

Form Codes DEON, EWON, FFOQ

SAT Reasoning Test™

Question-and-Answer Service
January 2007 Administration

INSIDE:

- Test questions and correct answers
- The difficulty level for each question
- Your essay prompt and all other essay prompts administered on your test day
- Instructions for scoring your own test
- Suggestions for using this report to understand your strengths and weaknesses

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Using Your Question-and-Answer Service (QAS) Report

This booklet contains the SAT Reasoning Test™ you took in January 2007. It also includes the correct answers, the difficulty level for each question, additional essay prompts, and scoring information. If the SAT Reasoning Test you took included an unscored “equating” section, this booklet will not include that section.

Reviewing Your SAT Results

The QAS report can help you understand your academic strengths and weaknesses. To make the best use of this report, do the following:

- Read each question, focusing on the type of question, the correct answer, how you answered it, and the difficulty level.
- Analyze test questions you answered incorrectly to understand why your answer was incorrect. Check to see whether you misread the question or misgridded the answer.
- Use the table below to keep track of how you did on the different types of questions (as labeled on your QAS report). This can help you decide how best to concentrate your efforts to improve.

Section	Type of Question	Number Correct	Number Incorrect	Number Omitted
Critical Reading	C Sentence completion			
	R Passage-based reading			
Mathematics	N Number and operations			
	A Algebra and functions			
	G Geometry and measurement			
	D Data analysis, statistics, probability			
Writing Multiple-Choice	S Improving sentences			
	E Identifying sentence errors			
	P Improving paragraphs			

Reviewing Your Essay

You can view a copy of your essay online at www.collegeboard.com/viewessay.

Your essay prompt is included in this booklet. Other essay prompts used on the day you took the test are also included. On the practice sheets in the back of this booklet, you can try writing your essay again, or you can try writing a practice essay for a different prompt.

Understanding Your Scores

If you would like to score your test, use the Scoring Worksheet, SAT Essay Scoring Guide, and score conversion tables at the back of this booklet. You will need to use the “Form Code” shown at the top of your personalized QAS report to locate your particular score conversion tables.

ESSAY
Time — 25 minutes

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

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

Important Reminders:

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

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

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

Most human beings spend their lives doing work they hate and work that the world does not need. It is of prime importance that you learn early what you want to do and whether or not the world needs this service. The return from your work must be the satisfaction that work brings you and the world's need of that work. Income is not money, it is satisfaction; it is creation; it is beauty.

Adapted from W. E. B. Du Bois, *The Autobiography of W. E. B. Du Bois: A Soliloquy on Viewing My Life from the Last Decade of Its First Century*

Assignment: Is it more important to do work that one finds fulfilling or work that pays well? Plan and write an essay in which you develop your point of view on this issue. Support your position with reasoning and examples taken from your reading, studies, experience, or observations.

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

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

ESSAY**Time — 25 minutes**

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

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

Important Reminders:

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

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

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

If we are dissatisfied with our circumstances, we think about changing them. But the most important and effective changes—in our attitude—hardly occur to us. In other words, we should worry *not* about how to alter the world around us for the better but about how to change ourselves in order to fit into that world.

Adapted from Michael Hymers, "Wittgenstein, Pessimism and Politics"

Assignment: Is it better to change one's attitude than to change one's circumstances? Plan and write an essay in which you develop your point of view on this issue. Support your position with reasoning and examples taken from your reading, studies, experience, or observations.

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

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



ESSAY

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

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

Important Reminders:

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

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

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

Many people believe that our government should do more to solve our problems. After all, how can one individual create more jobs or make roads safer or improve the schools or help to provide any of the other benefits that we have come to enjoy? And yet expecting that the government—rather than individuals—should always come up with the solutions to society's ills may have made us less self-reliant, undermining our independence and self-sufficiency.

Assignment: Should people take more responsibility for solving problems that affect their communities or the nation in general? Plan and write an essay in which you develop your point of view on this issue. Support your position with reasoning and examples taken from your reading, studies, experience, or observations.

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

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



SECTION 2

Time — 25 minutes

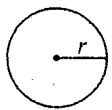
18 Questions

Directions: This section contains two types of questions. You have 25 minutes to complete both types. For questions 1-8, solve each problem and decide which is the best of the choices given. Fill in the corresponding circle on the answer sheet. You may use any available space for scratchwork.

Notes

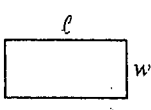
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is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

Reference Information

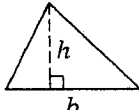


$$A = \pi r^2$$

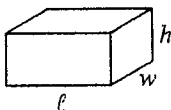
$$C = 2\pi r$$



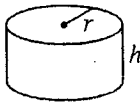
$$A = \ell w$$



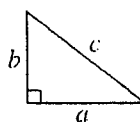
$$A = \frac{1}{2}bh$$



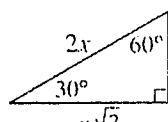
$$V = \ell wh$$



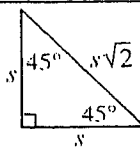
$$V = \pi r^2 h$$



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



Special Right Triangles



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

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

1. If $3x = 0$, what is the value of $1 + x + x^2$?

- (A) $\frac{7}{9}$
 (B) 1
 (C) $\frac{13}{9}$
 (D) 7
 (E) 13

2. The diameter of circle A is 3 times the diameter of circle B. What is the ratio of the radius of circle A to the radius of circle B?

- (A) 9 : 1
 (B) 6 : 1
 (C) 3 : 4
 (D) 3 : 2
 (E) 3 : 1

GO ON TO THE NEXT PAGE



3. N is a set of numbers whose average (arithmetic mean) is 3. M is a set that is generated by doubling each number in N . What is the average of the numbers in set M ?

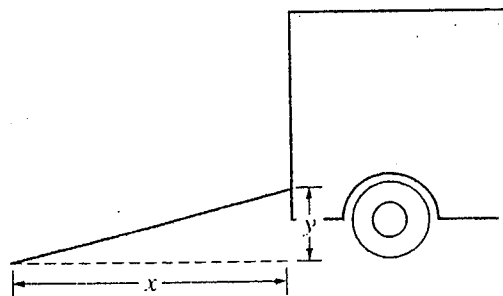
(A) $\frac{1}{3}$
(B) 2
(C) 3
(D) 6
(E) 9

4. If P , R , and T are digits in the positive three-digit integer PRT , what is the decimal equivalent of $PRT \times 10^{-2}$?

(A) $0.0PRT$
(B) $0.PRT$
(C) $P.RT$
(D) $PR.T$
(E) $PR.T00$

5. If $k + n < k$, which of the following must be true?

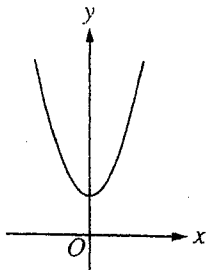
(A) $k > 0$
(B) $k = 0$
(C) $k < 0$
(D) $n > 0$
(E) $n < 0$



Note: Figure not drawn to scale.

6. A ramp is extended from a truck to the ground, as shown in the figure above. The ramp has a slope of $\frac{7}{16}$. If y is 3.5 feet, what is x , in feet?

(A) 8
(B) 12.5
(C) 20
(D) 24.5
(E) 32



7. The graph above is a parabola whose equation is $y = ax^2 + 2$, where a is a constant. If $y = \frac{a}{3}x^2 + 2$ is graphed on the same axes, which of the following best describes the resulting graph as compared with the graph above?
- (A) It will be narrower.
(B) It will be wider.
(C) It will be moved to the left.
(D) It will be moved to the right.
(E) It will be moved 3 units downward.

8. Meredith has a red hat, a blue hat, and a white hat. She also has three sweaters—one red, one blue, and one white—and three pairs of jeans—one red, one blue, and one white. Meredith wants to wear a red, white, and blue outfit consisting of one hat, one sweater, and one pair of jeans. How many different possibilities does she have?
- (A) 3
(B) 6
(C) 9
(D) 12
(E) 27



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.

Grid in result.

7	/	1	2
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0	0
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	1	1	1
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	2	2	2
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	3	3	3
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	4	4	4
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	5	5	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	6	6	6
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	7	7	7
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	8	8	8
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	9	9	9
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Fraction line

Answer: 2.5

2	.	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	1	1
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	2	2
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	3	3
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	4	4
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	5	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	6	6
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	7	7
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	8	8
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	9	9
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Decimal point

Answer: 201

Either position is correct.

2	0	1
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	1	1
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	2	2
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	3	3
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	4	4
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

- Mark no more than one circle in any column.
- Because the answer sheet will be machine-scored, **you will receive credit only if the circles are filled in correctly.**
- Although not required, it is suggested that you write your answer in the boxes at the top of the columns to help you fill in the circles accurately.
- Some problems may have more than one correct answer. In such cases, grid only one answer.
- No question has a negative answer.
- Mixed numbers** such as $3\frac{1}{2}$ must be gridded as 3.5 or 7/2. (If $\frac{31}{2}$ is gridded, it will be interpreted as $\frac{31}{2}$, not $3\frac{1}{2}$.)

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

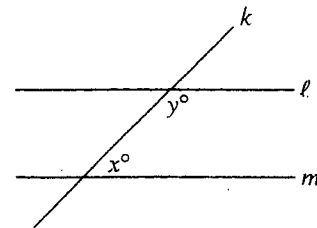
Acceptable ways to grid $\frac{2}{3}$ are:

2	/	3
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	1	1
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	2	2
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	3	3
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	4	4
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	5	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	6	6
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

.	6	6	6
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0	0
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	1	1	1
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	2	2	2
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	3	3	3
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	4	4	4
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	5	5	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	6	6	6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

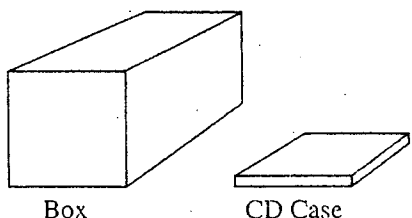
.	6	6	7
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0	0
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	1	1	1
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	2	2	2
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3	3	3	3
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	4	4	4
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	5	5	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	6	6	6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. When twice a certain number is increased by 5, the result is 14. What is the number?



