

Form Code IUBB

SAT Reasoning TestTM

Question-and-Answer Service
May 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 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 May 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 might have 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.

Scoring Your Test

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. The Scoring Worksheet and score conversion tables are specific to the essay prompt and other questions you answered on the May 2007 test. Do not use them to score any other practice essays or tests.

Preparing to Take the SAT Again

If you plan to retake the SAT, you should continue to read and write extensively and take challenging academic courses. You can further prepare by visiting the online SAT Preparation Center™ at collegeboard.com/satprep. Use your QAS report to focus your efforts on the areas you need to improve. You can register to take the SAT again at collegeboard.com/sat.



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.

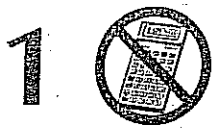
Materialism: it's the thing that everybody loves to hate. Few aspects of modern life have been more criticized than materialism. But let's face it: materialism—acquiring possessions and spending money—is a vital source of meaning and happiness in our time. People may criticize modern society for being too materialistic, but the fact remains that most of us spend most of our energy producing and consuming more and more stuff.

Adapted from James Twitchell, "Two Cheers for Materialism"

Assignment: Should modern society be criticized for being materialistic? 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.
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Think carefully about the issue presented in the following excerpt and the assignment below.

Knowledge is power. In agriculture, medicine, and industry, for example, knowledge has liberated us from hunger, disease, and tedious labor. Today, however, our knowledge has become so powerful that it is beyond our control. We know how to do many things, but we do not know where, when, or even whether this know-how should be used.

Assignment: Can knowledge be a burden rather than a benefit? 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.

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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.

We do not take the time to determine right from wrong. Reflecting on the difference between right and wrong is hard work. It is so much easier to follow the crowd, going along with what is popular rather than risking the disapproval of others by voicing an objection of any kind.

Adapted from Stephen J. Carter, *Integrity*

Assignment: Is it always best to determine one's own views of right and wrong, or can we benefit from following the crowd? 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.

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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.

It is often the case that revealing the complete truth may bring trouble—discomfort, embarrassment, sadness, or even harm—to oneself or to another person. In these circumstances, it is better not to express our real thoughts and feelings. Whether or not we should tell the truth, therefore, depends on the circumstances.

Assignment: Do circumstances determine whether or not we should tell the truth? Plan and write an essay in which you develop your point of view on this issue. Support your position with reasoning and examples taken from your reading, studies, experience, or observations.

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.
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SECTION 2

Time — 25 minutes

20 Questions

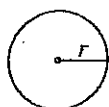
Turn to Section 2 (page 4) of your answer sheet to answer the questions in this section.

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

Notes

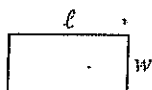
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is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

Reference Information

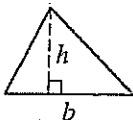


$$A = \pi r^2$$

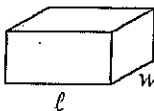
$$C = 2\pi r$$



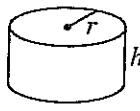
$$A = \ell w$$



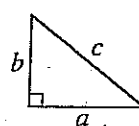
$$A = \frac{1}{2}bh$$



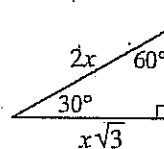
$$V = \ell wh$$



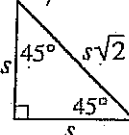
$$V = \pi r^2 h$$



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



Special Right Triangles

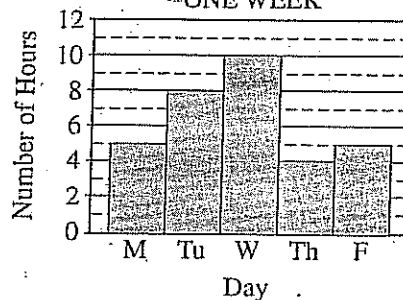


The number of degrees of arc in a circle is 360.

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

1. If
- $2x + 1 = 5 + x$
- , then
- $x =$

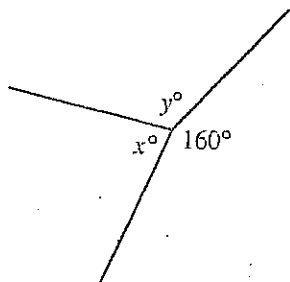
- (A) 6
(B) 4
(C) 2
(D) $\frac{4}{3}$
(E) -4

NUMBER OF HOURS WORKED IN
ONE WEEK

2. The graph above shows the number of hours that Bill worked each day during one week. What was the total number of hours that he worked during the week?

- (A) 31
(B) 32
(C) 33
(D) 34
(E) 36

GO ON TO THE NEXT PAGE



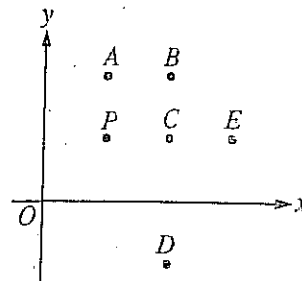
3. In the figure above, what is the value of $x + y$?

(A) 160
(B) 180
(C) 200
(D) 260
(E) 320

$$c(p) = 3p + 24$$

4. When a certain caterer expects p people to attend a reception, he uses the formula above to determine $c(p)$, the number of cookies to bake. If the caterer bakes 240 cookies for a reception, then according to the formula, how many people does he expect to attend?

(A) 67
(B) 72
(C) 83
(D) 88
(E) 104



5. In the figure above, point P has coordinates (a, b) . Which of the following points could have coordinates $(a, 2b)$?

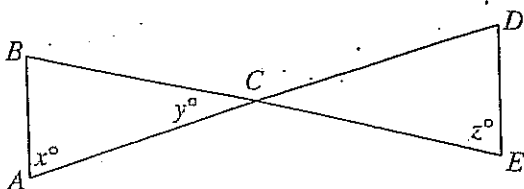
(A) A
(B) B
(C) C
(D) D
(E) E

7, 10, 13, ...

6. In the sequence above, each term after the first is 3 more than the previous term. How much greater is the 104th term than the 100th term?

(A) 3
(B) 4
(C) 6
(D) 9
(E) 12

GO ON TO THE NEXT PAGE



Note: Figure not drawn to scale.

