become too confessional and self-expressive. People think that to hide one's thoughts or feelings is to pretend not to have those thoughts or feelings. They assume that honesty requires one to express every inclination and impulse.

Adapted from J. David Velleman, "The Genesis of Shame"

Assignment: Should people make more of an effort to keep some things private? 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 2

Time — 25 minutes

20 Questions

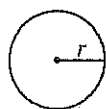
Turn to Section 2 (page 4) of your answer sheet to answer the questions in this section.

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

Notes

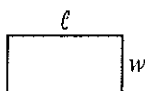
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is 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

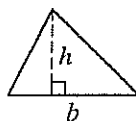


$$A = \pi r^2$$

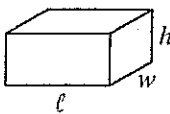
$$C = 2\pi r$$



$$A = \ell w$$



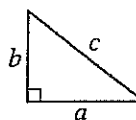
$$A = \frac{1}{2}bh$$



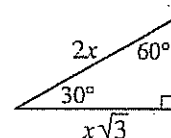
$$V = \ell wh$$



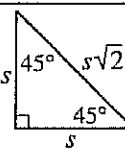
$$V = \pi r^2 h$$



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



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.

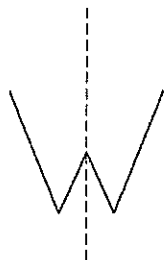
1. If $10 + x$ is 5 more than 10, what is the value of $2x$?

(A) -5
(B) 5
(C) 10
(D) 25
(E) 50

2. The result when a number is divided by 2 is equal to the result when that same number is divided by 4. What is that number?

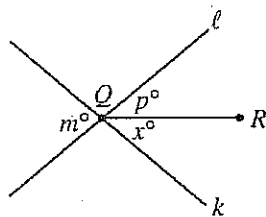
(A) -4
(B) -2
(C) 0
(D) 2
(E) 4

GO ON TO THE NEXT PAGE 



3. If this page was folded along the dotted line in the figure above, the left half of the letter W would exactly coincide with the right half of W. Which of the following letters, as shown, CANNOT be folded along a vertical line so that its left half would coincide with its right half?

- (A) A
(B) I
(C) O
(D) U
(E) E



Note: Figure not drawn to scale.

4. In the figure above, lines ℓ and k intersect at point Q . If $m = 40$ and $p = 25$, what is the value of x ?

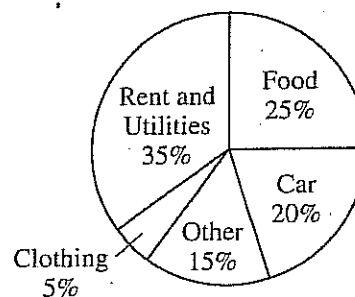
- (A) 15
(B) 20
(C) 25
(D) 40
(E) 65

x	y
-2	-3
0	3
1	6
2	9
4	15

5. Which of the following equations is satisfied by the five pairs of numbers listed in the table above?

- (A) $y = x^3 + 3$
(B) $y = 3x + 3$
(C) $y = -3x + 6$
(D) $y = x^2 + 6$
(E) $y = x^2 - 7$

DAVID'S MONTHLY EXPENSES



6. The circle graph above shows how David's monthly expenses are divided. If David spends \$450 per month for food, how much does he spend per month on his car?

- (A) \$200
(B) \$320
(C) \$360
(D) \$400
(E) \$450



7. If n and k are positive integers and $8^n = 2^k$, what is the value of $\frac{n}{k}$?

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

8. In a certain store, the regular price of a refrigerator is \$600. How much money is saved by buying this refrigerator at 20 percent off the regular price rather than buying it on sale at 10 percent off the regular price with an additional discount of 10 percent off the sale price?

(A) \$6
(B) \$12
(C) \$24
(D) \$54
(E) \$60

9. If the function f is defined by $f(x) = 3x + 4$, then $2f(x) + 4 =$

(A) $5x + 4$
(B) $5x + 8$
(C) $6x + 4$
(D) $6x + 8$
(E) $6x + 12$

10. What is the greatest possible area of a triangle with one side of length 7 and another side of length 10?

(A) 17
(B) 34
(C) 35
(D) 70
(E) 140

11. A total of 120,000 votes were cast for 2 opposing candidates, Garcia and Pérez. If Garcia won by a ratio of 5 to 3, what was the number of votes cast for Pérez?

(A) 15,000
(B) 30,000
(C) 45,000
(D) 75,000
(E) 80,000



12. If a positive integer n is picked at random from the positive integers less than or equal to 10, what is the probability that $5n + 3 \leq 14$?

(A) 0
(B) $\frac{1}{10}$
(C) $\frac{1}{5}$
(D) $\frac{3}{10}$
(E) $\frac{2}{5}$

13. If t is a number greater than 1, then t^2 is how much greater than t ?

(A) 1
(B) 2
(C) t
(D) $t(t - 1)$
(E) $(t - 1)(t + 1)$

14. The height of a right circular cylinder is 5 and the diameter of its base is 4. What is the distance from the center of one base to a point on the circumference of the other base?

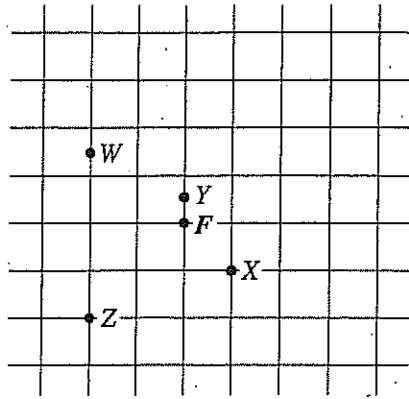
(A) 3
(B) 5
(C) $\sqrt{29}$ (approximately 5.39)
(D) $\sqrt{33}$ (approximately 5.74)
(E) $\sqrt{41}$ (approximately 6.40)

15. If p and n are integers such that $p > n > 0$ and $p^2 - n^2 = 12$, which of the following can be the value of $p - n$?

I. 1
II. 2
III. 4
(A) I only
(B) II only
(C) I and II only
(D) II and III only
(E) I, II, and III



Questions 16-18 refer to the following figure and information.



The grid above represents equally spaced streets in a town that has no one-way streets. F marks the corner where a firehouse is located. Points W , X , Y , and Z represent the locations of some other buildings. The fire company defines a building's m -distance as the minimum number of blocks that a fire truck must travel from the firehouse to reach the building. For example, the building at X is an m -distance of 2, and the building at Y is an m -distance of $\frac{1}{2}$ from the firehouse.

16. What is the m -distance of the building at W from the firehouse?

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

17. What is the total number of different routes that a fire truck can travel the m -distance from F to Z ?

- (A) Six
- (B) Five
- (C) Four
- (D) Three
- (E) Two

18. All of the buildings in the town that are an m -distance of 3 from the firehouse must lie on a

- (A) circle
- (B) square
- (C) right isosceles triangle
- (D) pair of intersecting lines
- (E) line



19. If x and y are positive integers, which of the following is equivalent to $(2x)^{3y} - (2x)^y$?

(A) $(2x)^{2y}$
(B) $2^y(x^3 - x^y)$
(C) $(2x)^y[(2x)^{2y} - 1]$
(D) $(2x)^y(4x^y - 1)$
(E) $(2x)^y[(2x)^3 - 1]$

20. If j , k , and n are consecutive integers such that $0 < j < k < n$ and the units (ones) digit of the product jn is 9, what is the units digit of k ?

(A) 0
(B) 1
(C) 2
(D) 3
(E) 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 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) ☒

- Many private universities depend heavily on -----, the wealthy individuals who support them with gifts and bequests.
(A) instructors (B) administrators
(C) monitors (D) accountants
(E) benefactors
- One of the characters in Milton Murayama's novel is considered ----- because he deliberately defies an oppressive hierarchical society.
(A) rebellious (B) impulsive (C) artistic
(D) industrious (E) tyrannical
- Nightjars possess a camouflage perhaps unparalleled in the bird world: by day they roost hidden in shady woods, so ----- with their surroundings that they are nearly impossible to -----.
(A) vexed . . dislodge
(B) blended . . discern
(C) harmonized . . interrupt
(D) impatient . . distinguish
(E) integrated . . classify
- Many economists believe that since resources are scarce and since human desires cannot all be -----, a method of ----- is needed.
(A) indulged . . apportionment
(B) verified . . distribution
(C) usurped . . expropriation
(D) expressed . . reparation
(E) anticipated . . advertising
- The range of colors that homeowners could use on the exterior of their houses was ----- by the community's stringent rules regarding upkeep of property.
(A) circumscribed (B) bolstered
(C) embellished (D) insinuated
(E) cultivated



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

I know what your e-mail in-box looks like, and it isn't pretty: a babble of come-ons and lies from hucksters and con artists. To find your real e-mail, you must wade through the torrent of fraud and obscenity known politely as "unsolicited bulk e-mail" and colloquially as "spam." In a perverse tribute to the power of the online revolution, we are all suddenly getting the same mail: easy weight loss, get-rich-quick schemes, etc. The crush of these messages is now numbered in billions per day. "It's becoming a major systems and engineering and network problem," says one e-mail expert. "Spammers are gaining control of the Internet."