10. In the figure above, $\ell \parallel m$ and $y = 3x$. What is the value of y ?

GO ON TO THE NEXT PAGE



11. The inside dimensions of the rectangular box shown above are 4 inches by 4 inches by 8 inches. What is the maximum number of CD cases like the one shown that will fit inside the box if each CD case has outside dimensions of 4 inches by 4 inches by $\frac{1}{4}$ inch?

12. If $\frac{3x + y}{y} = \frac{6}{5}$, what is the value of $\frac{x}{y}$?

PROFITS OF CERTAIN STORES

	Year 1	Year 2
Store A	\$ 5,000	\$ 6,200
Store B	6,000	7,350
Store C	10,000	12,700
TOTAL	\$21,000	\$26,250

13. The table above lists the profits of 3 stores in 2 consecutive years. What was the average (arithmetic mean) increase in profit, in dollars, for these 3 stores from year 1 to year 2 ? (Disregard the \$ sign when gridding your answer.)

$f(x) = |3x - 17|$

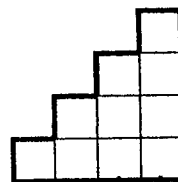
14. For the function defined above, what is one possible value of a for which $f(a) < a$?



15. From a jar containing 50 pieces of candy, of which 25 are red and 25 are green, Ari has taken 3 red and 4 green pieces. He takes an additional 13 pieces from the jar. What is the least number of these additional pieces that must be red in order for Ari to have more red candies than green candies among all the pieces he has taken?

17. The cost of a telephone call using long-distance carrier A is \$1.00 for any time up to and including 20 minutes and \$0.07 per minute thereafter. The cost using long-distance carrier B is \$0.06 per minute for any amount of time. For a call that lasts t minutes, the cost using carrier A is the same as the cost using carrier B . If t is a positive integer greater than 20, what is the value of t ?

16. A positive integer is said to be "tri-factorable" if it is the product of three consecutive integers. How many positive integers less than 1,000 are tri-factorable?



18. The figure above shows an arrangement of 10 squares, each with side of length k inches. The perimeter of the figure is p inches. The area of the figure is a square inches. If $p = a$, what is the value of k ?

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) ●

- Geoffrey's corrupt dealings earned him such disgrace that any possibility of his being reelected to the city council was completely -----.
(A) ensured (B) approved (C) belittled
(D) eliminated (E) defended
- Although the editors were reputed to be very -----, the uneven quality of the material they put into the anthology suggests they were too -----.
(A) amateurish . . professional
(B) lax . . harsh
(C) selective . . inclusive
(D) judgmental . . discriminating
(E) sensitive . . insightful

- The professor's presentation was both ----- and -----: though brief, it was instructive.

- (A) verbose . . mundane
(B) concise . . elaborate
(C) comprehensive . . edifying
(D) succinct . . enlightening
(E) provocative . . technical

- With its large circulation, *Essence* magazine has enjoyed ----- only recently challenged by new publications aggressively seeking female African American readers.

- (A) an aggregation (B) an inclination
(C) a prognosis (D) a retrenchment
(E) a preeminence

- The judge's published opinions, though sophisticated and subtle, were undeniably -----: they left no doubt of her intentions.

- (A) unequivocal (B) effusive (C) incorrigible
(D) tenuous (E) ineffable

GO ON TO THE NEXT PAGE



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

Questions 6-7 are based on the following passage.

Properly speaking, a movement is a continuous, collective effort to bring about fundamental social reform. It is a collaborative rather than an individualistic enterprise. No matter how many factions are involved, there is always a common objective. The Black freedom struggle of the 1960's was such an effort. Its objective was to transform the manner in which Black Americans in the United States were viewed and treated. And Black writers and artists, as a vital sector of the movement, sought to transform the manner in which Black Americans were represented or portrayed in literature and the arts.

6. The first sentence of the passage ("Properly speaking . . . reform") primarily serves to
 - (A) present a controversial opinion
 - (B) question the effectiveness of a process
 - (C) provide an example of an abstract idea
 - (D) define the meaning of a term
 - (E) offer a solution to a problem
7. The passage indicates that Black writers and artists were most important to the freedom struggle in that they
 - (A) promoted freedom of artistic expression for Black Americans
 - (B) attempted to alter the way Black people were depicted in the arts
 - (C) created powerful protest art that documented the Black struggle
 - (D) were a cohesive group that opposed excessive individualism
 - (E) prescribed a course of action to help ensure social justice

Questions 8-9 are based on the following passage.

As a slang word, "cool" has stayed cool far longer than most such words. One of the main characteristics of slang is the continual renewal of its vocabulary: in order for slang to feel slangy, it has to have a feeling of novelty. Slang expressions meaning the same thing as "cool," like "groovy," "hep," "far-out," "rad," and "tubular," have for the most part not had the staying power of "cool." In general, there is no intrinsic reason why one word stays alive and others get consigned to the scrap heap of linguistic history, but slang terms, like fashion designs, are rarely "in" for long. The jury is still out on how long "def" and "phat" will survive.

8. The primary purpose of the passage is to
 - (A) address a pressing question
 - (B) define an unusual expression
 - (C) note the durability of a term
 - (D) oppose a particular use of language
 - (E) challenge a linguistic theory
9. In line 11, "fashion designs" serve as an example of something
 - (A) provocative
 - (B) ephemeral
 - (C) pretentious
 - (D) esoteric
 - (E) exotic



Questions 10-15 are based on the following passage.

This passage was adapted from a 1995 book about astronomy.

Apart from the Moon and occasional comets and asteroids, Venus is often our nearest neighbor. Its orbit brings it closer to Earth than any other planet—only 26 million miles away at certain times. Despite that proximity, for a long time it was generally termed “the planet of mystery.” This is because the atmosphere of Venus is so dense and so cloud-laden that its surface is permanently hidden from sight.

The first attempt to learn more about Venus was to analyze its upper atmosphere using spectroscopic methods. In size and mass, Venus is almost the equal of Earth, and its gravitational field is only slightly weaker than ours, so that logically it might be expected to have the same kind of atmosphere—but this is emphatically not so. Scientists found that the main constituent of its atmosphere is carbon dioxide. Since this is a heavy gas that would be expected to sink, it was reasonable to assume that carbon dioxide made up most of the atmosphere down to ground level. Carbon dioxide acts in the manner of a greenhouse, trapping the Sun’s heat, so it followed that Venus was likely to be a very torrid sort of world.

Yet opinions differed. According to one theory, the clouds contained a great deal of water. It was even claimed that the surface might be largely ocean covered, in which case the atmospheric carbon dioxide would have fouled the water and produced seas of soda water. Another intriguing theory made Venus very similar to the Earth of over 200 million years ago. There would be marshes, luxuriant vegetation of the fern and horsetail variety, and primitive life-forms such as giant dragonflies. If so, then Venus might presumably evolve the same way Earth has done.

In 1962 the American probe Mariner 2 bypassed Venus at less than 22,000 miles and gave us our first reliable information. The surface proved to be very hot indeed; we now know that the maximum temperature is almost 500°C. The atmosphere really is almost pure carbon dioxide, and those shining clouds are rich in sulfuric acid. All ideas of a pleasant, oceanic Venus had to be abandoned. In 1975 Venera 9, a Russian automatic lander, visited Venus and sent back pictures direct from the surface. The scene—a rocky, scorched landscape—could hardly be more hostile. Subsequent probes have confirmed this impression.

Why is Venus so unlike Earth? The answer can only lie in its lesser distance from the Sun. It seems that in the early days of the solar system the Sun was less luminous than it is now, in which case Venus and Earth may have started to evolve along the same lines, but when the Sun became more powerful the whole situation changed. Earth, at 93 million miles, was just out of harm’s way, but Venus, at 67 million, was not. The water in oceans vaporized, the carbonates were driven out of the rocks, and in a relatively short time on the cosmic scale, Venus was transformed from a potentially life-bearing world into the inferno of today.

10. The primary purpose of the passage is to

- (A) criticize the lack of research on a topic of mystery
- (B) speculate about life on another world
- (C) lament the demise of a compelling theory
- (D) illustrate the principles of planetary research
- (E) discuss attempts to understand an astronomical enigma

11. The statement in lines 11-14 (“In size . . . so”) functions primarily to

- (A) dismiss a plausible supposition
- (B) mock an outrageous claim
- (C) bolster an accepted opinion
- (D) summarize a particular experiment
- (E) undermine a controversial hypothesis

12. The primary purpose of the third paragraph (lines 22-31) is to

- (A) provide evidence in support of a controversial theory
- (B) challenge two popular misconceptions about Venus
- (C) show why a particular hypothesis was misguided
- (D) suggest that Venus has been romanticized throughout history
- (E) present two distinct theories about Venus



13. In order for the hypothesis in lines 28-30 ("There would . . . dragonflies") to be correct, which statement could NOT be true of conditions on Venus?

- (A) The environment is generally warm and humid.
- (B) The atmosphere is pure carbon dioxide.
- (C) It is possible for evolutionary change to occur.
- (D) There is enough light for photosynthesis to occur.
- (E) Creatures are able to fly with ease.

14. The statement in lines 32-34 ("In 1962 . . . information") suggests that the

- (A) quality of the data surprised the scientists
- (B) evidence collected earlier was relatively untrustworthy
- (C) records had been lost for a long time before scientists rediscovered them
- (D) probe allowed scientists to formulate a completely new theory
- (E) data confirmed an obscure and implausible theory

15. The tone of the statement in lines 43-44 ("The answer . . . Sun") is best described as

- (A) regretful
- (B) guarded
- (C) skeptical
- (D) decisive
- (E) amused



Questions 16-24 are based on the following passage.

This passage has been adapted from a memoir published in 1999. The year is 1961; the author, then a young girl, has just moved to New York City with her family.

New York was darker than I expected, and, in spite of the cleansing rain, dirtier. Used to the sensual curves of Puerto Rico, my eyes had to adjust to the regular, aggressive two-dimensionality of Brooklyn. Raindrops pounded the hard streets, captured the dim silver glow of street lamps, bounced against sidewalks in glistening sparks, then disappeared like tiny ephemeral jewels, into the darkness. Mami and Tata* teased that I was disillusioned because the streets were not paved with gold. But I had no such vision of New York. I was disappointed by the darkness and fixed my hopes on the promise of light deep within the sparkling raindrops.