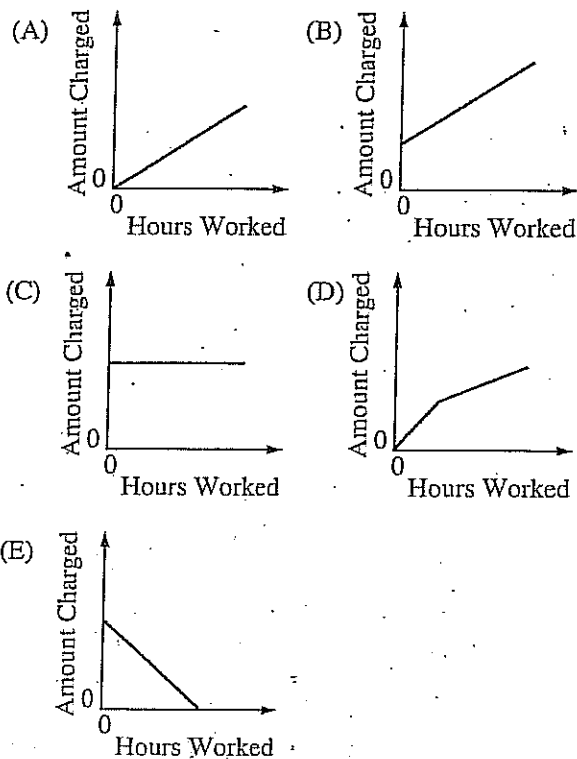
7. In the figure above, \overline{AD} and \overline{BE} intersect at point C and $\overline{AB} \parallel \overline{DE}$. If $x = 75$ and $y = 40$, what is the value of z ?

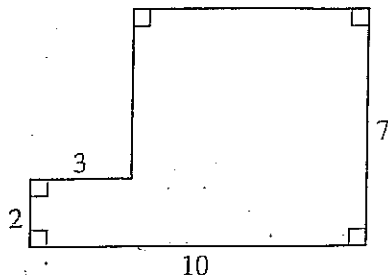
- (A) 35
(B) 40
(C) 65
(D) 75
(E) It cannot be determined from the information given.

8. If x and y are positive integers and $2x + 3y = 27$, which of the following is a possible value of x ?

- (A) 2
(B) 4
(C) 5
(D) 9
(E) 11

9. Joe, a car mechanic, charges each customer a fixed fee for diagnosing a problem with the customer's car, and then he charges an hourly rate for the time it takes him to repair the problem. Which of the following graphs could show the relationship between the number of hours Joe works to repair a car after diagnosing the problem and the total amount he charges for his diagnosis and repair?



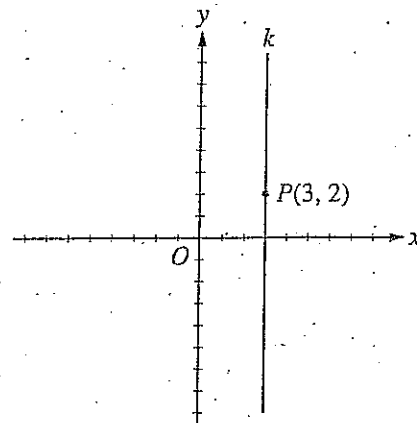


10. What is the area of the figure above?

- (A) 34
- (B) 55
- (C) 64
- (D) 69
- (E) 70

11. Last week, the Grayson Furniture Store received \$500 for each of the 24 sofas that it sold. The store also received \$300 for each of the tables sold that week. If the total amount received by the store from the sale of the sofas was equal to the total amount received from the sale of the tables, how many more tables than sofas were sold last week?

- (A) 16
- (B) 26
- (C) 36
- (D) 40
- (E) 60



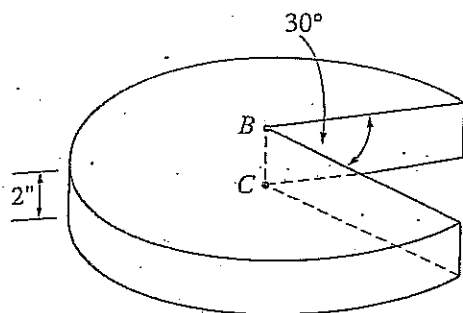
12. In the figure above, line k is parallel to the y -axis. Which of the following is an equation of line k ?

- (A) $x + y = 5$
- (B) $y = 3$
- (C) $y = 2$
- (D) $x = 3$
- (E) $x = 2$

13. Two consecutive positive even integers are represented by x and y , where x is less than y . The square of the smaller number is subtracted from the product of x and y . Which of the following represents this difference?

- (A) x
- (B) $2x$
- (C) $4x$
- (D) $2y$
- (E) $4y$

GO ON TO THE NEXT PAGE



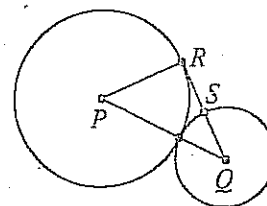
Note: Figure not drawn to scale.

14. The figure above shows a right circular cylindrical wheel of cheese 2 inches high from which a wedge weighing $\frac{1}{2}$ pound has been cut. All cuts are perpendicular to the base and radiate from points B and C , the centers of the circular top and bottom. What is the weight, in pounds, of the original uncut wheel?

(A) 2
(B) 3
(C) 4
(D) 6
(E) 12

15. If $0 < x < y$ and $\frac{x}{y} = r$, which of the following must be equal to $\frac{x+y}{x}$?

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



Note: Figure not drawn to scale.

16. In the figure above, the circle with center P has radius 6 and the circle with center Q has radius 1. The circles are tangent to each other. Segment QR is tangent to the larger circle and intersects the smaller circle at S . What is the length of segment RS ?

(A) $\sqrt{12}$ (approximately 3.46)
(B) $\sqrt{13} - 1$ (approximately 2.61)
(C) $\sqrt{14} - 1$ (approximately 2.74)
(D) 5
(E) $5\frac{1}{2}$

17. There are 17 numbers in a list. If the 5 smallest of these numbers are decreased by 1 each and the 3 greatest of these numbers are increased by 2 each, which of the following statements must be true?