Passage 2

Many people who hate spam assume that it is protected as free speech. Not necessarily so. The United States Supreme Court has previously ruled that individuals may preserve a threshold of privacy. "Nothing in the Constitution compels us to listen to or view any unwanted communication, whatever its merit," wrote Chief Justice Warren Burger in a 1970 decision. "We therefore categorically reject the argument that a vendor has a right to send unwanted material into the home of another." With regard to a seemingly similar problem, the Telephone Consumer Protection Act of 1991 made it illegal in the United States to send unsolicited faxes; why not extend the act to include unsolicited bulk e-mail?

6. The primary purpose of Passage 1 is to

- (A) make a comparison
- (B) dispute a hypothesis
- (C) settle a controversy
- (D) justify a distinction
- (E) highlight a concern

7. The primary purpose of Passage 2 is to

- (A) confirm a widely held belief
- (B) discuss the inadequacies of a ruling
- (C) defend a controversial technology
- (D) analyze a widespread social problem
- (E) lay the foundation for a course of action

8. What would be the most likely reaction by the author of Passage 1 to the argument cited in lines 16-21 of Passage 2 ("Nothing . . . another") ?

- (A) Surprise at the assumption that freedom of speech is indispensable to democracy
- (B) Dismay at the Supreme Court's vigorous defense of vendors' rights
- (C) Hope that the same reasoning would be applied to all unsolicited e-mail
- (D) Concern for the plight of mass marketers facing substantial economic losses
- (E) Appreciation for the political complexity of the debate about spam

9. Unlike the author of Passage 1, the author of Passage 2

- (A) criticizes a practice
- (B) offers an example
- (C) proposes a solution
- (D) states an opinion
- (E) quotes an expert



Questions 10-16 are based on the following passage.

The following passage is adapted from a novel set in the early twentieth century. Mr. Beebe, a clergyman, is speaking with Cecil Vyse about a mutual acquaintance, Lucy Honeychurch. Miss Honeychurch has recently returned from a journey with her older cousin and chaperone, Miss Bartlett.

"Lucy Honeychurch has no faults," said Cecil, with grave sincerity.

"I quite agree. At present she has none."

"At present?"

"I'm not cynical. I'm only thinking of my pet theory about Miss Honeychurch. Does it seem reasonable that she should play piano so wonderfully, and live so quietly? I suspect that someday she shall be wonderful in both. The water-tight compartments in her will break down, and music and life will mingle. Then we shall have her heroically good, heroically bad—too heroic, perhaps, to be good or bad."

Cecil found his companion interesting.

"And at present you think her not wonderful as far as life goes?"

"Well, I must say I've only seen her at Tunbridge Wells, where she was not wonderful, and at Florence. She wasn't wonderful in Florence either, but I kept on expecting that she would be."

"In what way?"

Conversation had become agreeable to them, and they were pacing up and down the terrace.

"I could as easily tell you what tune she'll play next. There was simply the sense that she found wings and meant to use them. I can show you a beautiful picture in my diary. Miss Honeychurch as a kite, Miss Bartlett holding the string. Picture number two: the string breaks."

The sketch was in his diary, but it had been made afterwards, when he viewed things artistically. At the time he had given surreptitious tugs to the string himself.

"But the string never broke?"

"No. I mightn't have seen Miss Honeychurch rise, but I should certainly have heard Miss Bartlett fall."

"It has broken now," said the young man in low, vibrating tones.

Immediately he realized that of all the conceited, ludicrous, contemptible ways of announcing an engagement this was the worst. He cursed his love of metaphor; had he suggested that he was a star and that Lucy was soaring up to reach him?

"Broken? What do you mean?"

"I meant," Cecil said stiffly, "that she is going to marry me."

The clergyman was conscious of some bitter disappointment which he could not keep out of his voice.

"I am sorry; I must apologize. I had no idea you were intimate with her, or I should never have talked in this flippant, superficial way. You ought to have stopped me." And down in the garden he saw Lucy herself; yes, he was disappointed.

Cecil, who naturally preferred congratulations to apologies, drew down the corner of his mouth. Was this the reaction his action would get from the whole world? Of course, he despised the world as a whole; every thoughtful man should; it is almost a test of refinement.

"I'm sorry I have given you a shock," he said dryly. "I fear that Lucy's choice does not meet with your approval."

10. Cecil's remark in line 1 ("Lucy . . . faults") is made in a tone of

- (A) great conviction
- (B) studied neutrality
- (C) playful irony
- (D) genuine surprise
- (E) weary cynicism

11. Mr. Beebe asks the question in lines 6-7 ("Does . . . quietly") primarily in order to

- (A) raise an urgent concern
- (B) anticipate a possible objection
- (C) challenge a widely accepted theory
- (D) note an apparent inconsistency
- (E) criticize a popular pastime

12. Mr. Beebe's statement, "The water-tight . . . bad" (lines 9-11), suggests that Lucy will

- (A) ultimately become a famous and respected musician
- (B) eventually play music in a less disciplined fashion
- (C) one day begin to live with great passion
- (D) soon regret an impetuous decision
- (E) someday marry a man who will be the cause of her undoing



13. In line 24, "sense" most nearly means

- (A) definition
- (B) intelligence
- (C) plausibility
- (D) consensus
- (E) impression

14. For Mr. Beebe, "Picture number two" (line 27) represents

- (A) a misleading occurrence
- (B) a dangerous gamble
- (C) an unlikely development
- (D) an anticipated outcome
- (E) an avoidable difficulty

15. Ultimately, Cecil views his remark in line 34 ("It . . . now") as

- (A) singularly poetic
- (B) particularly memorable
- (C) embarrassingly inapt
- (D) excessively critical
- (E) regrettably underhanded

16. The question in lines 39-40 ("had . . . him ") suggests that Cecil fears that Mr. Beebe will

- (A) detect the lack of originality in his thinking
- (B) consider him to be vain
- (C) tell Lucy of his inappropriate remark
- (D) distrust him as a confidant
- (E) attempt to block his engagement to Lucy



Questions 17-24 are based on the following passage.

The following passage is adapted from a book published in 1999.

Line 5 Calling it a cover-up would be far too dramatic. But for more than half a century—even in the midst of some of the greatest scientific achievements in history—physicists have been quietly aware of a dark cloud looming on a distant horizon. The problem is this: There are two foundational pillars upon which modern physics rests. One is general relativity, which provides a theoretical framework for understanding the universe on the largest of scales: stars, galaxies, clusters of galaxies, and beyond to the immense expanse of the universe itself. The other is quantum mechanics, which provides a theoretical framework for understanding the universe on the smallest of scales: molecules, atoms, and all the way down to subatomic particles like electrons and quarks. Through years of research, physicists have experimentally confirmed to almost unimaginable accuracy virtually all predictions made by each of these theories. But these same theoretical tools inexorably lead to another disturbing conclusion: As they are currently formulated, general relativity and quantum mechanics *cannot both be right*. The two theories underlying the tremendous progress of physics during the last hundred years—progress that has explained the expansion of the heavens and the fundamental structure of matter—are mutually incompatible.

25 If you have not heard previously about this ferocious antagonism, you may be wondering why. The answer is not hard to come by. In all but the most extreme situations, physicists study things that are either small and light (like atoms and their constituents) or things that are huge and heavy (like stars and galaxies), but not both. This means that they need use only quantum mechanics or only general relativity and can, with a furtive glance, shrug off the barking admonition of the other. For 50 years this approach has not been quite as blissful as ignorance, but it has been pretty close.

40 But the universe *can* be extreme. In the central depths of a black hole, an enormous mass is crushed to a minuscule size. According to the big bang theory, the whole of the universe erupted from a microscopic nugget whose size makes a grain of sand look colossal. These are realms that are tiny and yet incredibly massive, therefore requiring that both quantum mechanics and general relativity simultaneously be brought to bear. The equations of general relativity and quantum mechanics, when combined, begin to shake, rattle, and gush with steam like a decrepit automobile. Put less figuratively, well-posed physical questions elicit nonsensical answers from the unhappy amalgam of

these two theories. Even if you are willing to keep the deep interior of a black hole and the beginning of the universe shrouded in mystery, you can't help feeling that the hostility between quantum mechanics and general relativity cries out for a deeper level of understanding. Can it really be that the universe at its most fundamental level is divided, requiring one set of laws when things are large and a different, incompatible set when things are small?

Superstring theory, a young upstart compared with the venerable edifices of quantum mechanics and general relativity, answers with a resounding no. Intense research over the past decade by physicists and mathematicians around the world has revealed that this new approach to describing matter at its most fundamental level resolves the tension between general relativity and quantum mechanics. In fact, superstring theory shows more: within this new framework, general relativity and quantum mechanics require one another for the theory to make sense. According to superstring theory, the marriage of the laws of the large and the small is not only happy but inevitable. Superstring theory has the potential to show that all of the wondrous happenings in the universe—from the frantic dance of subatomic quarks to the stately waltz of orbiting binary stars—are reflections of one grand physical principle, one master equation.