Two days later, I leaned against the wall of our apartment building on McKibbin Street wondering where New York ended and the rest of the world began. It was hard to tell. There was no horizon in Brooklyn. Everywhere I looked, my eyes met a vertical maze of gray and brown straight-edged buildings with sharp corners and deep shadows. Every few blocks there was a cement playground surrounded by chain-link fence. And in between, weedy lots mounded with garbage and rusting cars.

A girl came out of the building next door, a jump rope in her hand. She appraised me shyly; I pretended to ignore her. She stepped on the rope, stretched the ends overhead as if to measure their length, and then began to skip, slowly, grunting each time she came down on the sidewalk. Swish splat grunt swish, she turned her back to me; swish splat grunt swish, she faced me again and smiled. I smiled back, and she hopped over.

"¿Tú eres hispana?" she asked, as she whirled the rope in lazy arcs.

"No, I'm Puerto Rican."

"Same thing. Puerto Rican, Hispanic. That's what we are here." She skipped a tight circle, stopped abruptly, and shoved the rope in my direction. "Want a turn?"

"Sure." I hopped on one leg, then the other. "So, if you're Puerto Rican, they call you Hispanic?"

"Yeah. Anybody who speaks Spanish."

I jumped a circle, as she had done, but faster.

"You mean, if you speak Spanish, you're Hispanic?"

"Well, yeah. No . . . I mean your parents have to be Puerto Rican or Cuban or something."

I whirled the rope to the right, then the left, like a boxer. "Okay, your parents are Cuban, let's say, and you're born here, but you don't speak Spanish. Are you Hispanic?"

She bit her lower lip. "I guess so," she finally said. "It has to do with being from a Spanish country. I mean, you or your parents, like, even if you don't speak Spanish, you're Hispanic, you know?" She looked at me uncertainly. I nodded and returned her rope.

But I didn't know. I'd always been Puerto Rican, and it hadn't occurred to me that in Brooklyn I'd be someone else.

Later, I asked, "Are we Hispanics, Mami?"

"Yes, because we speak Spanish."

"But a girl said you don't have to speak the language to be Hispanic."

She scrunched her eyes. "What girl? Where did you meet a girl?"

"Outside. She lives in the next building."

"Who said you could go out to the sidewalk?"

This isn't Puerto Rico. *Algo te puede suceder.*"

"Something could happen to you" was a variety of dangers outside the locked doors of our apartment. I listened to Mami's lecture with downcast eyes and the necessary, respectful expression of humility. But inside, I quaked. Two days in New York, and I'd already become someone else. It wasn't hard to imagine that greater dangers lay ahead.

* The narrator's mother and grandmother

16. In line 3, "regular" most nearly means

- (A) customary
- (B) agreeable
- (C) unvarying
- (D) recurring
- (E) average

17. Lines 4-8 ("Raindrops . . . darkness") are particularly notable for their

- (A) despairing mood
- (B) vivid imagery
- (C) humorous wordplay
- (D) nostalgic atmosphere
- (E) abstract language



18. In lines 8-9, Mami and Tata imply that the narrator

- (A) faced economic barriers
- (B) exhibited driving ambitions
- (C) believed in miraculous transformations
- (D) was ruled by greedy impulses
- (E) harbored unrealistic expectations

19. The second paragraph (lines 13-22) suggests that the narrator experienced Brooklyn as

- (A) mysterious and unknowable
- (B) uniform and oppressive
- (C) orderly and appealing
- (D) drab yet multifaceted
- (E) menacing yet alluring

20. Which of the following best describes the initial interaction of the "girl" (line 23) and the narrator?

- (A) Neither was in a mood to meet someone new.
- (B) Neither wanted to show her fear of the other.
- (C) They acted as if they already knew each other.
- (D) They studied each other suspiciously.
- (E) They cautiously took note of each other.

21. The exchange between the narrator and the girl (lines 31-52) is best described as

- (A) a debate over the power of language to shape personality
- (B) a discussion of the value of using ethnic labels to characterize people
- (C) an exchange of strategies for survival in a mystifying culture
- (D) an attempt to identify the criteria that determine an ethnic label
- (E) an effort to reconcile group identity with personal autonomy

22. The paragraph in lines 53-55 ("But I . . . else") suggests that, for the narrator, being considered Hispanic represents

- (A) the end of childhood as she has known it
- (B) the loss of her former identity
- (C) a restriction to be overcome
- (D) an opportunity for self-redefinition
- (E) an unavoidable result of emigration

23. The mother refers to "Puerto Rico" (line 64) in order to impress upon the narrator that

- (A) nostalgia for one's birthplace can be a distraction
- (B) New Yorkers are indifferent to cultural backgrounds
- (C) newcomers must embrace New York if they are to flourish
- (D) life was more restricted in Puerto Rico
- (E) different rules apply to life in New York

24. The narrator's mood at the conclusion of the passage is best described as one of

- (A) apathy and sullenness
- (B) anger and bewilderment
- (C) defeat and resignation
- (D) fearfulness and uncertainty
- (E) resentment and defiance

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

STOP

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



SECTION 4
Time — 25 minutes
35 Questions

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

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

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

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

EXAMPLE:

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

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

(A) ● (C) (D) (E)

1. Confident that she was fully prepared, Ellen decided to spend the night before the recital reading and relaxing but not to be practicing.
- (A) but not to be practicing
 - (B) and not for practicing
 - (C) more than to practice
 - (D) rather than practicing
 - (E) rather than having practiced

2. Sir Ronald Ross, winner of the 1902 Nobel Prize for Physiology or Medicine, and who identified the Anopheles mosquito as the transmitter of human malaria.
- (A) and who identified
 - (B) he has identified
 - (C) and he has identified
 - (D) and who is identifying
 - (E) identified
3. Traveling through Yosemite, the scenery of waterfalls and granite peaks, which we photographed, was beautiful.
- (A) the scenery of waterfalls and granite peaks, which we photographed, was beautiful
 - (B) the waterfalls and granite peaks were the beautiful scenery we photographed
 - (C) we photographed the beautiful scenery of waterfalls and granite peaks
 - (D) we photographed the scenery of waterfalls and granite peaks, being beautiful
 - (E) what we photographed was the beautiful scenery of waterfalls and granite peaks
4. The poet Firdawsi composed the Iranian national epic *Shah-nameh* in 1010 with his purpose being to recount the history of the Persian kings.
- (A) with his purpose being to recount
 - (B) and his purpose was recounting
 - (C) to recount
 - (D) thus recounted
 - (E) he recounted



5. As a choreographer, Judith Jamison has enriched the world of dance, she uses as her work's inspiration African American culture.
- (A) Jamison has enriched the world of dance, she uses as her work's inspiration
 (B) Jamison has enriched the world of dance with works inspired by
 (C) Jamison, who has enriched the world of dance by works whose inspirations are
 (D) Jamison, enriching the world of dance, with works inspired by
 (E) Jamison enriches the world of dance through works that had the inspiration of
6. Leslie Marmon Silko has said that her writing, which was powerfully influenced by storytellers in her family but that the landscape of her childhood also shaped her vision and provided stories.
- (A) her writing, which was powerfully influenced by storytellers in her family
 (B) her writing, powerfully influenced by family storytellers
 (C) family storytellers powerfully influenced her writing
 (D) storytellers in the family being powerful influences on her writing
 (E) powerfully influential in her writing was family storytellers
7. Finding the Baltimore waterfront fascinating, all that there was to see was thoroughly explored by Antonio.
- (A) Finding the Baltimore waterfront fascinating, all that there was to see was thoroughly explored by Antonio.
 (B) Antonio found the Baltimore waterfront fascinating, he thoroughly explored all that there was to see.
 (C) Finding the Baltimore waterfront fascinating, Antonio thoroughly explored all that there was to see.
 (D) The Baltimore waterfront is fascinating and is why Antonio thoroughly explored all that there was to see.
 (E) The Baltimore waterfront can be found fascinating, and this made Antonio explore all that there was to see.
8. In the 100-yard relay our team impressed the crowd, with each of the members shaving several seconds off her own best time.
- (A) of the members shaving
 (B) of the members had shaved
 (C) of the members was shaving
 (D) who had been shaving
 (E) who shaved
9. Because of their ability to eat large numbers of insects, some people are building bat houses in their backyards.
- (A) Because of their ability to eat large numbers of insects, some people are building bat houses in their backyards.
 (B) They have the ability to eat large numbers of insects, so some people are building bat houses in their backyards.
 (C) Because bats can eat large numbers of insects, bat houses are being built in their backyards by some people.
 (D) Some people are building bat houses in their backyards because bats can eat large numbers of insects.
 (E) Bats can eat large numbers of insects, because of this some people are building bat houses in their backyards.
10. For all their talk about ecology, major companies have so far spent very little to fight pollution.
- (A) For all their talk
 (B) In spite of the fact of their having talked
 (C) Besides their having talked
 (D) In addition to their talking
 (E) Although there is talk between one and the other
11. The survival of many species of marine life may depend on both the enforcement of waste-disposal regulations and the education of the public about the fragility of ocean resources.
- (A) and the education of the public
 (B) educating the public
 (C) and the public being educated
 (D) along with the education of the public
 (E) in combination with public education



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. Hearing the unexpected loud noise, Cindy, Leroy, and

A
 me were so startled that we almost jumped
 B C
 out of our seats. No error
 D E

13. Many admire Louisa May Alcott for her

detailed descriptions of nineteenth-century domestic
 A
 life in novels such as *Little Women*, but few have read
 B C
 the lurid thrillers she writes early in her career.
 D
No error
 E

14. According to some critics, the title character of

the Greek tragedy *Oedipus Rex* saw himself
 A
as the savior of his people and believing
 B C
 erroneously that he could do no wrong. No error
 D E

15. Unlike Thomas, neither Leslie or her younger

A B
 brother Philip has an interest in a career in law.
 C D
No error
 E

16. One subject of Felipe Alfau's second novel, published

A
more than 40 years after it has been written, is the
 B C D
 illusory nature of the passage of time. No error
 E

17. Joining a grassroots movement against inhumane

working conditions, some consumers in the United
 States have stopped buying products from countries
 A
in which workers are essentially a slave laborer.
 B C D
No error
 E

18. As the mayor was evaluating the proposed tax, he was

A
 less interested in the revenue it would generate than in
 B
 whether they would disproportionately affect certain
 C D
 income groups. No error
 E

19. Eating garlic has long been regarded as a means

A B
 of warding off malaise, and scientific research
has shown that it does have some therapeutic
 C D
 value. No error
 E

GO ON TO THE NEXT PAGE



20. Although the night shift is fully staffed, the managers

A

always holds us responsible for that shift's work if

B C

it is not finished when we arrive in the morning.