(A) The median does not change.
(B) The median decreases.
(C) The median increases.
(D) The average (arithmetic mean) decreases.
(E) The average (arithmetic mean) does not change.



18. Let the operation \square be defined for all positive numbers x and y by $x \square y = 2x + y$. If r , s , and t are positive numbers, then by what amount is $(r \square s) \square t$ greater than $r \square (s \square t)$?

(A) r
(B) $2r$
(C) $r + s$
(D) $2r + 2s$
(E) $r + s + t$

20. If $x > 0$, which of the following are equivalent to $x^{\frac{3}{2}}$?

I. $x\sqrt{x}$
II. $\sqrt{x^3}$
III. $\frac{x^2}{\sqrt{x}}$

(A) None
(B) I and II only
(C) I and III only
(D) II and III only
(E) I, II, and III

19. The toll for trucks to cross a certain bridge is a total of \$2 for the first two axles plus \$2 for each additional axle. Which of the following functions gives the toll $T(n)$, in dollars, for a truck with n axles?

(A) $T(n) = 2n - 2$
(B) $T(n) = 2n - 1$
(C) $T(n) = 2n$
(D) $T(n) = 2n + 1$
(E) $T(n) = 2n + 2$

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

25 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.

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

Example:

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

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

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

1. The engineers heard the claims about the new software with -----, but the demonstration of the software was so ----- that it won them over.
 - (A) enthusiasm . . comprehensive
 - (B) skepticism . . convincing
 - (C) excitement . . lackluster
 - (D) apathy . . routine
 - (E) hesitation . . inconclusive
2. Because the candidate had switched his party allegiance immediately before the campaign, his former associates called him a -----, and even his new allies considered him an ----- .
 - (A) recruit . . expert
 - (B) strategist . . imbecile
 - (C) deserter . . inspiration
 - (D) prophet . . interloper
 - (E) traitor . . opportunist
3. All copies of Verna Hart's poster commemorating the 1992 Charlotte Jazz Festival were sold in a few hours, an unmistakable ----- of the ----- of this artist's work.
 - (A) refutation . . popularity
 - (B) investigation . . value
 - (C) demonstration . . mediocrity
 - (D) duplication . . durability
 - (E) indication . . appeal
4. Although Virginia Woolf was a central figure in London's established literary scene, she nevertheless perceived herself as being ----- .
 - (A) renowned (B) permissive (C) rational
 - (D) salutary (E) marginal
5. Although strangers compliment the comedian on her work repeatedly, almost -----, she is always moved by such enthusiastic encouragement.
 - (A) tenuously (B) staunchly (C) singularly
 - (D) incessantly (E) inimitably
6. In contrast to the ----- maneuvers of his colleagues, Roberto's business relations were always open and aboveboard.
 - (A) convivial (B) clandestine (C) steadfast
 - (D) fortuitous (E) frank
7. This medical study shuns ----- in describing the drug's dangers; the appeal is to rational evaluation rather than to fear.
 - (A) obfuscation (B) certitude
 - (C) sensationalism (D) piety
 - (E) plausibility
8. Alexis complained that Jim ----- too quickly when their parents imposed a curfew: instead of negotiating, he complied without protest.
 - (A) remonstrated (B) capitulated
 - (C) compromised (D) interceded
 - (E) equivocated



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 9-10 are based on the following passage.

Line Scientifically speaking, it seems clear why dogs act
like dogs. Like most domesticated animals, dogs are the
descendants of an intensely social species. Their instinct
to seek the company of human beings is an attempt to
5 reconstitute an ancestral social structure that is etched in
their genes. But cats defy all normal rules about domesticated animals. The cat's wild progenitor, the African
wildcat, is completely solitary in its natural state. I suppose this explains why I've never seen any Seeing Eye
10 cats, Frisbee-catching cats, or slipper-fetching cats. But
by the same reasoning, there ought to be no lap-sitting
cats or treat-begging cats—and certainly no cats like
Shawn, my orange barn cat.

9. Which of the following would be the LEAST appropriate to add to the list in lines 9-10?

- (A) search-and-rescue cats
- (B) sled-pulling cats
- (C) luggage-sniffing cats
- (D) mouse-hunting cats
- (E) sheep-herding cats

10. The author of the passage implies that Shawn is very

- (A) curious
- (B) independent
- (C) aggressive
- (D) companionable
- (E) mischievous

Questions 11-12 are based on the following passage.

Line The Equal Employment Opportunity Commission
has been investigating the treatment of women in a major
financial services firm since a former executive alleged
that she had been underpaid, excluded from outings with
5 clients, and denied promotion because of her gender. If
the commission sues the firm, it would be a rare case of
the federal government's taking up the cause of a highly
compensated professional in a workplace dispute.

11. The passage implies that the federal government traditionally intervenes in workplace disputes that

- (A) cannot be resolved in the judicial system
- (B) have repercussions for both men and women
- (C) involve employees at the lower end of the pay scale
- (D) are beyond the authority of state governing bodies
- (E) are not likely to result in further lawsuits

12. It can be inferred that the commission views the alleged treatment of the former executive as

- (A) possibly representative of a general pattern
- (B) clearly showing the need for legal reform
- (C) indicative of declining business ethics
- (D) posing a sensitive political dilemma
- (E) likely to prove difficult to verify



Questions 13-25 are based on the following passage.

This passage is adapted from a 1981 book on the history of the blues.

I have some difficulty in describing why I traveled to West Africa and what I was doing there, since the journey that became so complicated and took me to so many unexpected places seemed—in the beginning—to be so simple and so clearly defined. I went to Africa to find the roots of the blues. It had always been obvious that the blues sprang from a complex background, with much of it developing from the music of the long period of African slavery in the United States and with some of its harmonic forms and instrumental styles derived out of a broad European context. It had always been just as obvious that there were certain elements in the blues—in the singing style and in the rhythmic structures—that were not traceable to anything in the countryside of the American South. These things, it seemed to me, might have come from a distantly remembered African background, even if there had been such a lengthy period between the break in contact with Africa and the emergence of the blues in the 1890's.