17. The "dark cloud" mentioned in line 4 refers to an

- (A) atypical diagnosis
- (B) unsupported hypothesis
- (C) unknown threat
- (D) evil influence
- (E) important contradiction

18. Which pairing best represents the different models of the universe presented in lines 7-14?

- (A) Big and little
- (B) Old and new
- (C) Complex and simple
- (D) Verified and undocumented
- (E) Theoretical and practical

19. The author's use of italics in line 20 serves primarily

- (A) draw attention to a commonly known hypothesis
- (B) stress a speculative aspect of two theories
- (C) support a difficult claim
- (D) underscore a surprising point
- (E) emphasize an area of agreement



20. The author uses the "automobile" (lines 45-46) to represent equations that

(A) demand a professional's attention
(B) are intrinsically unreliable
(C) do not work together effectively
(D) can be easily adjusted if necessary
(E) are based on dated mathematics

21. Which of the following, if available, would best refute the author's assertion about the "young upstart" (line 57) ?

(A) Evidence that certain kinds of particles in nature exceed the speed of light
(B) Confirmation of conditions that existed in the earliest stages of the big bang
(C) Speculation that the deep interior of a black hole is not as dense as scientists have believed
(D) Mathematical formulas that link general relativity and quantum mechanics in the same realm
(E) Proof that the laws governing the universe depend on the size of the system being studied

22. The primary reason described for the usefulness of the theory mentioned in line 57 is its ability to

(A) explain new phenomena
(B) replace the theory of general relativity
(C) reinforce the predictions of quantum mechanics
(D) indicate where other theories are inapplicable
(E) reconcile two seemingly contradictory theories

23. Those who hold the "conclusion" referred to in line 18 would most likely believe that the "marriage" (line 68) was an

(A) inevitable result of their research
(B) unjustifiable elevation of their hypotheses
(C) inadvisable use of research funds
(D) unfortunate consequence
(E) impossible outcome

24. The author uses dance imagery in lines 71-72 in order to

(A) suggest a similarity between the study of science and the study of dance
(B) highlight the extremes found in the physical world
(C) emphasize the different ways that binary stars move
(D) illustrate the intricacy of the subatomic world of quarks
(E) suggest the cohesive nature of both science and dance

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 5

Time — 25 minutes

35 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.

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. Since last September Patricia has been working at the convenience store down the road.

- (A) has been working
- (B) works
- (C) is working
- (D) will be working
- (E) worked

2. To help freshmen and sophomores in selecting their courses, candid reviews of courses and instructors compiled by juniors and seniors.

- (A) candid reviews of courses and instructors compiled by juniors and seniors
- (B) candid reviews of courses and instructors being compiled by juniors and seniors
- (C) and to compile candid reviews of courses and instructors by juniors and seniors
- (D) juniors and seniors have compiled candid reviews of courses and instructors
- (E) with juniors and seniors compiling candid reviews of courses and instructors

3. The landscape artist who designed New York City's Central Park believed that providing scenic settings accessible to all would not only benefit the public's physical and mental health and also foster a sense of democracy.

- (A) and also foster a sense of democracy
- (B) as it also fosters a sense of democracy
- (C) and would foster a sense of democracy also
- (D) but also foster a sense of democracy
- (E) and foster a sense of democracy also

4. In areas where deer roam freely, residents must dress to protect themselves against deer ticks that might transmit diseases.

- (A) areas where deer roam freely
- (B) areas roamed by deer freely
- (C) areas, freely roamed by deer
- (D) areas, in which there are deer that roam freely
- (E) areas which deer roam free

5. Given the cost of a hardcover book, the price of it typically hovers around \$25, many consumers ask their book dealers, "When will the paperback be out?"
- (A) the price of it typically hovers
 - (B) and typically it hovers at a price
 - (C) which typically hovers
 - (D) in that it typically hovers
 - (E) they typically hover
6. The article featured the Sea Islands because many were known there to live much as their ancestors of a century ago had lived.
- (A) many were known there to live
 - (B) they were known there for living
 - (C) many of the people there were known to live
 - (D) of the many people, they were there living
 - (E) of knowing that many people lived there
7. A poetic form congenial to Robert Browning was the dramatic monologue, it let him explore a character's mind without the simplifications demanded by stage productions.
- (A) monologue, it let him explore
 - (B) monologue, which let him explore
 - (C) monologue that lets him explore
 - (D) monologue; letting him explore
 - (E) monologue by letting him do exploration of
8. Many eighteenth- and nineteenth-century Romantic poets were believers in rebellion against social conventions, express strong emotion, and the power of imagination.
- (A) were believers in rebellion against social conventions, express strong emotion
 - (B) are believers in rebelling against social conventions, strong emotions being expressed
 - (C) who believed in rebellion against social conventions, express strong emotion
 - (D) believed in rebellion against social conventions, to express strong emotions
 - (E) believed in rebellion against social conventions, the expression of strong emotions
9. At the Constitutional Convention of 1787, the proposal to replace the existing Articles of Confederation with a federal constitution were met with fierce opposition.
- (A) were met with
 - (B) having been met with
 - (C) it met
 - (D) met with
 - (E) met their
10. When for the first time the United States imported more oil than it exported, Americans should have realized that an energy crisis was imminent and could happen in the future.
- (A) was imminent and could happen in the future
 - (B) could happen imminently in the future
 - (C) will be imminent and happening soon
 - (D) is an imminent thing
 - (E) might be imminent
11. Intimacy, love, and marriage are three different, if interrelated, subjects.
- (A) different, if interrelated, subjects
 - (B) interrelated subjects, being, however, different
 - (C) different subjects, whereas they are interrelated
 - (D) different subjects when interrelated
 - (E) subjects that are different although being interrelated



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. America's first roller coaster ride, which opened in

A
1884 at Coney Island, Brooklyn, and capable of
B
a top speed of only six miles per hour. No error
C D E

13. The inflation rate in that country is so high that

A
even with adjusted wages, most workers can barely
B C D
pay for food and shelter. No error
E

14. Over the past two years, apparel manufacturers have

A B
worked to meeting the revised federal standards
C
for the design of uniforms. No error
D E

15. Storing bread in the refrigerator delays drying and the

A
growth of mold but increase the rate at which the
B C
bread loses flavor. No error
D E

16. According to last week's survey, most voters

were disappointed by legislators' inability working
A B C
together on key issues. No error
D E

17. When Marie Curie shared the 1903 Nobel Prize for

A
Physics with two other scientists—her husband
B
Pierre Curie and Henri Becquerel—she had been
C
the first woman to win the prize. No error
D E

18. *Question 18 did not count toward your score.*

19. Those investors who sold stocks just before the

A B
stock market crashed in 1929 were either wise or
C
exceptional lucky. No error
D E



20. Most of the sediment and nutrients of the

Mississippi River no longer reach the coastal

A

wetlands, a phenomenon that has adversely

B

affected the region's ecological balance.

C

D

No error

E

21. Most major air pollutants cannot be seen, although

large amounts of them concentrated in cities

A

B

are visible as smog. No error

C

D

E

22. The light emitted by high-intensity-discharge

car headlights are very effective in activating

A

B

the reflective paints of road markers, thereby

C

making driving at night safer. No error

D

E

23. During the nineteenth century, Greek mythology

A

acquired renewed significance when both poets and

B

painters turned to the ancient myths for subject

C

D

matter. No error

E

24. The museum is submitting proposals to several

A

B

foundations in the hope to gain funds to build

C

D

a tropical butterfly conservatory. No error

E

25. In order for the audience to believe in and

A

be engaged by a Shakespearean character,

B

they have to come across as a real person

C

D

on the stage. No error

E

26. Most of the hypotheses that Kepler developed

A

B

to explain physical forces were later rejected as

C

inconsistent to Newtonian theory. No error

D

E

27. Lynn Margulis's theory that evolution is a process

A

involving interdependency rather than competition

B

among organisms differs dramatically from

C

most biologists. No error

D

E

28. The Empire State Building, the Sears Tower, the

Canadian National Tower—each of these structures

A

was the tallest in the world at the time they were

B

C

D

built. No error

E

29. The cost of safely disposing of the toxic chemicals

A

is approximately five times what the company paid

B

C

to purchase it. No error

D

E



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

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

Questions 30-35 refer to the following passage.

(1) On September 10, 1973, the United States Postal Service issued a stamp honoring Henry Ossawa Tanner (1859-1937), one of four stamps in the American Arts series. (2) Acclaimed as an artist in the United States and Europe at the turn of the century, Tanner was called the "dean" of art by W. E. B. Du Bois. (3) But after his death, Tanner's work was largely forgotten. (4) And so it remained, and even later, in 1969, the donation of one of his paintings to the Smithsonian Institution aroused new interest in the art of this American master. (5) Now his works are on exhibit again. (6) You can even buy posters of his paintings!

(7) One of his most famous works is a realistic painting by the name of "The Banjo Lesson." (8) It was inspired by a poem of Paul Laurence Dunbar. (9) The painting isn't like a photograph. (10) The magnificence of his work can be seen with each subtle brush stroke, each carefully crafted detail. (11) The effect is truly beautiful. (12) If I were to try to identify the dominant theme of the painting, I would have to say that it is family cohesiveness because the entire scene seems to emphasize the bond between the boy and his grandfather.