D

No error

E

21. Members of the Alvin Ailey Dance Company have

A

once again shown how the combination of strength

B

and being agile can produce beautiful movements.

C D

No error

E

22. Anne Tyler's novel *The Accidental Tourist* features

A

a character whose obsession with saving time and

B C

money are absurd, yet somehow plausible. No error

D E

23. At the conclusion of the novel *The Great Gatsby*,

Nick Carraway, a young Midwesterner recently

arrived to New York, moodily watches the blinking

A B C

green light at the tip of Long Island. No error

D E

24. Despite the efforts of the publicity subcommittee,

A

hardly anyone attended the workshop that had been

B C

planned so painstakingly. No error

D E

25. Peter's seemingly effortless flights, achieved through

A B

the use of sophisticated technical equipment,

continues to delight those who see the play

C D

Peter Pan. No error

E

26. Mediators were standing by, prepared to intervene in

A

the labor dispute even though both sides had refused

B C

earlier offers for assistance. No error

D E

27. According to some theorists, what any particular bird

A B

can eat could change with even the slightest variation

C D

in the shape of its beak. No error

E

28. Neither Ms. Perez nor Ms. Tanaka believes that

A B

watching as much television as her son Sam does

C

will lead to anything productive. No error

D E

29. An amateur potter herself, the accountant offered

A

to help the artist with his business accounts, com-

B

plicated as they were by his unusual system of record

C D

keeping. No error

E



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

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

Questions 30-35 are based on the following passage.

(1) Many critics consider modern film remakes of classical works disrespectful and a waste of time and money. (2) A recent version of Shakespeare's *Romeo and Juliet* drew harsh reviews from purists, they are people who expect filmmakers to follow the original text exactly. (3) The only positive ones expressed relief that Shakespeare was not around to feel the insult. (4) Wouldn't he be horrified to see his play open with a gang shoot-out at a gas station? (5) And *Clueless*, a remake of Jane Austen's 1815 novel *Emma*. (6) Imagine equating flirtation in a Southern California high school with dignified courtship in a nineteenth-century English country estate.

(7) I see nothing wrong with creative remakes. (8) After all, didn't Shakespeare borrow freely from other writers' plots? (9) For example, his *Romeo and Juliet* is borrowed from a myth popularized by the Roman poet Ovid. (10) And as for being insulted, Shakespeare would have starved if he had written only about genteel topics. (11) No doubt he would recognize the swaggering teenagers in the movie, they would be distant relatives of his own warring characters. (12) Austen will see traces of her characters in the frivolous, money-conscious society of *Clueless*. (13) The movie's main character is preoccupied with appearances, and it would make her feel right at home in the England mocked by Austen.

(14) The themes of the great classics are timeless, so we should not let these works become fossils.

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

A recent version of Shakespeare's *Romeo and Juliet* drew harsh reviews from purists, they are people who expect filmmakers to follow the original text exactly.

- (A) (as it is now)
- (B) purists; they were people who expected
- (C) purists in expecting
- (D) purists. These expected
- (E) purists, those who expect

31. In context, which of the following is the best word to use instead of "ones" in sentence 3 ?

- (A) scenes
- (B) instances
- (C) reviews
- (D) remakes
- (E) sections

32. In context, which of the following is the best version of the underlined portion of sentence 5 (reproduced below) ?

And *Clueless*, a remake of Jane Austen's 1815 novel *Emma*.

- (A) (As it is now)
- (B) *Clueless* is a
- (C) Another supposed outrage is *Clueless*, a
- (D) We can also take offense at *Clueless*, a
- (E) Yet consider *Clueless*, which is a

33. An important strategy used in the first paragraph is to

- (A) elaborate on a view that contrasts with the essay's argument
- (B) use descriptive detail to animate a personal experience
- (C) provide a thoughtful, objective analysis of modern criticism
- (D) introduce an unconventional approach to writing fiction
- (E) reveal the sense of playfulness implicit in much film criticism



34. Which of the following is the best version of the underlined portion of sentence 11 (reproduced below) ?

No doubt he would recognize the swaggering teenagers in the movie, they would be distant relatives of his own warring characters.

- (A) (as it is now)
- (B) movie; they are
- (C) movie; they were
- (D) movie for being
- (E) movie as

35. In context, which of the following is the best way to revise the underlined portion of sentence 12 (reproduced below) ?

Austen will see traces of her characters in the frivolous, money-conscious society of Clueless.

- (A) Austen could have seen
- (B) Austen, too, would see
- (C) However, Austen might have seen
- (D) In addition to this, Austen would see
- (E) Likewise, Austen can 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

20 Questions

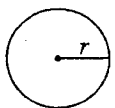
Turn to Section 6 (page 6) of your answer sheet to answer the questions in this section.

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

Notes

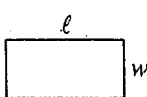
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is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

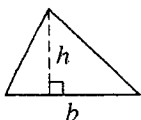


$$A = \pi r^2$$

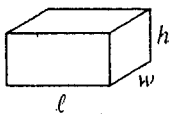
$$C = 2\pi r$$



$$A = \ell w$$



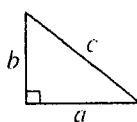
$$A = \frac{1}{2}bh$$



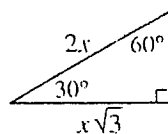
$$V = \ell wh$$



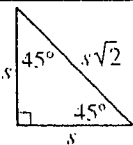
$$V = \pi r^2 h$$



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



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, 4, 10, t , 46, ...

1. In the sequence above, the first term is 1 and each term after the first is 2 more than twice the previous term. What is the value of t ?

- (A) 12
(B) 14
(C) 20
(D) 22
(E) 24

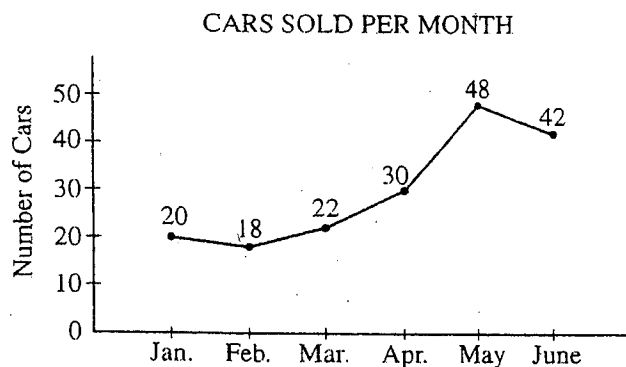
2. A machine can fill 24 cartons in 1 hour. At this rate, how many cartons can the machine fill in 5 minutes?

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

GO ON TO THE NEXT PAGE



Questions 3-4 refer to the following graph.



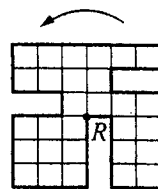
The line graph above shows the number of cars Cathy sold in each of the first six months of 2003.

3. Cathy sold how many more cars in the month of May than in the months of January and February combined?

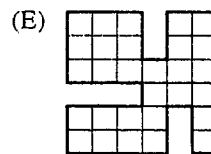
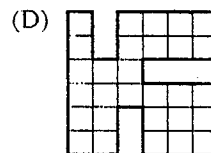
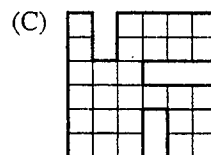
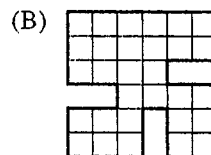
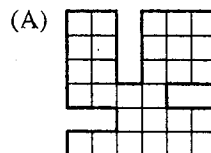
(A) 10
(B) 15
(C) 20
(D) 25
(E) 30

4. If the car sales data from these six months were illustrated by a circle graph, what would be the measure of the central angle of the sector that represents the month of April?

(A) 30°
(B) 54°
(C) 60°
(D) 108°
(E) 120°



5. If the figure above were rotated counterclockwise 90° about point R , which of the following would be the result?





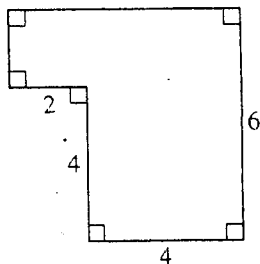
6. If 3 more than twice a number is equal to 10, what is 4 times the number?

(A) $3\frac{1}{2}$
 (B) 7
 (C) $10\frac{1}{2}$
 (D) 14
 (E) $17\frac{1}{2}$

$a, 2a, 4a, 8a$

7. If $a < 0$, which of the four numbers above is the greatest?

(A) a
 (B) $2a$
 (C) $4a$
 (D) $8a$
 (E) It cannot be determined from the information given.



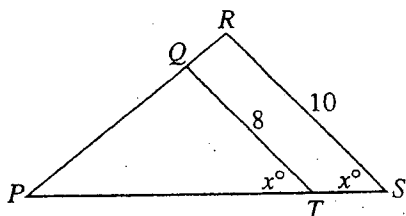
8. What is the area of the six-sided figure above?