In the beginning I planned simply to record the tribal singers of West Africa known as *griots*, since it was these musicians who seemed to come closest to what we know as a blues singer. They are from tribes that had many people taken to the southern states as slaves, and they usually sing alone, accompanying themselves for the most part on plucked string instruments. Since most African music is performed by village groups, and is often dominated by drumming, this practice in itself is enough to set the *griots* apart. At the same time I hoped to collect from the singers narrative accounts of the first encounters between the Africans and the Europeans, told from the African viewpoint. I felt that this could give me a clearer picture of one of the factors that had shaped the early Black experience in the United States.

Before leaving for Africa I'd spent months taking notes on the tribal groups and working with as much material on the *griots* as I could find. As I traveled I had a definite idea of where I wanted to go, but at the same time I had not planned the trip in any way. I've always felt that to plan a trip too carefully is to make sure you won't find out anything you don't already know.

I didn't know, however, how much the simple trip I had begun would change direction once I'd come to Africa, almost as if it took on a life and a will of its own. I began to feel like someone who had bought a set of boxes that fit inside each other in a wooden nest. When I opened one there was another inside it, and inside that one was

still another. I found so many boxes inside each other that the simple project I had begun with became a series of new perceptions, each of which was contained within the perception—the box—that I'd just opened. Sometimes, as I sat on sagging beds engulfed in mosquito nets, the space around me seemed to be filled with the myriad boxes of different sizes that my notebooks and tapes had come to symbolize.

When I opened the box that was the music I'd come to record, I found that the box inside was slavery itself. There was no way that I could work with the music without taking into consideration how it had come to the United States. I also realized that this was one of the reasons I had come to Africa. I was trying to find traces of an experience, and not only that, I was looking for traces of an experience that had occurred hundreds of years before. Would what I found have any reality for me so many years afterward?

I understand now that this complex set of questions had already been there in my mind when I put the microphones and the tape recorder into my shoulder bag. I had always tried to have some conception of the slavery that had brought people from West Africa to the United States, even if I hadn't seen, symbolically, that when I opened the box decorated with pictures of musicians and instruments inside it would be the next box, illustrated with old engravings of slave ships. I had come to Africa to find a kind of song, to find a kind of music and the people who performed it. But nothing can be taken from a culture without considering its context.

13. The author's "difficulty" (line 1) was caused primarily by the

- (A) long distances that had to be traveled
- (B) unanticipated changes in the project
- (C) refusal to question some widespread assumptions
- (D) cultural limitations that hindered communication
- (E) challenge of mastering a new musical form

14. In line 10, "broad" most nearly means

- (A) spacious
- (B) progressive
- (C) coarse
- (D) obvious
- (E) general



15. The author mentions the "singing style" and "rhythmic structures" (lines 12-13) primarily in order to
- (A) discuss why the blues have remained popular through the years
 - (B) identify aspects of the blues that present a historical enigma
 - (C) argue that the American South had a profound influence on the musical structure of the blues
 - (D) praise the musical complexity of a little-known art form
 - (E) cite some blues innovations that have influenced other musical genres
16. The description of the musicians in lines 20-29 ("In the . . . apart") primarily serves to
- (A) introduce a new school of African music by comparing it to the music of the *griots*
 - (B) describe an alternative interpretation of blues music
 - (C) indicate important differences between the author and other music historians
 - (D) justify an intended direction in the author's research
 - (E) illustrate the social status of musicians in West Africa
17. The author views the "narrative accounts" (line 30) primarily as
- (A) offering a useful perspective on a complex historical situation
 - (B) lending authenticity to an unusual form of music
 - (C) contributing to a community's sense of patriotism
 - (D) exhibiting the versatile nature of an art form
 - (E) increasing the appeal of an already popular musical genre
18. Lines 35-41 ("Before . . . know") suggest that the author valued both
- (A) frivolity and impulsiveness
 - (B) preparation and flexibility
 - (C) scholarship and artistry
 - (D) thoroughness and subtlety
 - (E) creativity and generosity
19. Which statement best describes the function of the sentence in lines 42-44 ("I didn't . . . own")?
- (A) It indicates a significant turning point in the author's research.
 - (B) It suggests that the author's initial hypothesis lacked validity.
 - (C) It reveals the author's ability to adapt to a new environment.
 - (D) It highlights the importance of the author's thorough preparation.
 - (E) It expresses regret about the outcome of the author's trip.
20. The primary purpose of the fourth paragraph (lines 42-55) is to
- (A) demonstrate the author's belief that earlier studies of West African music were inaccurate
 - (B) dramatize the author's excitement about some findings
 - (C) justify the author's method of collecting music samples
 - (D) convey the increasing challenges of the author's project
 - (E) describe the author's daily life while conducting research
21. In context, the reference to "notebooks and tapes" (line 54) primarily serves to
- (A) illustrate the technology required by the author's research
 - (B) underscore the author's growing awareness of the scope of the undertaking
 - (C) suggest that few people appreciate the difficulty of writing historical narratives
 - (D) describe the author's success in collecting data that supports oral history
 - (E) indicate the importance of a methodical approach to every project
22. In context, the phrase "not only that" (line 62) emphasizes the idea that
- (A) an event will prove to have surprising repercussions
 - (B) an objective will be particularly difficult to accomplish
 - (C) a problem can often be solved by considering its historical context
 - (D) a research finding will strain the reader's credibility
 - (E) an approach has yielded a number of promising leads



23. The primary obstacle the author faces in seeking the "traces of an experience"(line 62) is the
- (A) difficulty of maintaining emotional detachment from the topic
 - (B) inability to find any new evidence in Africa
 - (C) distortion of actual events when represented in song and story
 - (D) reluctance of some people to be interviewed by a stranger
 - (E) distance between the modern observer and past events

24. The author presents the final sentence (lines 74-76) as a

- (A) learned lesson
- (B) grim admonition
- (C) surprising afterthought
- (D) scholarly hypothesis
- (E) sarcastic commentary

25. The primary purpose of the passage is to describe the

- (A) author's theory about the origins of slave music in the American South
- (B) mental processes of a researcher considering an issue in music history
- (C) position of the *griots* in the musical culture of West Africa
- (D) various research techniques utilized by different musicologists
- (E) significance of blues music in the social development of West Africa

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

STOP

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



SECTION 5

Time — 25 minutes

35 Questions

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

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

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

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

EXAMPLE:

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

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

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

1. On Friday, the local police arrested many demonstrators, especially while picketing the construction site.
 - (A) especially while picketing the construction site
 - (B) especially them picketing the construction site
 - (C) especially those who were picketing the construction site
 - (D) especially their picketing of the construction site
 - (E) and especially the picketing of the construction site

2. An increased concentration of carbon dioxide and certain other gases in the Earth's atmosphere, contributing to global warming.