30. Which is the best version of the underlined part of sentence 2 (reproduced below) ?

Acclaimed as an artist in the United States and Europe at the turn of the century, Tanner was called the "dean" of art by W. E. B. Du Bois.

- (A) (as it is now)
- (B) century; Tanner was called the "dean" of art by W. E. B. Du Bois
- (C) century, Tanner, who was called "dean" of art by W. E. B. Du Bois
- (D) century, W. E. B. Du Bois calling Tanner the "dean" of art
- (E) century, it was W. E. B. Du Bois who called Tanner the "dean" of art

31. Which is the best version of the underlined portion of sentence 4 (reproduced below) ?

And so it remained, and even later, in 1969, the donation of one of his paintings to the Smithsonian Institution aroused new interest in the art of this American master.

- (A) (as it is now)
- (B) remained, and even after that, in 1969,
- (C) remained, but even then, in 1969,
- (D) remained until 1969, when
- (E) remained when in 1969

32. In context, which is the best revision of sentence 6 (reproduced below) ?

You can even buy posters of his paintings!

- (A) It is amazing, you can buy posters of his paintings.
- (B) Even ordinary people like us can buy posters of his paintings.
- (C) Posters of his paintings had been sold.
- (D) People can even buy his paintings as a poster.
- (E) One can even buy posters of his paintings.



33. In context, which is the best way to revise sentence 7 (reproduced below) ?

One of his most famous works is a realistic painting by the name of "The Banjo Lesson."

- (A) Add "In contrast," to the beginning of the sentence.
- (B) Change "a realistic painting by the name of" to "the realistic painting".
- (C) Delete the words "of his most famous works".
- (D) Change "is" to "had been".
- (E) Delete "most famous".

34. Which sentence is best inserted after sentence 7 ?

- (A) The painting shows a man teaching his grandson how to play the banjo.
- (B) He finished "The Banjo Lesson" in 1893.
- (C) In the painting, a bright light sets off the man and boy.
- (D) Banjos came to the United States from West Africa.
- (E) Portraits by Tanner show a psychological depth and compassion.

35. Which is best to add to the beginning of sentence 9 ?

- (A) Although it is realistic,
- (B) You can almost hear the music, but
- (C) Photographs have a beauty of their own, but
- (D) As a lifelike work,
- (E) Some people just copy what they see;

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

18 Questions

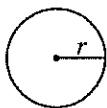
Turn to Section 6 (page 6) of your answer sheet to answer the questions in this section.

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

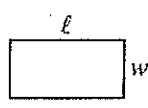
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is 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

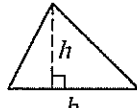


$$A = \pi r^2$$

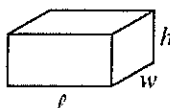
$$C = 2\pi r$$



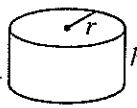
$$A = \ell w$$



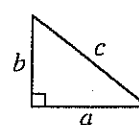
$$A = \frac{1}{2}bh$$



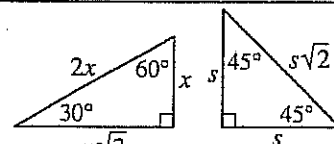
$$V = \ell wh$$



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



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



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.

4, 11, 18, ...

1. In the sequence above, the first term is 4 and each term after the first is 7 more than the previous term. What is the 12th term of the sequence?

(A) 77
(B) 81
(C) 84
(D) 86
(E) 92

2. If $(x - 2)^2 = 49$, then x could be

(A) -9
(B) -7
(C) 2
(D) 5
(E) 9

GO ON TO THE NEXT PAGE

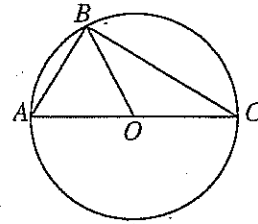


3. The average (arithmetic mean) of t and y is 15, and the average of w and x is 15. What is the average of t , w , x , and y ?

(A) 7.5
(B) 15
(C) 22.5
(D) 30
(E) 60

All of Kay's brothers can swim.

4. If the statement above is true, which of the following must also be true?
- (A) If Fred cannot swim, then he is not Kay's brother.
(B) If Dave can swim, then he is not Kay's brother.
(C) If Walt can swim, then he is Kay's brother.
(D) If Pete is Kay's brother, then he cannot swim.
(E) If Mark is not Kay's brother, then he cannot swim.



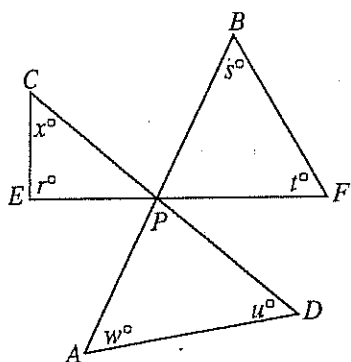
5. In the figure above, triangle ABC is inscribed in the circle with center O and diameter \overline{AC} . If $AB = AO$, what is the degree measure of $\angle ABO$?

(A) 15°
(B) 30°
(C) 45°
(D) 60°
(E) 90°

6. Each of the following is equivalent to $\frac{a}{b}(bc + k)$

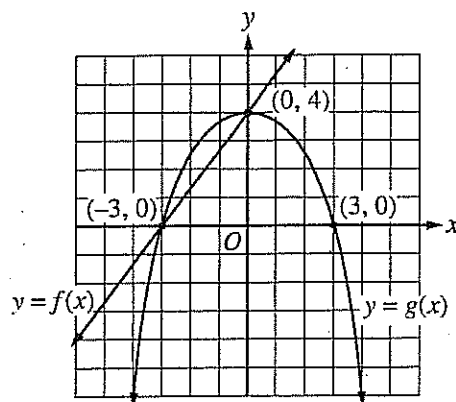
EXCEPT

(A) $a\left(\frac{c+k}{b}\right)$
(B) $a\left(c + \frac{k}{b}\right)$
(C) $\frac{a}{b}(k + bc)$
(D) $ac + \frac{ak}{b}$
(E) $\frac{abc + ak}{b}$



Note: Figure not drawn to scale.

7. In the figure above, \overline{AB} , \overline{CD} , and \overline{EF} intersect at P . If $r = 90$, $s = 50$, $t = 60$, $u = 45$, and $w = 50$, what is the value of x ?
- (A) 45
(B) 50
(C) 65
(D) 75
(E) It cannot be determined from the information given.



8. Based on the portions of the graphs of the functions f and g shown above, what are all values of x between -6 and 6 for which $g(x) > f(x)$?
- (A) $-6 < x < -3$ only
(B) $-3 < x < 0$ only
(C) $0 < x < 3$ only
(D) $3 < x < 6$ only
(E) $-6 < x < -3$ and $0 < x < 3$



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

Grid in result. →

← Fraction line

Answer: 2.5

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

← Decimal point

Answer: 201

Either position is correct.

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

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

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

- Mark no more than one circle in any column.
- Because the answer sheet will be machine-scored, you will receive credit only if the circles are filled in correctly.
- Although not required, it is suggested that you write your answer in the boxes at the top of the columns to help you fill in the circles accurately.
- Some problems may have more than one correct answer. In such cases, grid only one answer.
- No question has a negative answer.
- **Mixed numbers** such as $3\frac{1}{2}$ must be gridded as 3.5 or 7/2. (If $\boxed{3|\frac{1}{2}|}$ 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 0.666..., you should record your result as .666 or .667. A less accurate value such as .66 or .67 will be scored as incorrect.

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

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

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

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

9. When her son's class held its magazine drive, Dr. Nelson bought 7 one-year magazine subscriptions for the waiting room in her office. She bought 4 subscriptions that have 12 issues per year, 2 subscriptions that have 4 issues per year, and 1 subscription that has 52 issues per year. Altogether, how many magazines will her office receive from these subscriptions?

10. Three more than twice a number is equal to 4. What is the number?

SALES OF BOOK *B*

	Total Number of Copies Sold
End of 1st week	3200
End of 2nd week	5500
End of 3rd week	6800
End of 4th week	7400
End of 5th week	7700

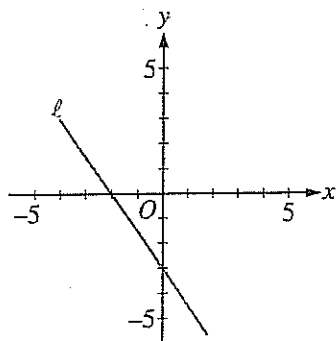
11. The table above shows the total number of copies of Book *B* that were sold by the end of each of the first 5 weeks of its publication. How many copies of the book were sold during the 3rd week of its publication?

12. If $\frac{j}{k} = 32$ and $k = \frac{3}{2}$, what is the value of $\frac{1}{2}j$?

$$\begin{aligned}x + y + 3z &= 600 \\x + y + z &= 400\end{aligned}$$

13. In the system of equations above, what is the value of $x + y$?

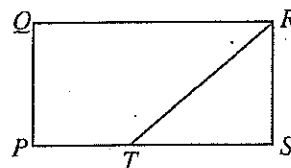
14. There are 25 trays on a table in the cafeteria. Each tray contains a cup only, a plate only, or both a cup and a plate. If 15 of the trays contain cups and 21 of the trays contain plates, how many contain both a cup and a plate?