(A) 26
 (B) 28
 (C) 30
 (D) 34
 (E) 40

9. If $(x - 2)^2 = 25$ and $x < 0$, what is the value of x ?

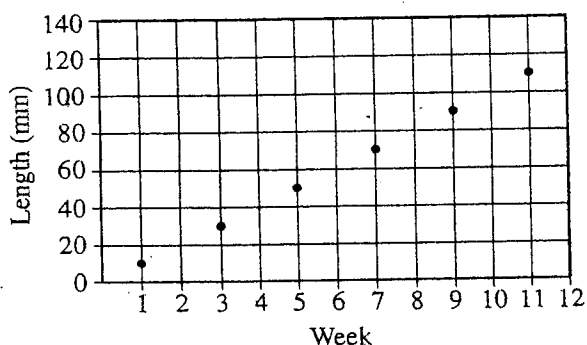
(A) -23
 (B) -7
 (C) -5
 (D) -3
 (E) -2

GO ON TO THE NEXT PAGE



10. In the figure above, what is the value of $\frac{PT}{PS}$?

- (A) $\frac{1}{5}$
- (B) $\frac{1}{4}$
- (C) $\frac{2}{5}$
- (D) $\frac{1}{2}$
- (E) $\frac{4}{5}$



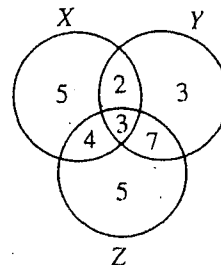
11. A biology teacher graphed the length of a fish over time, and the results are shown above. If L represents the length of the fish in millimeters and W represents the number of the week, which of the following equations best describes the data shown?

- (A) $L = W$
- (B) $L = 10$
- (C) $L = W + 10$
- (D) $L = 10W$
- (E) $L = 10W + 10$

5, 6, 5, 6, 7, 5, 5, n , 6

12. For the numbers listed above, the only mode is 5 and the median is 6. Each of the following could be the value of n EXCEPT

- (A) 6
- (B) 7
- (C) 8
- (D) 9
- (E) 10



13. In the Venn diagram above, the number in each region indicates how many elements are in that region. How many elements are in the intersection of sets Y and Z ?

- (A) 3
- (B) 7
- (C) 10
- (D) 16
- (E) 25



14. If $m = t^3$ for any positive integer t , and if $w = m^2 + m$, what is w in terms of t ?

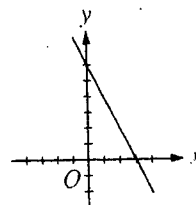
(A) $t^2 + t$
 (B) t^3
 (C) $t^3 + t$
 (D) $t^5 + t^3$
 (E) $t^6 + t^3$

15. For all positive integers x , let $x\blacktriangle$ be defined to be $(x - 1)(x + 1)$. Which of the following is equal to $6\blacktriangle - 5\blacktriangle$?

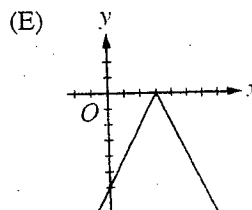
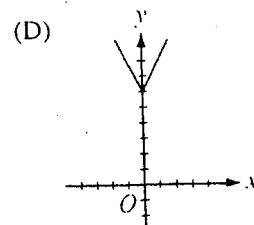
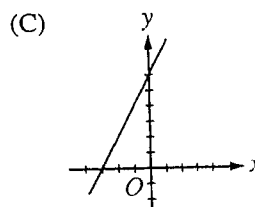
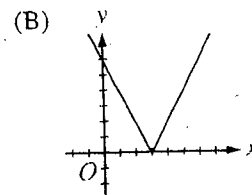
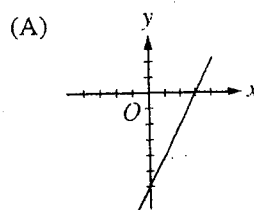
(A) $2\blacktriangle + 1\blacktriangle$
 (B) $3\blacktriangle + 2\blacktriangle$
 (C) $4\blacktriangle + 3\blacktriangle$
 (D) $5\blacktriangle + 4\blacktriangle$
 (E) $6\blacktriangle + 5\blacktriangle$

16. If $\frac{x^2}{y}$ is an integer, but $\frac{x}{y}$ is not an integer, which of the following could be the values of x and y ?

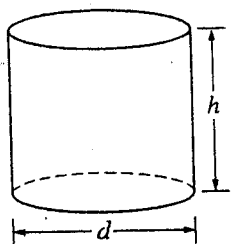
(A) $x = 1, y = 1$
 (B) $x = 3, y = 2$
 (C) $x = 4, y = 2$
 (D) $x = 6, y = 4$
 (E) $x = 9, y = 3$



17. The equation of the line above is $y = -2x + 6$. Which of the following is the graph of $y = |-2x + 6|$?



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18. The right circular cylinder above has diameter d and height h . Of the following expressions, which represents the volume of the smallest rectangular box that completely contains the cylinder?

(A) dh
(B) d^2h
(C) dh^2
(D) d^2h^2
(E) $(d + h)^2$

19. The square of x is equal to 4 times the square of y . If x is 1 more than twice y , what is the value of x ?

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

20. In the xy -coordinate plane, lines ℓ and q are perpendicular. If line ℓ contains the points $(0, 0)$ and $(2, 1)$, and line q contains the points $(2, 1)$ and $(0, t)$, what is the value of t ?

(A) -3
(B) -2
(C) 2
(D) 3
(E) 5

STOP

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



SECTION 7

Time — 25 minutes

25 Questions

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

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

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

Example:

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

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

(A) (B) (C) (D) ☒

1. The movie's plot was -----: once you knew what befell the hero, you could ----- the fate of the villain.

- (A) convincing . . misinterpret
- (B) misleading . . anticipate
- (C) predictable . . foresee
- (D) ironic . . endorse
- (E) spellbinding . . ignore

2. A certain additive put in gasoline to reduce air pollution is actually ----- groundwater, a finding that shows that even the most well-intentioned fixes can sometimes -----.

- (A) liquefying . . founder
- (B) contaminating . . backfire
- (C) purifying . . boomerang
- (D) saturating . . reciprocate
- (E) polluting . . prevail

3. The biologist's description of the wolf pack was truly -----, devoid of any emotion or personal prejudice.

- (A) dispassionate (B) insubstantial (C) esoteric
- (D) capricious (E) indignant

4. No longer considered -----, the belief that all of Puerto Rico's indigenous Taino people perished centuries ago appears to be a ----- now that modern Taino descendants have come forward.

- (A) conclusive . . reality
- (B) tenable . . misconception
- (C) mythical . . possibility
- (D) erroneous . . delusion
- (E) hypothetical . . digression

5. Although easily angered by our mischievous behavior, our mother could be immediately ----- by our expressions of remorse.

- (A) substantiated (B) impugned (C) protected
- (D) united (E) mollified

6. Scientists wonder what to do with the dead satellites, jettisoned rockets, drifting paint flecks, and other ----- orbiting Earth.

- (A) flotsam (B) reconnaissance (C) decimation
- (D) raiment (E) sustenance

7. Although aging brings about profound physiological changes, it does not often alter an individual's -----: an irascible thirty year old will probably still be ----- at seventy.

- (A) disposition . . cantankerous
- (B) anatomy . . churlish
- (C) outlook . . benevolent
- (D) personality . . laconic
- (E) stature . . robust

8. The commentator characterized the electorate as ----- because it was unpredictable and given to constantly shifting moods.

- (A) mercurial (B) corrosive (C) disingenuous
- (D) implacable (E) phlegmatic

GO ON TO THE NEXT PAGE



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

Questions 9-12 are based on the following passages.

Passage 1

Just how overcrowded is Earth anyway? Certainly the world is filled with empty places. A flight almost anywhere reveals vast expanses of unoccupied land. Cities cover only a small percentage of Earth. Indeed, when we look at the world's population relative to the land available, we find out just how *underpopulated* the world is. A noted economist recently put Earth's population in perspective by asking what would happen if the world's six billion people were put into the land area of Texas. His answer: each person would have an area equal to the floor space of a typical U.S. home. And he further notes that some cities in the United States contain enough land area to provide standing room for the entire global population.

Passage 2

The idea that the number of people per square mile is a key determinant of population pressure is as widespread as it is wrong. The key issue in judging overpopulation is not how many people can fit into any given space but whether Earth can supply the population's long-term requirement for food, water, and other resources. Most of the "empty" land in the United States, for example, either grows the food essential to our well-being or supplies us with raw materials. Densely populated countries and cities can be crowded only because the rest of the world is not.

9. The author of Passage 2 would most likely criticize the author of Passage 1 for

- (A) using incorrect data to support a flawed conclusion
- (B) severely overstating the extent of a global problem
- (C) recommending a course of action that might have damaging effects
- (D) focusing on the wrong factor in considering an issue
- (E) allowing personal prejudice to interfere with scientific inquiry

10. The tone of the first sentence of Passage 2 is best characterized as

- (A) wistful
- (B) dismayed
- (C) emphatic
- (D) ambivalent
- (E) apologetic

11. It can be inferred from the use of quotation marks in line 19 that the author of Passage 2 would most likely

- (A) criticize Passage 1 for overstating the nature of a problem
- (B) take issue with Passage 1 for failing to acknowledge a change in population patterns
- (C) disagree with the characterization in Passage 1 of certain regions
- (D) endorse the solution to a problem advanced in Passage 1
- (E) concur with a specific theory briefly mentioned in Passage 1

12. Both authors acknowledge which of the following points?

- (A) Earth contains a great deal of unoccupied land.
- (B) Estimates of Earth's population are not reliable.
- (C) Technology is transforming empty spaces into productive land.
- (D) Nonscientists do not appreciate the dangers of overpopulation.
- (E) Earth's population is outstripping available resources.



Questions 13-25 are based on the following passage.

This passage is excerpted from a novel published in 1970. As the passage begins, four men are looking at a map in preparation for a canoe trip.

It unrolled slowly, forced to show its colors, curling and snapping back whenever one of us turned loose. The whole land was very tense until we put our four steins on its corners and laid the river out to run for us through the mountains 150 miles north. Lewis' hand took a pencil and marked out a small strong X in a place where some of the green bled away and the paper changed with high ground, and began to work downstream, northeast to southwest through the printed woods. I watched the hand rather than the location, for it seemed to have power over the terrain, and when it stopped for Lewis' voice to explain something, it was as though all streams everywhere quit running, hanging silently where they were to let the point be made. The pencil turned over and pretended to sketch in with the eraser an area that must have been around fifty miles long, through which the river hooked and cramped.