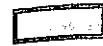
- (A) atmosphere, contributing to
- (B) atmosphere, they contribute to
- (C) atmosphere, which contributes to
- (D) atmosphere contributes to
- (E) atmosphere and contributes to

3. Millions of dollars are spent each year to get rid of fleas on dogs and cats causing a variety of diseases.

- (A) to get rid of fleas on dogs and cats causing a variety of diseases
- (B) because they can cause a variety of diseases if dogs and cats are not rid of fleas
- (C) to rid dogs and cats of fleas, which can cause a variety of diseases
- (D) to be getting dogs and cats rid of fleas, which can cause a variety of diseases
- (E) because a variety of diseases can be gotten if you do not rid dogs and cats of fleas

4. While some marine scientists lament the spread of new diseases that are killing coral reefs, others would have noted that the species of coral that do survive are disease-resistant.

- (A) reefs, others would have noted that
- (B) reefs; others would note if
- (C) reefs, others note that
- (D) reefs; others who note
- (E) reefs, but others should note that



5. Josephine Baker rose to fame as a dancer, then using her resources to adopt many needy children of all nationalities.
- (A) Josephine Baker rose to fame as a dancer, then using
 - (B) Josephine Baker rising to fame as a dancer while using
 - (C) Josephine Baker, who rose to fame as a dancer, also using
 - (D) Josephine Baker, she rose to fame as a dancer and then used
 - (E) Josephine Baker, having risen to fame as a dancer, used
6. Roberto is from Italy, he can speak four languages: Italian, French, Spanish, and English.
- (A) Roberto is from Italy, he can speak four languages
 - (B) Roberto, from Italy, who can speak four languages
 - (C) Roberto is from Italy, he is able to speak four languages
 - (D) Roberto, who is Italian and able to speak four languages
 - (E) Roberto, who is from Italy, can speak four languages
7. The care exercised by the company in investigating side effects of various kinds of drugs have won them their enviable reputation among scientists.
- (A) have won them their
 - (B) have won them an
 - (C) have won it its
 - (D) has won for it their
 - (E) has won it an
8. Armed with new tools for the manipulation of genes and proteins, vaccines are devised by scientists fighting everything from food poisoning to cancer.
- (A) vaccines are devised by scientists fighting
 - (B) scientists, devising vaccines to fight
 - (C) scientists are the ones who are devising vaccines in order to fight
 - (D) scientists are devising vaccines to fight
 - (E) the fight by scientists who devise vaccines is for
9. New York State has passed a law requiring that all legal contracts be written in simple, understandable English.
- (A) all legal contracts be written
 - (B) all legal contracts being written
 - (C) all legal contracts have to be written
 - (D) the writing of all legal contracts is
 - (E) when writing legal contracts, it should be
10. Carefully reading the manuscript, numerous grammatical errors were detected by the copy editor.
- (A) Carefully reading the manuscript, numerous grammatical errors were detected by the copy editor.
 - (B) Carefully reading the manuscript, the copy editor detected numerous grammatical errors.
 - (C) The reading of the manuscript by the copy editor carefully detected numerous grammatical errors.
 - (D) When carefully reading the manuscript, numerous grammatical errors were detected by the copy editor.
 - (E) The careful reading of the manuscript by the copy editor enabled detecting numerous grammatical errors.
11. The Arts and Crafts movement at the turn of the twentieth century was a revolt against the uniformity of objects mass-produced by the factories of the Industrial Revolution.
- (A) century was a revolt against the uniformity of objects mass-produced
 - (B) century revolted against objects that were mass-produced and uniform
 - (C) century, being a revolt against uniform, mass-produced objects
 - (D) century was revolting against mass-produced, uniform objects
 - (E) century has revolted against uniformity in mass-producing objects



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. While Sylvia is justifiably proud of the award that

A

she won for placing first in the science contest,

B

but Carol should not feel disappointed about

C

D

taking second prize. No error

E

13. Recently trolleys have been brought back to solve the

A

problems of congestion caused by the automobile,

B

C

the very vehicle that causes the trolley's demise years

D

ago. No error

E

14. Jocelyn, my friend since junior high school, believes

A

she is more well suited to a career in the sciences

B

than to the business career her parents have urged her

C

D

to pursue. No error

E

15. One of the playwright's hopes was that the play

A

would shock theatergoers; instead, it succeeded

B

C

only in confusing them. No error

D

E

16. Bill simultaneously listened to music and did

A

homework at the same time because he believed

B

that music enabled him to relax while he studied.

C

D

No error

E

17. Vaudeville was an early training ground for many

A

B

great American artists who serve apprenticeships

C

there before going on to successful careers in

D

theater, film, or television. No error

E

18. Biologists which have studied coyotes claim that

A

B

living in packs enables the animals to defend their

C

D

food supplies against marauders. No error

E

19. Even when Barbara Jordan put questions toward

A

B

a political nominee, her elegant diction evoked

C

in listeners memories of her eloquent political

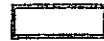
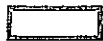
D