15. In the figure above, line ℓ intersects the x -axis at $x = -2$ and the y -axis at $y = -3$. If line m (not shown) passes through the origin and is perpendicular to line ℓ , what is the slope of line m ?

16. If $6 < |x - 3| < 7$ and $x < 0$, what is one possible value of $|x|$?

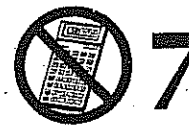
17. What is the product of the smallest prime number that is greater than 50 and the greatest prime number that is less than 50?



18. In the figure above, $PQRS$ is a rectangle. The area of $\triangle RST$ is 7 and $PT = \frac{2}{5} PS$. What is the area of $PQRS$?

STOP

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



SECTION 7

Time — 25 minutes

24 Questions

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

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

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

Example:

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

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

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

1. Years of ----- lifting of heavy furniture had left him too ----- to be able to stand erect for long periods of time.
 - (A) profitable . . dumbfounded
 - (B) generous . . distracted
 - (C) onerous . . hesitant
 - (D) strenuous . . debilitated
 - (E) unstinting . . eminent
2. Canadian Lynn Johnston was named Cartoonist of the Year in 1985, the first woman to be so -----.
 - (A) inspired (B) entrusted (C) honored
 - (D) employed (E) refined
3. Because the photographer believed that wild animals should be ----- only in their various natural surroundings, she ----- often in her career.
 - (A) depicted . . traveled
 - (B) displayed . . spoke
 - (C) captured . . protested
 - (D) domesticated . . roamed
 - (E) represented . . publicized
4. Folk painter Grandma Moses has become such an enduring icon that many consider her ----- of America.
 - (A) an innovator (B) an emblem
 - (C) a successor (D) a detractor
 - (E) a lobbyist
5. Whether substances are medicines or poisons often depends on dosage, for substances that are ----- in small doses can be ----- in large.
 - (A) useless . . effective
 - (B) mild . . benign
 - (C) curative . . toxic
 - (D) harmful . . fatal
 - (E) beneficial . . miraculous
6. Critics dismissed the engineer's seemingly creative design as being -----, that is, underdeveloped and lacking in sophistication.
 - (A) defunct (B) unorthodox (C) simplistic
 - (D) erroneous (E) ambiguous
7. The professor commented to other faculty members that Sheila seemed temperamentally suited to the study of logic, given her ----- for ----- intricate arguments.
 - (A) sympathy . . influencing
 - (B) penchant . . evading
 - (C) disregard . . unhinging
 - (D) contempt . . following
 - (E) bent . . analyzing
8. While traveling near the Sun, the comet Hale-Bopp produced a ----- amount of dust, much more than the comets Halley or Hyakutake.
 - (A) voracious (B) disposable (C) redundant
 - (D) superficial (E) prodigious



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 Newspaper editor and political commentator Henry
5 Louis Mencken was a force of nature, brushing aside
all objects animal and mineral in his headlong rush
to the publicity that surely awaited him. He seized
each day, shook it to within an inch of its life, and
then gaily went on to the next. No matter where his
writing appeared, it was quoted widely, his pungently
outspoken opinions debated hotly. Nobody else could
10 make so many people so angry, or make so many others
laugh so hard.

9. In lines 4-5, the words "seized" and "shook" help establish which aspect of Mencken's personality?

- (A) His code of honor
- (B) His sense of humor
- (C) His vindictiveness
- (D) His intensity
- (E) His petulance

10. The public response described in lines 6-8 most strongly suggests that Mencken's writings were

- (A) authoritative
- (B) controversial
- (C) arrogant
- (D) informal
- (E) frivolous

Questions 11-12 are based on the following passage.

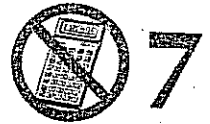
Line The ability to see the situation as your opponents see it,
5 as difficult as it may be, is one of the most important skills
that you can possess as a negotiator. You must know more
than simply that they see things differently. It is not
enough to study them like beetles under a microscope;
you need to know what it feels like to be a beetle. To
accomplish this you should be prepared to withhold
judgment as you "try on" their views. Your opponents
may well believe that their views are right as strongly
10 as you believe yours are.

11. The reference to beetles in lines 5-6 serves to suggest that

- (A) people need to be more attuned to their surroundings
- (B) effective negotiation is more of a science than an art
- (C) people can be made to do what they would prefer not to do
- (D) effective negotiation requires identifying with a different viewpoint
- (E) people feel uncomfortable when their actions are under scrutiny

12. The primary purpose of the passage is to

- (A) persuade people to defend their positions on critical issues
- (B) indicate a specific ability that is useful in negotiation
- (C) encourage people to be more accepting of others
- (D) argue that few people are fit for the demands of negotiation
- (E) suggest that negotiators should always seek consensus



Questions 13-24 are based on the following passages.

Passage 1 is from a 2003 book that examines the famous "I Have a Dream" speech delivered by Martin Luther King, Jr. at the historic March on Washington in August 1963. Passage 2 is from a 2000 biography of Martin Luther King, Jr. written by an African American scholar.

Passage 1

The ability of the "I Have a Dream" speech to highlight King's early career at the expense of his later career accounts for the tone of impatience and betrayal that often appears when modern-day supporters of King's agenda talk about the speech. Former Georgia state legislator Julian Bond said in 1986 that commemorations of King seemed to "focus almost entirely on Martin Luther King the dreamer, not on Martin King the antiwar activist, not on Martin King the challenger of the economic order, not on Martin King the opponent of apartheid, not on the complete Martin Luther King." One King scholar has proposed a ten-year moratorium on reading or listening to the "I Have a Dream" speech, in the hopes that America will then discover the rest of King's legacy.

This proposal effectively concedes that King's magnificent address cannot be recovered from the misuse and overquotation it has suffered since his death. But it is not clear that this is so. Even now, upon hearing the speech, one is struck by the many forms of King's genius. Many people can still remember the first time they heard "I Have a Dream," and they tend to speak of that memory with the reverence reserved for a religious experience. At the very least, reflecting on the "I Have a Dream" speech should be an opportunity to be grateful for the astonishing transformation of America that the freedom movement wrought. In just under a decade, the civil rights movement brought down a system of segregation that stood essentially unaltered since Reconstruction. King's dreams of an America free from racial discrimination are still some distance away, but it is astounding how far the nation has come since that hot August day in 1963. Segregation in the South has been dismantled; there are no longer "Whites Only" signs; segregationist governors do not try to prevent Black children from entering public schools. Toward the end of his life, King preached a sermon entitled "Ingratitude," in which he called ingratitude "one of the greatest of all sins," because the sinner "fail[s] to realize his dependence on others." The annual Martin Luther King holiday is properly a day of national thanksgiving, a time for the nation to recognize the immense debt it owes to King and the thousands of heroes of the civil rights movement for saving the soul of America.

Passage 2

Martin Luther King was at his best when he was willing to reshape the wisdom of many of his intellectual predecessors. He ingeniously harnessed their ideas to his views to advocate sweeping social change. He believed that his early views on race failed to challenge America fundamentally. He later confessed that he had underestimated how deeply entrenched racism was in America. If Black Americans could not depend on goodwill to create social change, they had to provoke social change through bigger efforts at nonviolent direct action. This meant that Blacks and their allies had to obtain political power. They also had to try to restructure American society, solving the riddles of poverty and economic inequality.

This is not the image of King that is celebrated on Martin Luther King Day. Many of King's admirers are uncomfortable with a focus on his mature beliefs. They seek to deflect unfair attacks on King's legacy by shrouding him in the cloth of superhuman heroism. In truth, this shroud is little more than romantic tissue. King's image has often suffered a sad fate. His strengths have been needlessly exaggerated, his weaknesses wildly overplayed. King's true legacy has been lost to cultural amnesia. As a nation, we have emphasized King's aspiration to save America through inspiring words and sacrificial deeds. Time and again we replay the powerful image of King standing on a national stage in the shadow of the Lincoln Memorial mouthing perhaps the most famous four words ever uttered by a Black American: "I have a dream." For most Americans, those words capture King's unique genius. They express his immortal longing for freedom, a longing that is familiar to every person who dares imagine a future beyond unjust laws and unfair customs. The edifying universality of those four words—who hasn't dreamed, and who cannot identify with people whose dreams of a better world are punished with violence?—helps to explain their durability. But those words survive, too, because they comfort folk who would rather entertain the dreams of unfree people than confront their rage and despair.