"When they take another survey and rework the map," Lewis said, "all this in here will be blue. The dam at Aintry has already been started, and when it's finished next spring the river will back up fast. This whole valley will be under water. But right now it's wild. And I *mean* wild; it looks like something up in Alaska. We really ought to go up there before the real estate people get hold of it and make it over into one of their heavens."

I leaned forward and concentrated down into the invisible shape he had drawn, trying to see the changes that would come, the nighttime rising of dammed water bringing a new lake up with its choice lots, its marinas and beer cans, and also trying to visualize the land as Lewis said it was at that moment, unvisited and free. I breathed in and out once, consciously; my body, particularly the back and arms, felt ready for something like this. I looked around the bar and then back into the map, picking up the river where we would enter it. A little way to the southwest the paper blanched.

"Does this mean it's higher here?" I asked.

"Yes," Lewis said, looking quickly at me to see if I saw he was being tolerant.

Ah, he's going to turn this into something, I thought.

A lesson. A moral. A life principle. A Way.

"It must run through a gorge or something" was all he said though. "But we can get through that in a day, easy. And the water should be good, in that part especially."

I didn't have much idea what good meant in the way of river water, but for it to seem good to Lewis it would have to meet some very definite standards. The way he went about things was strictly his own; that was mainly what he liked about doing them. He liked particularly to take some extremely specialized and difficult form of sport—usually one he could do by himself—and evolve a personal approach to it which he could then expound. I had been through this with him in fly casting, in archery and weight lifting and spelunking, in all of which he had developed complete mystiques. Now it was canoeing. I settled back and came out of the map.

Bobby Trippe was there, across from me. He had smooth thin hair and a high pink complexion. I knew him least well of the others at the table, but I liked him a good deal, even so. He was pleasantly cynical and gave me the impression that he shared some kind of understanding with me that neither of us was to take Lewis too seriously.

"They tell me that this is the kind of thing that gets hold of middle-class householders every once in a while," Bobby said. "But most of them just lie down till the feeling passes."

"And when most of them lie down they're at Woodlawn* before they think about getting up," Lewis said.

* A cemetery.

13. In lines 1-5 ("It unrolled . . . north"), the map is described as if it were

- (A) invaluable
- (B) animate
- (C) cryptic
- (D) antiquated
- (E) erroneous

14. Lines 9-14 ("I watched . . . made") primarily serve to

- (A) recount an anecdote
- (B) offer an example
- (C) note an impression
- (D) make a prediction
- (E) advance a theory



15. In lines 9-14 ("I watched . . . made"), the narrator suggests that Lewis' hand is
- (A) deft
 - (B) languid
 - (C) resilient
 - (D) omnipotent
 - (E) expressive
16. In line 13, "hanging" most nearly means
- (A) flowing
 - (B) drooping
 - (C) inclining
 - (D) unfinished
 - (E) suspended
17. In line 22, "Alaska" serves as an example of a place that is
- (A) distant
 - (B) immense
 - (C) scenic
 - (D) cold
 - (E) undeveloped
18. Lewis' attitude toward the "real estate people" (line 23) is best described as
- (A) contemptuous
 - (B) envious
 - (C) furious
 - (D) puzzled
 - (E) intrigued
19. Lewis' use of the word "heavens" (line 24) is best characterized as
- (A) appreciative
 - (B) deceitful
 - (C) tentative
 - (D) defensive
 - (E) ironic
20. In lines 25-30 ("I leaned . . . free"), the narrator reacts to Lewis' suggestion by
- (A) visualizing an unlikely series of events
 - (B) imagining two radically different states
 - (C) considering a problem and its proposed solution
 - (D) weighing the pros and cons of a course of action
 - (E) reflecting on how the past shapes the future
21. The narrator's reference to his "back and arms" (line 32) primarily serves to
- (A) suggest a sense of physical anticipation
 - (B) emphasize his insecurity about his athletic abilities
 - (C) indicate a feeling of intense discomfort
 - (D) express pride in his personal appearance
 - (E) call attention to his success in previous contests of strength
22. In line 34, "picking up" most nearly means
- (A) locating
 - (B) acquiring
 - (C) learning
 - (D) claiming
 - (E) gathering
23. In lines 39-40 ("Ah . . . Way"), the narrator suggests that Lewis is sometimes
- (A) whimsical
 - (B) callous
 - (C) remiss
 - (D) didactic
 - (E) impetuous



24. The narrative in lines 46-54 ("The way . . . mystiques") suggests that Lewis prefers sports that

- (A) do not require special equipment
- (B) are inherently competitive
- (C) allow room for individual expression
- (D) demand great strength but little skill
- (E) pose few risks to beginners

25. In context, Bobby's remarks in lines 63-66 ("They . . . passes") are best characterized as

- (A) explicit criticism
- (B) veiled malice
- (C) dry humor
- (D) frank confession
- (E) factual observation

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

18 Questions

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

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

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

Example:

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

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

(A) (B) (C) (D) ●

- Many paintings of the American Southwest convey a feeling of isolation and loneliness that mirrors the ----- landscape they depict.
(A) lush (B) sprawling (C) desolate
(D) gaudy (E) monumental
- Only recently created, this orchid is a -----, a plant produced by deliberately crossbreeding two different varieties of flowers.
(A) misnomer (B) hybrid (C) vector
(D) curative (E) precursor
- The pharmaceutical company insisted that its testing of new drugs was quite -----, more rigorous than the industry standard.
(A) stringent (B) dispersive (C) conditional
(D) recessive (E) obtrusive
- Freedom of expression is not necessarily a ----- force: communities that encourage it often feel less threatened by social unrest than do those in which dissent is -----.
(A) revolutionary . . promoted
(B) positive . . prohibited
(C) successful . . protested
(D) divisive . . restricted
(E) militant . . fostered
- Thomas Hardy's novels are described as ----- because of their preoccupation with daily life in rural and agricultural settings.
(A) bucolic (B) prolific (C) lugubrious
(D) sundry (E) metaphorical
- Some skeptics consider the Search for Extraterrestrial Intelligence (SETI) to be -----, even foolish; others go so far as to accuse SETI scientists of outright ----- in applying skewed data.
(A) misguided . . remonstrance
(B) absurd . . erudition
(C) plausible . . lassitude
(D) painstaking . . fabrication
(E) wrongheaded . . chicanery

GO ON TO THE NEXT PAGE



The two passages below are followed by questions based on their content and on the relationship between the two 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 7-18 are based on the following passages.

Passage 1 was adapted from a well-known 1953 study of comic books. Passage 2 was adapted from a 1965 analysis of the major comic books of the 1940's and 1950's.

Passage 1

I have found the effect of comic books to be first of all anti-educational. They interfere with education in the larger sense. For children, education is not merely a question of learning, but is a part of mental health. They do not "learn" only in school; they learn also during play, from entertainment, and in social life with adults and with other children. To take large chunks of time out of a child's life—time during which he or she is not positively, that is, educationally, occupied—means to interfere with healthful mental growth.

To make a sharp distinction between entertainment and learning is poor pedagogy, and even worse psychology. A great deal of learning comes in the form of entertainment, and a great deal of entertainment painlessly teaches important things. By no stretch of critical standards can the text in comics qualify as literature, or the drawings as art. Children spend an enormous amount of time on comic books, but their gain is nil. They do not learn how to read a serious book or magazine. They do not gain a true picture of the West from the "Westerns." They do not learn about any normal aspects of sex, love, or life. I have known many adults who have treasured throughout their lives some of the books they read as children. I have never come across any adult or adolescent who had outgrown comic book reading who would ever dream of keeping any of these "books" for any sentimental or other reason. In other words, children spend a large amount of their time and money on these publications and have nothing positive to show for it. And since almost all good children's reading has some educational value, comics by their very nature are not only non-educational; they are anti-educational. They fail to teach anything that might be useful to a child; they do suggest many things that are harmful.

Passage 2

Surprisingly, there are old comic book fans, a small army of them: adults wearing school ties and tweeds, teaching in universities, writing ad copy, writing for chic magazines, writing novels—who continue to be addicts,

who save old comic books, buy them, trade them, who publish mimeographed "fanzines," strange little publications deifying what is looked back on as "the golden age of comic books." Ruined by the critics. Ruined by growing up.

The charges against comic books in the 1950's—that they were participating factors in juvenile delinquency, that they were, in general, a corrupting influence, glorifying crime and depravity—can only, in all fairness, be answered: "But of course. Why else read them?"

Comic books, first of all, are junk. To accuse them of being what they are is to make no accusation at all: there is no such thing as *uncorrupt* junk or *moral* junk or *educational* junk—though attempts at the latter have, from time to time, been foisted upon us. But education is not the purpose of junk (which is one reason why halfhearted attempts to bring reality or literature to comic books invariably look embarrassing.) Junk is there to entertain on the basest, most compromised of levels. It finds the lowest common denominator and proceeds from there. A good many readers, when challenged, will say defiantly: "I know it's junk, but I like it." Which is the whole point about junk. It is there to be nothing else but liked. Junk is a second-class citizen of the arts, a status of which we and it are constantly aware. There are certain privileges inherent in second-class citizenship. Irresponsibility is one. Not being taken seriously is another. Junk can get away with doing or saying anything because, by its very appearance, it is already in disgrace.

What critics of comic books dismiss is the more positive side of junk, their *underground* antisocial influence. Children are bombarded with hard work, labeled *education*. They rise at the same time or earlier than their parents, start work without office chatter, go till noon without coffee breaks, have waxed milk for lunch, then back at the desk until three o'clock. And always at someone else's convenience. It should come as no surprise, then, that within this shifting hodgepodge of external pressures, children, simply to stay sane, must go underground. Have a place to hide where they cannot be got at by grownups. A relief zone. And the basic sustenance for this relief was, in my day, comic books.

With them we were able to roam free, disguised in costume, committing the greatest of feats—and the worst of sins. And, in every instance, getting away with them. For a little while, at least, it was our show. For a little while, at least, we were the bosses. Psychically renewed, we could then return aboveground and put up with another couple of days of victimization.