speeches. No error

E



20. With the current difficulty in filling seats on juries,
A
some argue that jurors should be compensated
B
for lost wages, particularly given the increasing
C D
length of trials. No error
E
21. No one who travels on the expressways that circle
A
our cities can help, but noticing the growing number
B C
of junkyards that defile the beauty of the countryside.
D
No error
E
22. Muffins made from whole-grain graham flour are
A B
coarser in texture but more flavorful than white flour.
C D
No error
E
23. In their search for ways to extend the human life span
and warding off diseases, scientists find themselves
A B
focusing not on expanding the diet but rather on
C
limiting it. No error
D E
24. The frustrated director held auditions longer than
expected because she is unable to find someone who
A B
could convincingly portray a character as complex as
C D
Dardanella. No error
E
25. Neither a percolator nor a drip coffeepot are likely to
A B
produce good coffee if the water used for brewing is
C D
overly chlorinated. No error
E
26. Long neglected by restaurants in the United States,
A
Portuguese cooking is attracting attention with their
B C
colorful, highly flavored, and complex dishes.
D
No error
E
27. Though Rivers had done all the work, Peters
A
had taken all the credit, and so he held him
B C
in contempt. No error
D E
28. These novels move willing readers away from
A
their humdrum lives and into a world that is
B C
at once fantastic and mysterious. No error
D E
29. Only by the afterglow of the sunset could the hikers
A B
find their path to the campsite at so late an hour.
C D
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 refer to the following passage.

(1) In Los Angeles, California, painted on the side of a cement-lined flood channel, there is a mural. (2) This mural is called *The Great Wall of Los Angeles*, it is ten feet high and stretches for over a half mile. (3) Twenty-five artists designed *The Wall*'s forty panels. (4) Over a period that spanned seven summers, they supervised the hundreds of teenagers from various communities in Los Angeles who painted the panels. (5) The project, inspired by the famous murals of Mexico City, was directed by artist Judith Baca. (6) Ms. Baca has been in charge of the work on the mural since it began in the 1970's.

(7) Mexico City's murals were painted fifty years ago exclusively by renowned artists in the city's grandest buildings. (8) In Los Angeles, however, over 2,000 murals have been painted in the last thirty years by ordinary citizens and community activists as well as artists. (9) The murals range from small creations painted by one or two artists to gigantic projects like *The Wall*.

(10) Each section of *The Wall* has a story to tell about the peoples of California. (11) Community issues are depicted on *The Wall*. (12) Unfortunately, *The Wall* ends in the mid-1950's. (13) One panel, Division of the Barrios and Chavez Ravine, portrays the way freeways divided families and neighborhoods within the city. (14) Ms. Baca hopes that the communities of Los Angeles will add new panels and bring *The Wall* up-to-date.

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

This mural is called The Great Wall of Los Angeles. it is ten feet high and stretches for over a half mile.

- (A) (as it is now)
- (B) Angeles, therefore
- (C) Angeles because it is
- (D) Angeles; moreover, it is
- (E) Angeles, having been built

31. In context, which is the best way to combine the underlined part of sentences 5 and 6 (reproduced below) ?

The project, inspired by the famous murals of Mexico City, was directed by artist Judith Baca. Ms. Baca has been in charge of the work on the mural since it began in the 1970's.

- (A) is directed by artist Judith Baca, who was
- (B) was directed by artist Judith Baca, who has been
- (C) artist Judith Baca directing, who has been
- (D) was directed and in the charge of Judith Baca, an artist,
- (E) was directed by artist Judith Baca, and Ms. Baca was

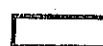
32. Which of the following would most improve sentence 7 (reproduced below) ?

Mexico City's murals were painted fifty years ago exclusively by renowned artists in the city's grandest buildings.

- (A) Insert "amazing" before "murals".
- (B) Change "were painted" to "have been painted".
- (C) Change "the city's" to "their".
- (D) Change "grandest" to "the most grand".
- (E) Move "in the city's grandest buildings" after "painted".

33. What is the primary purpose of sentence 7 ?

- (A) To provide a meaningful contrast
- (B) To emphasize the main point of the passage
- (C) To demonstrate a standard that is difficult to achieve
- (D) To leave the reader with a feeling of pride
- (E) To repeat a claim made earlier in the passage



34. In context, which is the best revision of the underlined part of sentence 11 (reproduced below) ?

Community issues are depicted on The Wall.

- (A) issues, however, are
- (B) issues affecting everyone
- (C) issues, in contrast, are
- (D) issues, in particular, are
- (E) issues, then, were

35. Where should sentence 12 go?

- (A) Where it is now
- (B) After sentence 1
- (C) After sentence 8
- (D) After sentence 13
- (E) After sentence 14

STOP

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



SECTION 6

Time — 25 minutes

18 Questions

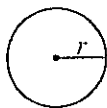
Turn to Section 6 (page 6) of your answer sheet to answer the questions in this section.

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

Notes

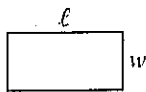
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is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

Reference Information

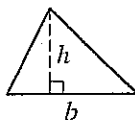


$$A = \pi r^2$$

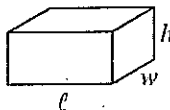
$$C = 2\pi r$$



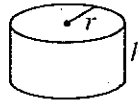
$$A = \ell w$$



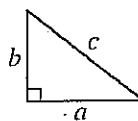
$$A = \frac{1}{2}bh$$



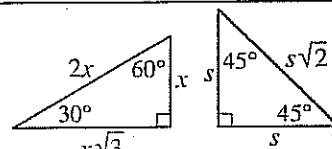
$$V = \ell wh$$



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



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



Special Right Triangles

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

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

$$a + 4 = 10$$

$$b + 10 = 4$$

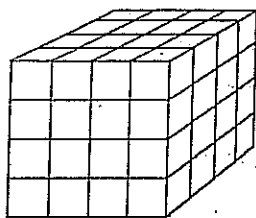
1. For the equations above, what is the value of $a + b$?

- (A) -12
(B) 0
(C) 6
(D) 14
(E) 28

2. If d is an odd integer and n is an even integer, then $2d + 5n$ must be

- (A) even
(B) odd
(C) a multiple of 5
(D) a multiple of 7
(E) the square of an integer

GO ON TO THE NEXT PAGE



3. The large cube in the figure above is divided as shown into 64 smaller cubes, all of equal volume. If 18 of these smaller cubes have a combined volume of 54, what is the volume of the large cube?