13. The authors of both passages agree that King's "I Have a Dream" speech
- (A) had significant global as well as national influence
 - (B) has been imitated by many of King's followers
 - (C) had a profound impact on many Americans
 - (D) was typical of King's thought as a whole
 - (E) questioned the ethical beliefs of many Americans



14. It can be inferred that, for Julian Bond, a portrait of "the complete Martin Luther King" (lines 10-11) would
- (A) celebrate King's influence both within and outside the United States
 - (B) acknowledge the logical lapses in some of King's later work
 - (C) compare King with other significant figures of his era
 - (D) achieve a balance between King's earlier concerns and his later ones
 - (E) reveal information about King's personal as well as his public life
15. The author of Passage 2 would most likely view Julian Bond's statement in lines 7-11 of Passage 1 with
- (A) outright disapproval
 - (B) considerable surprise
 - (C) cynical mistrust
 - (D) cautious optimism
 - (E) complete agreement
16. In line 17, "suffered" most nearly means
- (A) endured
 - (B) felt
 - (C) prolonged
 - (D) tolerated
 - (E) lamented
17. Lines 31-34 ("Segregation in . . . schools") serve primarily to
- (A) express ambitious hopes for the future
 - (B) challenge the accuracy of historical accounts
 - (C) provide a contrast with other cultures
 - (D) illustrate a point with particular examples
 - (E) defend a series of unusual occurrences
18. The author of Passage 1 mentions the "sermon" (line 35) primarily in order to
- (A) show King's effectiveness as a public speaker
 - (B) demonstrate the broad range of King's interests
 - (C) illustrate an important trait that King possessed
 - (D) question King's ability to empathize with others
 - (E) remind readers of a significant obligation to King
19. The author of Passage 2 would most likely characterize the view of King expressed in lines 38-42 of Passage 1 ("The annual . . . America") as
- (A) contradictory
 - (B) insightful
 - (C) atypical
 - (D) simplistic
 - (E) arrogant
20. Lines 57-58 ("This is . . . Day") mark a transition within Passage 2 from a
- (A) consideration of King's views to a critique of people's understanding of them
 - (B) challenge to King's beliefs to an acceptance of their cultural resonance
 - (C) discussion of King's intellectual predecessors to an analysis of his legacy
 - (D) celebration of King's strengths to an examination of his weaknesses
 - (E) defense of King's aspirations to an attack on those who fail to support them
21. Lines 76-79 in Passage 2 ("The edifying . . . durability") are best described as
- (A) contesting the notion of King's historical importance that is advanced by the author of Passage 1
 - (B) providing an explanation for the view of King's speech that is expressed by the author of Passage 1
 - (C) challenging the portrait of the civil rights movement that is presented by the author of Passage 1
 - (D) offering a humorous anecdote that supports a statement made by the author of Passage 1
 - (E) dismissing a perspective that is similarly rejected by the author of Passage 1
22. Unlike the author of Passage 2, the author of Passage 1 develops his or her argument by
- (A) citing an authority with whom he or she disagrees
 - (B) referring to a famous speech delivered by King
 - (C) discussing the universal human trait of dreaming
 - (D) dismissing those who fail to understand the subtlety of King's thought
 - (E) assuming that his or her readers are completely unfamiliar with King's ideas



23. The author of Passage 2 would most likely argue that commemorations focus on "Martin Luther King the dreamer" (line 7 of Passage 1) because people find this aspect of King to be

- (A) courageous
- (B) unpretentious
- (C) reassuring
- (D) provocative
- (E) unexpected

24. Which best characterizes the overall relationship between the two passages?

- (A) Passage 2 rejects the political goals that are described in Passage 1.
- (B) Passage 2 helps account for the responses to a speech discussed in Passage 1.
- (C) Passage 2 romanticizes a person who is objectively depicted in Passage 1.
- (D) Passage 2 recounts the history of a national holiday that is celebrated in Passage 1.
- (E) Passage 2 reflects on a figure who is denounced in Passage 1.

STOP

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

SECTION 8

Time — 20 minutes

16 Questions

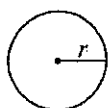
Turn to Section 8 (page 7) of your answer sheet to answer the questions in this section.

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

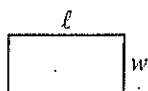
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is 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

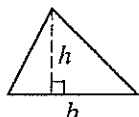


$$A = \pi r^2$$

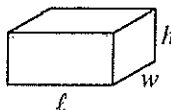
$$C = 2\pi r$$



$$A = \ell w$$



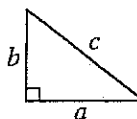
$$A = \frac{1}{2}bh$$



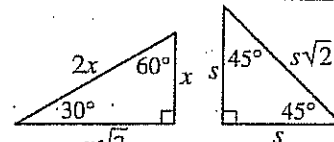
$$V = \ell wh$$



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



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



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. On Wednesday Heather ran 3 miles in 30 minutes. If she ran for 45 minutes at this rate on Thursday, how far did Heather run on Thursday?

(A) 3.5 miles
(B) 4 miles
(C) 4.5 miles
(D) 5 miles
(E) 5.5 miles

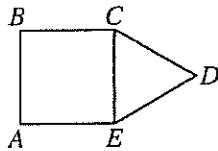
2. If $(2m)k = 6$, then $mk =$

(A) 3
(B) 4
(C) 5
(D) 6
(E) 12

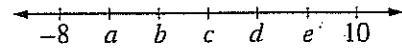
GO ON TO THE NEXT PAGE

3. If 3 times a number is equal to $\frac{3}{2}$, what is the number?

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



4. In the figure above, CDE is an equilateral triangle and $ABCE$ is a square with an area of 1. What is the perimeter of polygon $ABCDE$?
- (A) 4
 (B) 5
 (C) 6
 (D) 7
 (E) 8



5. On the number line above, the tick marks are equally spaced and their coordinates are shown. Of these coordinates, which has the smallest positive value?
- (A) a
 (B) b
 (C) c
 (D) d
 (E) e

10, 18, 4, 15, 3, 21, x

6. If x is the median of the 7 numbers listed above, which of the following could be the value of x ?
- (A) 5
 (B) 8
 (C) 9
 (D) 14
 (E) 16

7. Two spheres, one with radius 7 and one with radius 4, are tangent to each other. If P is any point on one sphere and Q is any point on the other sphere, what is the maximum possible length of PQ ?

(A) 7
(B) 11
(C) 14
(D) 18
(E) 22

NUMBER OF PREMIUM MEMBERS

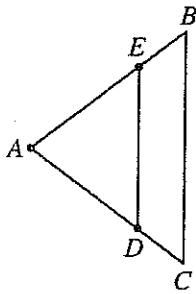
Year	2000	2001	2002
Store A	250	400	750
Store B	500	1,000	1,250

AVERAGE NUMBER OF VIDEO
RENTALS PER PREMIUM MEMBER
AT STORE B

Year	Rentals
2000	12
2001	15
2002	20

8. The first table above shows the number of premium members at two video rental stores, A and B, during the years 2000–2002. The second table shows the average (arithmetic mean) number of video rentals per premium member at store B during each of those years. Based on this information, which of the following best approximates the total number of video rentals by premium members at Store B during the years 2000–2002?

(A) 24,000
(B) 46,000
(C) 58,000
(D) 70,000
(E) 130,000



Note: Figure not drawn to scale.

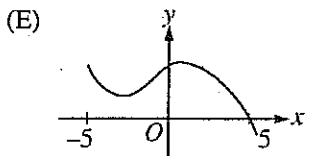
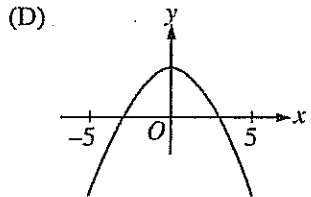
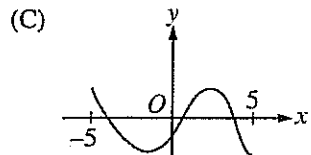
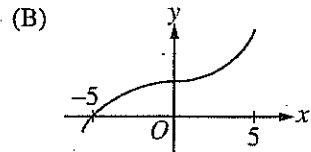
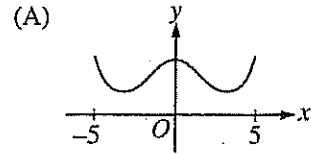
9. In $\triangle ABC$ above, $AB = AC$, E is the midpoint of \overline{AB} , and D is the midpoint of \overline{AC} . If $AE = x$ and $ED = 4$, what is length BC ?

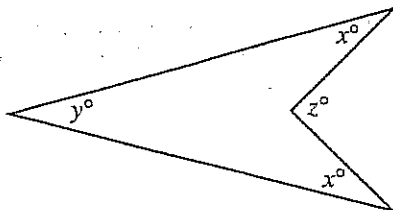
- (A) 6
(B) 8
(C) $2x$
(D) $4x$
(E) $4x^2$

10. A student was given a piece of rope and told to cut it into two equal pieces, keep one piece, and pass the other piece to the next student. Each student was to repeat this process until every student in the class had exactly one piece of rope. Which of the following could be the fraction of the original rope that one of the students had?

- (A) $\frac{1}{14}$
(B) $\frac{1}{15}$
(C) $\frac{1}{16}$
(D) $\frac{1}{17}$
(E) $\frac{1}{18}$

11. Which of the following is the graph of a function that $f(x) = 0$ for exactly two values of x between -5 and 5 ?





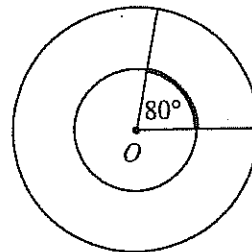
Note: Figure not drawn to scale.