7. Both authors would most likely agree that comic books

- (A) impair social development
- (B) could benefit from self-regulation
- (C) have no educational value
- (D) are obtained too easily
- (E) are garishly amusing

8. In line 4, "question" most nearly means

- (A) matter
- (B) request
- (C) objection
- (D) possibility
- (E) doubt

9. The author of Passage 1 criticizes those who would "make a sharp distinction" (line 11) because the author believes that

- (A) the best educators are also entertainers of a sort
- (B) without entertainment little learning takes place
- (C) entertainment and learning are closely interrelated
- (D) reading comic books may inspire children to create their own comic works
- (E) effective textbooks often adopt certain humorous techniques

10. In lines 18-22, the three sentences beginning with "They" primarily serve to

- (A) lament students' lack of interest in traditional learning
- (B) condemn those who profit by pandering to children
- (C) enumerate the failings of the educational system
- (D) indicate ways in which children are shortchanged
- (E) specify how comic books might be improved

11. In response to the claim made in lines 24-27 of Passage 1 ("I have . . . reason"), the author of Passage 2 would most likely assert that

- (A) adolescents tend to be passionate about their dislikes as well as their likes
- (B) comic books are not intended to provide lifelong entertainment
- (C) collectible pop-culture items are now displayed in museums
- (D) the sentimental value of comic books cannot be logically explained
- (E) many adults eagerly read and collect comic books

12. The argument from Passage 2 that best refutes the statement in lines 27-29 of Passage 1 ("In . . . it") is that comic books

- (A) do not cost much compared to other amusements
- (B) openly acknowledge their true purpose
- (C) help children cope with the stresses of their world
- (D) cannot be appreciated by someone who lacks a sense of humor
- (E) have never been proven to distract children from homework

13. In line 40, quotation marks are used to

- (A) underscore a traditional definition
- (B) set off a specialized term
- (C) attribute a novel concept
- (D) mock a flawed hypothesis
- (E) support a challenging assertion

14. It can be inferred that the author of Passage 2 considers "attempts at the latter" (line 52) to have been

- (A) unpolished products
- (B) unpopular changes
- (C) misunderstood creations
- (D) ill-conceived failures
- (E) foolish imitations



15. In line 57, “compromised” most nearly means

- (A) settled
- (B) endangered
- (C) combined
- (D) reconciled
- (E) degraded

16. In lines 68-87 (“What . . . victimization”), the author of Passage 2 argues that the fantasy world of comic books

- (A) taps into the repressed fears of every child
- (B) fails to stand up to extended critical scrutiny
- (C) appeals to adults who cultivate childlike wonder
- (D) has a therapeutic effect on young readers
- (E) inspires many children to learn to write well

17. The author of Passage 1 would most likely regard lines 81-83, Passage 2 (“With . . . them”), as evidence of the

- (A) students’ inability to read demanding fiction
- (B) schools’ failure to monitor student activities
- (C) need to combine education with entertainment
- (D) hackneyed narratives found in comic books
- (E) potentially harmful influence of comic books

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

- (A) conversational
- (B) facetious
- (C) severe
- (D) sarcastic
- (E) analytical

STOP

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



SECTION 9

Time — 20 minutes

16 Questions

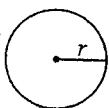
Turn to Section 9 (page 7) of your answer sheet to answer the questions in this section.

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

Notes

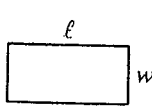
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is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

Reference Information

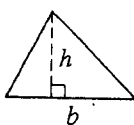


$$A = \pi r^2$$

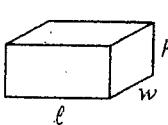
$$C = 2\pi r$$



$$A = \ell w$$



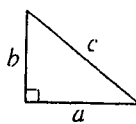
$$A = \frac{1}{2}bh$$



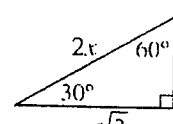
$$V = \ell wh$$



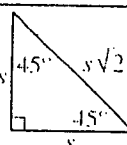
$$V = \pi r^2 h$$



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



Special Right Triangles

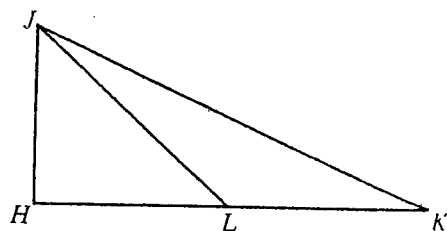


The number of degrees of arc in a circle is 360.

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

1. If a film takes 90 minutes to show, what fraction of the film is completed 15 minutes after it begins?

- (A) $\frac{1}{9}$
 (B) $\frac{1}{6}$
 (C) $\frac{1}{5}$
 (D) $\frac{1}{4}$
 (E) $\frac{1}{3}$



2. In $\triangle HJK$ above, $\angle JHK$ is a right angle. Which of the following lengths is greatest?

- (A) HJ
 (B) HK
 (C) HL
 (D) JK
 (E) JL

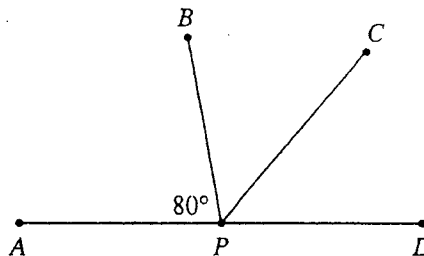
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n	1	2	3	4	5	6
$f(n)$	7	13	19	p	31	37

3. The table above defines a linear function. What is the value of p ?

(A) 21
(B) 23
(C) 25
(D) 27
(E) 29



5. In the figure above, P lies on \overline{AD} and \overline{PC} bisects $\angle BPD$. What is the measure of $\angle CPD$?

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

4. Charlie has built houses for 5 years less than twice as long as Maly has. If Maly has built houses for n years, which of the following expressions represents the number of years that Charlie has built houses?

(A) $n - 5$
(B) $n + 5$
(C) $2n - 5$
(D) $2n + 5$
(E) $5 - 2n$

GO ON TO THE NEXT PAGE 

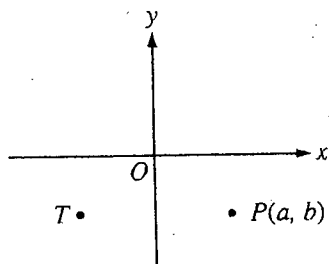


6. If x represents an odd integer, which of the following represents the next odd integer greater than x ?

(A) $x - 1$
(B) $x + 1$
(C) $x + 2$
(D) $x + 3$
(E) $2x - 1$

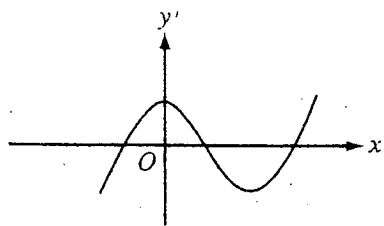
8. A box contains wood beads, red glass beads, and blue glass beads. The number of glass beads is 4 times the number of wood beads. If one bead is to be chosen at random from the box, the probability that a red glass bead will be chosen is 3 times the probability that a blue glass bead will be chosen. If there are 12 red glass beads in the box, what is the total number of beads in the box?

(A) 20
(B) 45
(C) 48
(D) 60
(E) 90



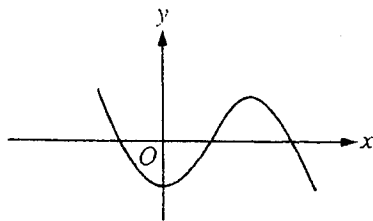
7. In the figure above, point T is the same distance from O as point P is from O . Which of the following could be the coordinates of point T ?

(A) $(-a, b)$
(B) $(a, -b)$
(C) $(-b, -a)$
(D) $(-b, a)$
(E) (b, a)

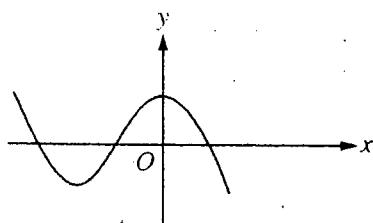


9. Which of the following graphs is the reflection of the graph above about the x -axis?

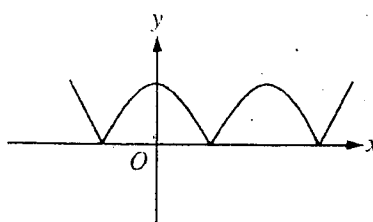
(A)



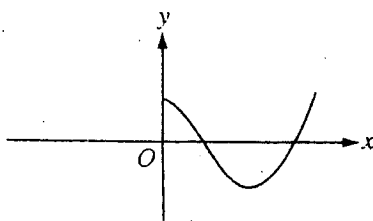
(B)



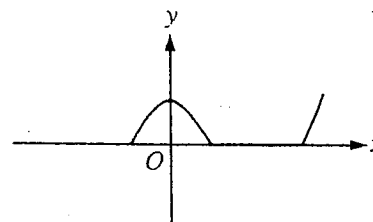
(C)



(D)



(E)



10. If $(x + y)^2 = 100$ and $(x - y)^2 = 16$, what is the value of xy ?

(A) 6
(B) 10
(C) 21
(D) 25
(E) 29

$$-1 \leq 4x - 5$$

11. Which of the following represents all values of x that satisfy the inequality above?

(A)

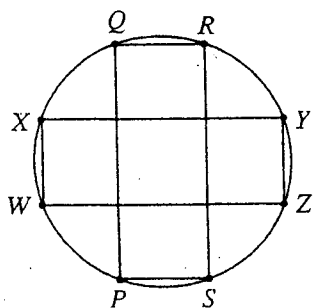
(B)

(C)

(D)

(E)

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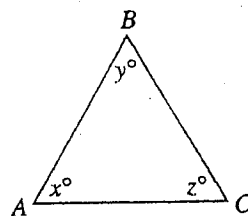


12. In the figure above, rectangles $PQRS$ and $WXYZ$ each have perimeter 12 and are inscribed in the circle. How many other rectangles with perimeter 12 can be inscribed in the circle?