(A) 128
(B) 160
(C) 180
(D) 192
(E) 224

MONEY SPENT ON A SCHOOL PICNIC

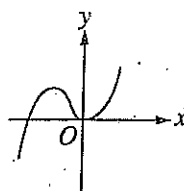
Grades	Amount
1, 2, and 3	\$300
4, 5, and 6	\$500
7 and 8	\$400
Total	\$1,200

4. The chart above shows how a total of \$1,200 was spent on a school picnic for the grades listed. What was the average (arithmetic mean) amount spent per grade by the 8 grades?

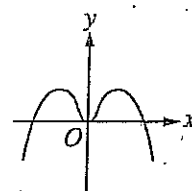
(A) \$150
(B) \$200
(C) \$250
(D) \$300
(E) \$400

5. Which of the following graphs in the xy -plane is symmetric with respect to the x -axis?

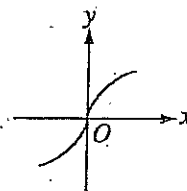
(A)



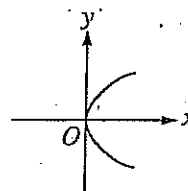
(B)



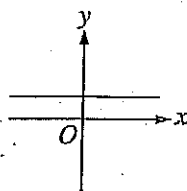
(C)



(D)



(E)



6. At the first stop after a school bus left school, 4 children got off the bus. One-quarter of the remaining children got off at the second stop, and 10 children got off at the third stop. If there were still 14 children on the bus after the third stop, how many children were on the bus as it left the school?

(A) 28
(B) 32
(C) 34
(D) 35
(E) 36



7. In $\triangle PQR$, $PQ = QR = 13$. If the length of the altitude drawn from Q , perpendicular to side \overline{PR} , is 12, what is the perimeter of $\triangle PQR$?

(A) 23
(B) 29
(C) 36
(D) 37
(E) 38

8. There are 6 different ways to arrange the 3 letters E , F , and G in a row from left to right. How many more ways are there to arrange the 4 letters D , E , F , and G in a row from left to right?

(A) 4
(B) 5
(C) 6
(D) 12
(E) 18

Directions: For Student-Produced Response questions 9-18, use the grids at the bottom of the answer sheet page on which you have answered questions 1-8.

Each of the remaining 10 questions requires you to solve the problem and enter your answer by marking the circles in the special grid, as shown in the examples below. You may use any available space for scratchwork.

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

Write answer in boxes. →

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

← Fraction line

Grid in result. →

Answer: 2.5

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

← Decimal point

Answer: 201

Either position is correct.

2	0	1
⊙	⊙	⊙
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4

2	0	1
⊙	⊙	⊙
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4

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

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

3.5 or $7/2$. (If $\frac{31}{2}$ is gridded, it will be interpreted as $\frac{31}{2}$, not $3\frac{1}{2}$.)

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

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

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

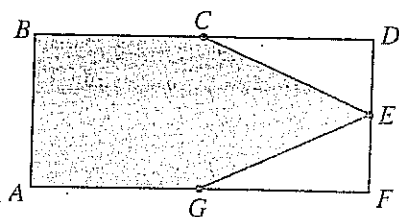
.	6	6	6
⊙	⊙	⊙	⊙
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6

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

9. Points P , Q , R , and S lie on a line in that order. If $QR = RS$, $PQ = 10$, and $PS = 38$, what does QR equal?

10. The distance Danielle walks is directly proportional to the length of time she walks. If she walks a distance of $1\frac{1}{3}$ miles in 20 minutes, how many miles will she walk in 1 hour?

GO ON TO THE NEXT PAGE →

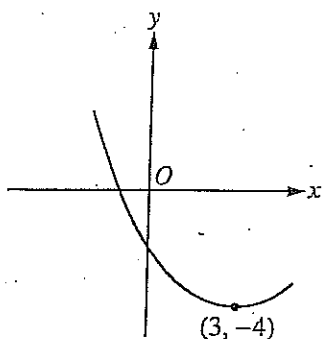


11. In the figure above, $ABDF$ is a rectangle and C , E , and G are the midpoints of sides \overline{BD} , \overline{DF} , and \overline{AF} , respectively. What fraction of the total area of $ABDF$ is shaded?

13. If $x + 2y = 3$, what is the value of $x^2 + 4xy + 4y^2$?

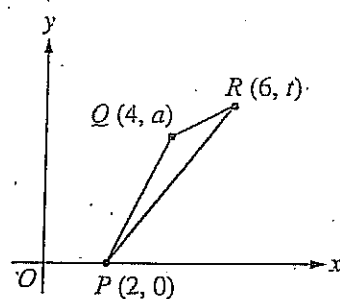
14. The average (arithmetic mean) of the 5 numbers in a list is 60. If a number m is added to the list, the average of the 6 numbers is 220. What is the value of m ?

12. If $x > 0$ and if $0 < x^2 < \frac{1}{64}$, what is one possible value of x ?



15. The figure above shows part of the graph of the quadratic function f . The graph intersects the x -axis at $x = -1$ and at $x = k$ (not shown). If the vertex of the graph of f is the point $(3, -4)$, what is the value of k ?

16. Of all the apartments in an apartment building, 20 percent are single-bedroom apartments, and 30 percent of the single-bedroom apartments have balconies. If 28 single-bedroom apartments do not have balconies, how many apartments are there in this apartment building?

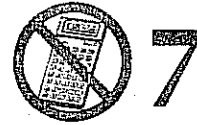


17. In the xy -coordinate system above, the slope of \overline{PQ} is 2 and the slope of \overline{QR} is $\frac{1}{2}$. What is the slope of \overline{PR} ?

18. A group of people were standing single file in a line to buy movie tickets. As Juan stood in the line, he noticed that there were 9 more people behind him than there were in front of him. He also noticed that the total number of people in the line was 3 times the number of people in front of him. How many people were in the line?

STOP

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



SECTION 7

Time — 25 minutes

24 Questions

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

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

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

Example:

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

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

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

1. Once thought to be -----, the dawn redwood was rediscovered in the 1940's, at which time its continued survival seemed -----; today, however, it is commonly cultivated.