12. If $x = 20$ and $y = 30$ in the figure above, what is the value of z ?

(A) 60
(B) 70
(C) 80
(D) 90
(E) 100

13. If x and y are integers, $7 < y < 16$, and $\frac{x}{y} = \frac{2}{5}$,
how many possible values are there for x ?

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

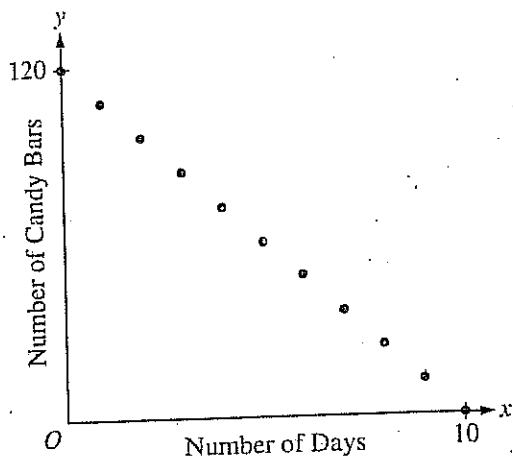


14. Point O is the center of both circles in the figure above. If the circumference of the large circle is 36 and the radius of the small circle is half of the radius of the large circle, what is the length of the darkened arc?

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



GEORGE'S UNSOLD CANDY BARS



15. The graph above shows the number of George's unsold candy bars over a 10-day period. The points on the graph all lie on which of the following lines?

(A) $y = 10x - 120$
(B) $y = 10x + 120$
(C) $y = 12x - 120$
(D) $y = 120 - 10x$
(E) $y = 120 - 12x$

16. Let ∇x be defined as $x + \frac{1}{x}$ for all nonzero integers x . If $\nabla x = t$, where t is an integer, which of the following is a possible value of t ?

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

STOP

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



SECTION 9

Time — 20 minutes

19 Questions

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

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

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

Example:

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

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

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

- The writer came to be labeled ----- because she isolated herself in her apartment, shunning outside contact.
(A) a loner (B) a miser (C) a connoisseur
(D) a conspirator (E) an ingenue
- Some Tibetan nomads used yak butter as a -----, one that often took the place of money in commercial transactions.
(A) promotion (B) commodity (C) formula
(D) refund (E) register
- Geysers vary widely: some may discharge -----, whereas others may have only a brief explosive eruption and then remain ----- for hours or days.
(A) violently . . dangerous
(B) continuously . . quiescent
(C) spontaneously . . unpredictable
(D) regularly . . active
(E) faintly . . imperceptible
- Although the administration repeatedly threatened to use its authority in order to ----- the student protestors into submission, they refused to be intimidated.
(A) ease (B) delude (C) cajole
(D) bully (E) nudge
- Only after the campaign volunteers became aware of their candidate's questionable motives could they recognize the ----- statements made in his seemingly ----- speeches.
(A) insightful . . astute
(B) partisan . . callous
(C) cordial . . hostile
(D) duplicitous . . candid
(E) cunning . . surreptitious
- No longer narrowly preoccupied with their own national pasts, historians are increasingly ----- in that they often take a transnational perspective.
(A) conciliatory (B) bombastic (C) mendacious
(D) cosmopolitan (E) jocular



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.

In the introduction to one of her dramas, a well-known playwright and actor discusses some of her ideas about acting.

Words have always held a particular power for me. I remember leafing through a book of Native American poems one morning while I was waiting for my Shakespeare class to begin and being struck by a phrase from the preface,
 5 "The word, the word above all; is truly magical, not only by its meaning, but by its artful manipulation."

This quote, which I added to my journal, reminded me of something my grandfather had told me when I was a girl: "If you say a word often enough it becomes your
 10 own." I added that phrase to my journal next to the quote about the magic of words. When I traveled home to Baltimore for my grandfather's funeral a year after my journal entry, I mentioned my grandfather's words to my father. He corrected me. He told me that my grandfather
 15 had actually said, "If you say a word often enough, it *becomes* you." I was still a student at the time, but I knew even then, even before I had made a conscious decision to teach as well as act, that my grandfather's words would be important.

Actors are very impressionable people, or some would say, suggestible people. We are trained to develop aspects of our memories that are more emotional and sensory than intellectual. The general public often wonders how actors
 20 remember their lines. What's more remarkable to me is how actors remember, recall, and reiterate feelings and sensations. The body has a memory just as the mind does. The heart has a memory, just as the mind does. The act of speech is a physical act. It is powerful enough that it can create, with the rest of the body, a kind of cooperative
 25 dance. That dance is a sketch of something that is inside a person, and not fully revealed by the words alone. I came to realize that if I were able to record part of the dance—that is, the spoken part—and reenact it, the rest of the body would follow. I could then create the illusion of being
 30 another person by reenacting something she had said *as she had said it*. My grandfather's idea led me to consider that the reenactment, or the reiteration, of a person's words would also teach me about that person.

I had been trained in the tradition of acting called
 40 "psychological realism." A basic tenet of psychological realism is that characters live inside of you and that you create a lifelike portrayal of the character through a process of realizing your own similarity to the character. When I

later became a teacher of acting, I began to become more
 45 and more troubled by the self-oriented method. I began to look for ways to engage my students in putting themselves in other people's shoes. This went against the grain of the psychological realism tradition, which was to get the character to walk in the *actor's shoes*. It became less and less
 50 interesting intellectually to bring the dramatic literature of the world into a classroom of people in their late teens and twenties, and to explore it within the framework of their real lives. Aesthetically it seemed limited, because most of the time the characters all sounded the same. Most characters spoke somewhere inside the rhythmic range of the
 55 students. More troubling was that this method left an important bridge out of acting. The spirit of acting is the *travel* from the self to the other. This "self-based" method seemed to come to a spiritual halt. It saw the self as the
 60 ultimate home of the character. To me, the search for character is constantly in motion. It is a quest that moves back and forth between the self and the other.

I needed evidence that you could find a character's psychological reality by "inhabiting" that character's words. I
 65 needed evidence of the limitations of basing a character on a series of metaphors from an actor's real life. I wanted to develop an alternative to the self-based technique, a technique that would begin with the other and come to the self, a technique that would empower the other to find the actor
 70 rather than the other way around.

7. The primary purpose of the first three paragraphs (lines 1-38) is to

- (A) describe the actor's process of developing a role
- (B) trace the beginnings of a personal philosophy
- (C) analyze the grandfather's insights into acting
- (D) investigate the effect of words on interpersonal relationships
- (E) explore a viewpoint that the author is forced to reverse

8. The author of the passage uses the quotation in lines 5-6 primarily as a

- (A) vivid expression of how she views words
- (B) powerful example of what she sought in Shakespeare
- (C) scholarly citation linking her to poetic words
- (D) comical introduction to a problem encountered by every dramatic performer
- (E) pragmatic assessment of the power of words for beginning drama students



9. By presenting both versions of the grandfather's words (lines 9-10 and lines 15-16), the author primarily conveys the
- (A) grandfather's attempts to play with language
 - (B) grandfather's enthusiasm in spite of her reaction
 - (C) father's intervention in a private moment
 - (D) ambivalence she feels toward her grandfather
 - (E) significance of the grandfather's message
10. The comparisons in lines 26-27 serve primarily to
- (A) show the similarities that exist between dancing and acting
 - (B) celebrate the broad range of memories that actors learn to draw on
 - (C) justify the author's adherence to conventional acting theory
 - (D) explain why actors have difficulty interpreting character
 - (E) enhance the author's credibility as a technically trained actor
11. In lines 29-34 ("a kind . . . follow"), the author uses the idea of a dance to
- (A) supply an image for the awkwardness some actors experience
 - (B) illustrate a process that words can set in motion
 - (C) portray the enactment of a character as an exhilarating experience
 - (D) argue that acting requires physical agility
 - (E) show how a word can evoke multiple meanings
12. In line 34, "follow" most nearly means
- (A) pursue
 - (B) result
 - (C) surpass
 - (D) join in
 - (E) listen carefully
13. In lines 39-62, the author reveals herself to be someone who believes that
- (A) teachers and students should examine controversial issues together
 - (B) playwrights especially benefit from experience on stage
 - (C) conventional approaches should be open to questioning and reevaluation
 - (D) traditional methods often reflect the accumulated insight of generations
 - (E) standard practices are the most suitable to teach to beginners
14. Lines 39-70 present the author's argument primarily by
- (A) celebrating the appeal of a discredited tradition
 - (B) exploring the impact of her early experiences on her acting
 - (C) explaining her reasons for rejecting a technique
 - (D) describing challenges commonly met by professional actors
 - (E) analyzing insights gained from debates with other drama professors
15. The author's explanation in the fourth paragraph suggests that the "self-oriented method" (line 45) rests on the assumption that
- (A) audience members appreciate complex nuances of character
 - (B) the playwright's biography provides the main evidence for interpreting character
 - (C) actors have already felt the full range of human emotions
 - (D) actors are extremely independent and self-serving people
 - (E) actors' lives become fulfilled through their dramatic portrayals

NOTE: "The Introduction", copyright © 1993 by Anna Deavere Smith, from *Fires in the Mirror* by Anna Deavere Smith. Used by permission of Doubleday, a division of Bantam Doubleday Dell Publishing Group, Inc.