(A) One
(B) Two
(C) Three
(D) Four
(E) More than four

13. If n is a positive integer and $2^n + 2^{n+1} = k$, what is 2^{n+2} in terms of k ?

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



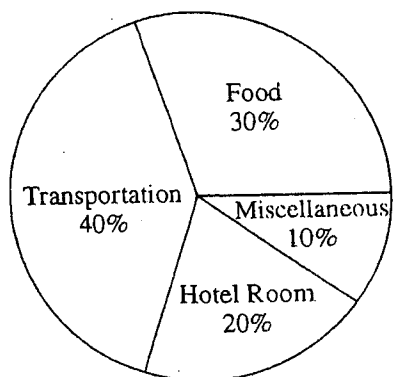
Note: Figure not drawn to scale.

14. The triangle above is isosceles and $AB > AC$. Which of the following must be FALSE?
- (A) $AB = BC$
(B) $BC = AC$
(C) $x = y$
(D) $x = z$
(E) $y = z$

GO ON TO THE NEXT PAGE 



TOM'S TRIP EXPENSES



15. The graph above shows the distribution of Tom's \$240 trip expenses. The amount Tom paid for the hotel room was only part of the total hotel room cost, because he shared the cost of the room equally with 3 other people. What was the total cost of the hotel room?

(A) \$20
(B) \$80
(C) \$144
(D) \$192
(E) \$240

16. On a square gameboard that is divided into n rows of n squares each, k of these squares lie along the boundary of the gameboard. Which of the following is a possible value for k ?

(A) 10
(B) 25
(C) 34
(D) 42
(E) 52

STOP

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



SECTION 10

Time — 10 minutes

14 Questions

Turn to Section 10 (page 7) of your answer sheet to answer the questions in this section.

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

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

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

EXAMPLE:

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

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

(A) ● (C) (D) (E)

1. Mr. Lee and his grandchildren practiced traditional Chinese calligraphy together so that the children would be knowing an art cherished by earlier generations of their family.

- (A) would be knowing
- (B) would know
- (C) will know
- (D) were known to
- (E) will be knowing

2. Isabel Allende, the author of *The House of the Spirits*, currently resides in California, but she was raised in Chile, being born in Peru first.

- (A) Isabel Allende, the author of *The House of the Spirits*, currently resides in California, but she was raised in Chile, being born in Peru first.
- (B) Being raised in Chile, after being born in Peru, Isabel Allende, now residing in California, wrote *The House of the Spirits*.
- (C) Born in Peru and raised in Chile, Isabel Allende, the author of *The House of the Spirits*, now resides in California.
- (D) Although now in California, Isabel Allende was born in Peru and raised in Chile, she is the author of *The House of the Spirits*.
- (E) Raised in Chile, and now she resides in California, Isabel Allende, a Peruvian, is the author of *The House of the Spirits*.

3. Although women in the Wyoming territory voted as early as 1869, suffrage for women throughout the United States not being established until ratification of the Nineteenth Amendment in 1920.

- (A) suffrage for women throughout the United States not being established
- (B) suffrage for women throughout the United States which had not been established
- (C) suffrage for women throughout the United States was not established
- (D) it did not establish suffrage for women throughout the United States
- (E) throughout the United States, suffrage for women was not being established

4. Bees must leave the safety of the hive to forage for food many times a day, they are risking being eaten by any of a multitude of predators.

- (A) day, they are risking being eaten
- (B) day at the risk of being eaten
- (C) day risking them to be eaten
- (D) day; the risk is to be eaten
- (E) day; likewise, they risk being eaten

GO ON TO THE NEXT PAGE



5. It took the Museum of Modern Art in New York half a century of creative and persistent effort and it acquired the outstanding Picasso collection.
- (A) and it acquired the outstanding Picasso collection
(B) before their outstanding Picasso collection being acquired
(C) and finally they had an outstanding Picasso collection there
(D) but finally an outstanding Picasso collection was acquired at last
(E) to acquire its outstanding Picasso collection
6. An artist who explores Mexican cultural themes, the art of Maria Elena is world renowned.
- (A) An artist who explores Mexican cultural themes, the art of Maria Elena is world renowned.
(B) To explore Mexican cultural themes, the work of artist Maria Elena is world-renowned art.
(C) Artist Maria Elena has explored Mexican cultural themes, the art of which is world renowned.
(D) An artist who has explored Mexican cultural themes, Maria Elena's art is world renowned.
(E) Maria Elena is a world-renowned artist whose art explores Mexican cultural themes.
7. The prevailing attitude in seventeenth-century England was that schools and universities should teach nothing that would discredit the established religion or the authority of kings and magistrates.
- (A) should teach nothing that would
(B) should teach nothing that will
(C) are to teach nothing that would
(D) should only teach that which will not
(E) shall teach nothing that will
8. During a conference with Pravika's parents, the teacher mentioned that Pravika had demonstrated considerable ability in math and to learn foreign languages.
- (A) considerable ability in math and to learn
(B) considerable ability in math and that she could do it well in
(C) ability that was considerable in math as well as in learning
(D) considerable ability in math and in
(E) considerable ability to learn math and in
9. Through his novels Thomas Wolfe reveals to us both the pain and the beauty of his boyhood in the American South.
- (A) Through his novels Thomas Wolfe reveals to us both the pain and
(B) By means of Thomas Wolfe's novels, which reveal to us both the pain and
(C) Not only the pain is revealed to us in Thomas Wolfe's novels but he also describes
(D) Thomas Wolfe, through the medium of his novels, reveals to us both the pain with
(E) As a novelist, Thomas Wolfe thus revealing to us the pain and
10. Because many Szechuan recipes require for one to cook without there having to be interruptions, it is a good idea to measure all ingredients in advance.
- (A) Because many Szechuan recipes require for one to cook without there having to be interruptions,
(B) Because many Szechuan recipes require that one cook without interruption,
(C) Being that many Szechuan recipes require you to cook and not be interrupted,
(D) Many Szechuan recipes require that one cook without interruption and
(E) When following many Szechuan recipes it is advisable for one to cook without interruptions and therefore
11. A mixture of jazz and classical idioms, the music of Gershwin was more innovative than most of his contemporaries.
- (A) than most of his contemporaries
(B) than most of his contemporaries were
(C) than were most of his contemporaries
(D) than that of most of his contemporaries
(E) than most of his contemporaries, as far as music is concerned
12. On October 13, 1955, at the Six Gallery in San Francisco, Allen Ginsberg read his poem Howl, being the inauguration of both a new style in poetry and the Beat movement.
- (A) *Howl*, being the inauguration of both
(B) *Howl*, both inaugurated
(C) *Howl*, it was the inauguration of both
(D) *Howl*, whose inauguration of both
(E) *Howl*, thus inaugurating both



13. Indicating their desire to extend free enterprise, Canadians elected a member of the Progressive Conservative Party, Kim Campbell, as Prime Minister in 1993.

- (A) Canadians elected a member of the Progressive Conservative Party, Kim Campbell, as Prime Minister
- (B) Canadians' election of a member of the Progressive Conservative Party as Prime Minister was Kim Campbell
- (C) Kim Campbell of the Progressive Conservative Party was elected Prime Minister of Canada
- (D) the Progressive Conservative Party's Kim Campbell was elected Prime Minister of Canadians
- (E) a member of the Progressive Conservative Party, Kim Campbell, was elected by Canadians as Prime Minister

14. Researchers tend to praise studies that agree with their own conclusions, and it is rare for kindness to be shown to contrary theories.

- (A) conclusions, and it is rare for kindness to be shown
- (B) conclusions, and kindness being rarely shown
- (C) conclusions, and they rarely show kindness
- (D) conclusions, they are rarely kind
- (E) conclusions, although rarely showing kindness

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.

Critical Reading

Section 8

COR. DIFF. ANS. LEV.		COR. DIFF. ANS. LEV.	
1. C	2.	10. D	3
2. B	1	11. E	4
3. A	3	12. C	3
4. D	4	13. B	3
5. A	5	14. D	4
6. E	5	15. E	4
7. C	1	16. D	2
8. A	2	17. E	3
9. C	3	18. C	4

Number correct

Number incorrect

Math

Section 9

COR. DIFF.			COR. DIFF.		
ANS. LEV.			ANS. LEV.		
1.	B	1	9.	A	2
2.	D	1	10.	C	3
3.	C	1	11.	A	3
4.	C	2	12.	E	4
5.	B	2	13.	B	4
6.	C	2	14.	E	5
7.	A	3	15.	D	5
8.	A	3	16.	E	5

Number correct

Number incorrect

Writing

Section 10

COR. DIFF.		COR. DIFF.		COR. DIFF.	
	ANS. LEV.		ANS. LEV.		ANS. LEV.
1.	B 1	6.	E 1	11.	D 4
2.	C 1	7.	A 3	12.	E 3
3.	C 1	8.	D 3	13.	A 3
4.	B 2	9.	A 2	14.	C 3
5.	E 1	10.	B 3		

Number correct

Number incorrect

-48-

SAT Score Conversion Table

Form Codes DEON, EWON, FFOQ

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			30	500	540	52
66	800			29	490	530	51
65	800			28	490	520	50
64	800			27	480	510	50
63	780			26	470	500	49
62	760			25	470	500	48
61	750			24	460	490	47
60	740			23	460	480	46
59	720			22	450	470	45
58	710			21	450	460	44
57	700			20	440	460	44
56	690			19	430	450	43
55	680			18	430	440	42
54	670	800		17	420	430	41
53	660	780		16	420	420	41
52	650	760		15	410	410	40
51	640	740		14	400	410	39
50	640	720		13	400	400	38
49	630	710	80	12	390	390	37
48	620	700	78	11	380	380	37
47	610	690	75	10	380	370	36
46	600	680	73	9	370	360	35
45	600	670	71	8	360	350	34
44	590	660	69	7	350	340	33
43	580	650	68	6	340	330	32
42	570	640	66	5	330	310	31
41	570	640	65	4	320	300	30
40	560	630	63	3	310	280	28
39	550	620	62	2	300	270	27
38	550	610	61	1	280	250	25
37	540	600	60	0	270	230	23
36	530	590	58	-1	250	210	20
35	530	580	57	-2	230	200	20
34	520	570	56	-3	210	200	20
33	520	560	55	-4	200	200	20
32	510	560	54	and			
31	500	550	53	below			

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

SAT Writing Composite Score Conversion Table

Form Code DEON

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

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

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

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