16. Which statement best captures the author's point in lines 54-56 ("Most characters . . . students") ?
- (A) The characters spoke through the students' own rich cadences.
 - (B) Young drama students have an uncanny knack for conveying character.
 - (C) Most students found class to be repetitious.
 - (D) Characterizations were confined by what the students knew.
 - (E) The spontaneity that the students had hoped for had not been achieved.
17. In line 60, the phrase "home of the character" most nearly means
- (A) way of understanding eccentricities
 - (B) social context surrounding a character
 - (C) environment for practicing acting
 - (D) forum in which the self is presented publicly
 - (E) source of a role's psychological truth
18. In lines 63-64, "psychological reality" describes which quality?
- (A) The versatility of a performer
 - (B) The physical gestures of a character
 - (C) The essence of an identity
 - (D) The accuracy of an audience's expectations
 - (E) The logical consistency of certain actions
19. The "metaphors" in line 66 are best described as
- (A) private misgivings
 - (B) objective observations
 - (C) abstract equations
 - (D) memorable phrases
 - (E) personal comparisons

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. In everything from finding comets to spotting supernovae, amateur astronomers have become so accomplished, and professional astronomers sometimes seek their help.
- (A) accomplished, and
 - (B) accomplished, also
 - (C) accomplished that
 - (D) accomplished therefore
 - (E) accomplished when

2. Since scientific advances are central to progress, basic research deserving continuing support.
- (A) basic research deserving continuing support
 - (B) basic research being what deserves continuing support
 - (C) basic research deserves continuing support
 - (D) continuing support is deserved by basic research
 - (E) continuing support is what they deserve in basic research
3. With Americans consuming sugar in record amounts, nutritionists are urging the public to reduce its consumption of sodas, which have largely replaced other, more healthful, beverages.
- (A) nutritionists are urging the public to reduce its consumption of sodas, which
 - (B) nutritionists have been urging that the public reduces its consumption of sodas; those
 - (C) the public ought to reduce its consuming of sodas, as urged by nutritionists, because they
 - (D) nutritionists urge about reducing public soda consumption, which
 - (E) less soda should be consumed by the public, urge nutritionists, which
4. Experts disagree about what is the definition of intelligence and how to measure it.
- (A) what is the definition of intelligence and how to measure it
 - (B) how to define intelligence, and also its measurement
 - (C) how to define and measure intelligence
 - (D) defining intelligence as well as measurement
 - (E) the definition of intelligence and measuring it



5. The charges against the organization are being investigated by a committee, it includes several senators.
- (A) committee, it includes
 - (B) committee; it including
 - (C) committee, and it will include
 - (D) committee, they include
 - (E) committee that includes
6. Travel writing often describes a journey of exploration and endurance, a trip that is risky either because of natural hazards but also because of political unrest.
- (A) but also because of
 - (B) but also due to
 - (C) or because there was
 - (D) or because of
 - (E) or the cause is
7. Though they had earlier indicated otherwise, it was eventually decided upon by the legislators to have the bill passed.
- (A) it was eventually decided upon by the legislators to have the bill passed
 - (B) it was eventually decided upon by the legislators to pass the bill
 - (C) the eventual decision of the legislators was for passage of the bill
 - (D) the legislators' eventual decision was passing the bill
 - (E) the legislators eventually decided to pass the bill
8. Spread by rat fleas, millions of people in medieval Europe were killed by bubonic plague.
- (A) millions of people in medieval Europe were killed by bubonic plague
 - (B) and millions of medieval Europeans killed by bubonic plague
 - (C) this led to the killing of millions of medieval Europeans by bubonic plague
 - (D) bubonic plague in medieval Europe was why millions of people were killed
 - (E) bubonic plague killed millions of people in medieval Europe
9. Traditional Jamaican music, enriched with rock, jazz, and other modern rhythms from America, were the basis for reggae.
- (A) were the basis for
 - (B) have been a basis for
 - (C) become the basis of
 - (D) was the basis for
 - (E) being the basis of
10. James Barrie, the author of *Peter Pan* and other plays, is noted for portraying adulthood as unpleasant and childhood is glorified.
- (A) childhood is glorified
 - (B) childhood as being glorious
 - (C) childhood as glorious
 - (D) childhood glorified
 - (E) glorified childhood
11. Medical insurance coverage that requires high monthly premiums and that is beyond the financial means of many people.
- (A) that requires high monthly premiums and that is
 - (B) that requires high monthly premiums and it is
 - (C) requiring high monthly premiums are
 - (D) with the requirements of high monthly premiums are
 - (E) that requires high monthly premiums is
12. Among the most flavorful cuisines in the United States, New Orleans has also become one of the most popular.
- (A) New Orleans has also become
 - (B) New Orleans has also become famous as
 - (C) the cuisine of New Orleans is also
 - (D) cuisines in New Orleans also have become
 - (E) also the cuisine of New Orleans is



13. Meals prepared by the Algonquin Indians, who were farmers as well as hunters, included more maize and pumpkin than other Indian tribes.
- (A) pumpkin than other Indian tribes
 - (B) pumpkin than did those prepared by other Indian tribes
 - (C) pumpkin than that which other Indian tribes did
 - (D) pumpkin, and this was not the same as other Indian tribes
 - (E) pumpkin; and other Indian tribes did not prepare meals in this way
14. Born of Ibuza parents in Nigeria, novelist Buchi Emecheta moved to England in 1962. since which she has lived in North London.
- (A) 1962, since which she has lived in North London
 - (B) 1962 and has lived since then in North London
 - (C) 1962, since then she has lived in North London
 - (D) 1962 and lived since then in North London
 - (E) 1962, and living in North London since that time

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 AEBH, BWBH, CFBH

Critical Reading

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

Number correct

Number correct

Number correct

Number incorrect

Number incorrect

Number incorrect

Math

Section 2				Section 6				Section 8			
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. C	1	11. C	3	1. B	1	9. 108	2	1. C	1	9. B	4
2. C	1	12. C	3	2. E	1	10. 1/2 or .5	2	2. A	1	10. C	3
3. E	1	13. D	4	3. B	3	11. 1300	2	3. B	1	11. D	3
4. A	2	14. C	4	4. A	2	12. 24	2	4. B	2	12. B	4
5. B	1	15. B	3	5. D	3	13. 300	3	5. C	2	13. B	3
6. C	2	16. D	2	6. A	4	14. 11	3	6. D	2	14. D	4
7. B	2	17. A	4	7. C	3	15. 2/3, .666. or .667	3	7. E	3	15. E	5
8. A	2	18. B	4	8. B	4	16. $3 < x < 4$	4	8. B	3	16. D	5
9. E	3	19. C	5			17. 2491	4				
10. C	3	20. A	5			18. 70/3 or 23.3	5				

Number correct

Number correct
(9-18)

Number correct

Number correct

Number incorrect

Number incorrect

Number incorrect

Writing

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

Number correct

Number correct

Number incorrect

Number incorrect

† Question dropped

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 50, 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 AEBH, BWBH, CFBH

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 2: Questions 1-20 _____

Section 6: Questions 1-18 + _____

Section 8: Questions 1-16 + _____

Total = _____ (A)

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

Section 2: Questions 1-20 _____

Section 6: Questions 1-8 + _____

Section 8: 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 52 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 7: Questions 1-24 + _____

Section 9: Questions 1-19 + _____

Total = _____ (A)

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

Section 3: Questions 1-24 _____

Section 7: Questions 1-24 + _____

Section 9: 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 52 to find your Critical Reading scaled score.

Get Your Writing Score

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

Section 5: Questions 1-35 _____

Section 10: Questions 1-14 + _____

Total = _____ (A)

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

Section 5: 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 52 to find your Writing multiple-choice scaled score.

Copy your essay score from your QAS report.

_____ (D)

Use the appropriate writing composite table (pages 53-55) 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 AEBH, BWBH, CFBH

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	550	56
66	800			30	500	540	55
65	800			29	490	540	54
64	790			28	480	530	53
63	770			27	480	520	52
62	760			26	470	510	51
61	740			25	460	500	50
60	730			24	460	490	48
59	720			23	450	480	47
58	700			22	440	480	46
57	690			21	440	470	45
56	680			20	430	460	44
55	670			19	420	450	43
54	670	800		18	410	440	42
53	660	790		17	410	430	41
52	650	760		16	400	420	41
51	640	740		15	390	420	40
50	630	720		14	380	410	39
49	620	710		13	380	400	38
48	620	700	80	12	370	390	37
47	610	690	78	11	360	380	36
46	600	680	75	10	350	370	35
45	600	670	73	9	340	360	34
44	590	660	71	8	330	350	33
43	580	650	70	7	320	330	32
42	570	640	68	6	310	320	31
41	570	640	67	5	300	310	30
40	560	630	66	4	290	290	29
39	550	620	64	3	270	280	27
38	550	610	63	2	260	260	26
37	540	600	62	1	240	240	24
36	530	590	61	0	220	220	22
35	530	590	60	-1	210	200	20
34	520	580	59	-2	200	200	20
33	520	570	58	and			
32	510	560	57	below			

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

SAT Writing Composite Score Conversion Table

Form Code AEBH

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

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

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

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