- (A) immense . . natural
- (B) adaptable . . astonishing
- (C) defunct . . inevitable
- (D) perennial . . doubtful
- (E) extinct . . precarious

2. As the name suggests, a geochronologist is a scientist who ----- terrestrial materials in order to ----- them.

- (A) combines . . sequence
- (B) gathers . . display
- (C) analyzes . . date
- (D) examines . . excavate
- (E) studies . . synthesize

3. Contemporary Inuit sculpture merges traditional carving techniques with current subject matter; thus, it ----- an Inuit practice while ----- a modern cultural identity.

- (A) invalidates . . manifesting
- (B) disregards . . invigorating
- (C) reappraises . . dissolving
- (D) supercedes . . negating
- (E) reaffirms . . fashioning

4. Although many novelists write for artistic reasons, others are lured by the money, because popular success in writing can be so -----.

- (A) acquisitive (B) aesthetic (C) diverting
- (D) lucrative (E) fulfilling

5. The company manager was known for both his ----- and his -----: he lied frequently, but did so with amazing flair.

- (A) ambivalence . . extravagance
- (B) duplicity . . panache
- (C) evasiveness . . irascibility
- (D) mendacity . . corruption
- (E) brashness . . charisma



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

Questions 6-9 are based on the following passages.

Passage 1

Line The bias against life on Venus is rooted in human
presumption. From our limited observation of life on
Earth we infer that liquid water, preferably lots of it,
5 is essential for life everywhere. So, when searching
for extraterrestrial life, we obsess over "rivulets" on
Mars' face—apparently carved by ancient gushes of
water—and delight in hints of permafrost just under-
neath the planet's surface. (By comparison, Venus
isn't even that interesting to look at: A boring cue ball
10 for backyard astronomers.) Attention and then funding
follow the water: More space landers will depart
for Mars, and serious plans for further missions hover in
the future.

Passage 2

Is there life on Venus? Could there be life on Venus?
15 The standard answers are "No" and "NO!" Venus is usu-
ally dismissed in a paragraph or two before an extensive
discussion of the prospects for life on Mars and other
planets. This thinking presupposes knowledge of the
universal nature of life and the general characteristics
20 of inhabited planets—knowledge that we do not yet
possess. Life is usually assumed to require organic
molecules dissolved in liquid water. Discussions of
other habitable places in the universe exclusively
focus on planets with climates and atmospheric
25 conditions that are "just right" for us. Venus, with
its 850-900 degree Fahrenheit surface temperatures,
is obviously sterile. Or is it?

6. The author of Passage 2 suggests that the "bias" mentioned in line 1, Passage 1, arises because people

- (A) find Venus less interesting to look at than other planets
- (B) often ignore crucial information provided by experts
- (C) assume that they know what they do not actually know
- (D) are unaware of the atmospheric conditions on Venus
- (E) believe that Earth has a unique status in the universe

7. On which point do the authors agree?

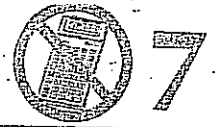
- (A) Earth is not the only planet in the universe where life exists.
- (B) Life is more likely to be discovered on Venus than on Mars.
- (C) People consider the possibility of life on Venus from too narrow a perspective.
- (D) Humans have a natural inclination to explore other planets.
- (E) Earth-based observation of Venus has given astronomers a false impression.

8. Unlike Passage 2, Passage 1 makes reference to

- (A) receptivity to the idea of life on Mars
- (B) the prospect of future planetary explorations
- (C) the distance between Earth and Venus
- (D) Venus' inhospitable climate
- (E) the abundance of habitable places in the universe

9. Which of the following is implied in both passages but explicitly stated in neither?

- (A) Venus' surface temperature is higher than that of Earth.
- (B) Scientists generally dismiss the possibility of extraterrestrial life.
- (C) There can be no life without organic molecules.
- (D) Mars' "rivulets" are not what they appear to be.
- (E) There is no evidence of liquid water on Venus.



Questions 10-17 are based on the following passage.

This passage is taken from a novel set in the 1950's at the Cedar Grove Elementary School, where Miss Dove has taught geography for more than a generation.

Line
5 Miss Dove's rules were as fixed as the signs of the zodiac. And they were known. Miss Dove rehearsed them at the beginning of each school year, stating them as calmly and dispassionately as if she were describing the atmospheric effects of the Gulf Stream. The penalties for infractions of the rules were also known. If a student's posture was incorrect, he had to go and sit for a while upon a stool without a backrest. If a page in his notebook was untidy, he had to copy it over. If he emitted an uncovered
10 cough, he was expected to rise immediately and fling open a window, no matter how cold the weather, so that a blast of fresh air could protect his fellows from the contamination of his germs. And if he felt obliged to disturb the class routine by leaving the room for a drink of water
15 (Miss Dove loftily ignored any other necessity), he did so to an accompaniment of dead silence. Miss Dove would look at him—that was all—following his departure and greeting his return with her perfectly expressionless gaze, and the whole class would sit idle and motionless until
20 he was back in the fold again. It was easier—even if one had eaten salt fish for breakfast—to remain and suffer.

Of course, there were flagrant offenses that were dealt with in private. Sometimes profanity sullied the
25 air of the geography room. Sometimes, though rarely, open rebellion was displayed. In those instances, the delinquent was detained, minus the comfort of his comrades, in awful seclusion with Miss Dove. What happened between them was never fully known. (Did she threaten
30 him with legal prosecution? Did she terrorize him with her long-map-pointer?) The culprit, himself, was unlikely to be communicative on the subject or, if he were, would tend to overdo the business with a tale that revolved to an incredible degree around his own heroism. After-
35 wards, as was duly noted, his classroom attitude was subdued and chastened.

Miss Dove had no rule relating to prevarication. A child's word was taken at face value. If it happened to be false—well, that was the child's problem. A lie,
40 unattacked and undistorted by defense, remained a lie and was apt to be recognized as such by its author.

Occasionally a group of progressive mothers would contemplate organized revolt. "She's been teaching too
45 long," they would cry. "Her pedagogy hasn't changed since we were in Cedar Grove. She rules the children through fear!" They would turn to the boldest one among themselves. "You go," they would say. "You go talk to her!"

The bold one would go, but somehow she never did
50 much talking. For there in the geography room, she would begin to feel—though she wore her handsomest tweeds and perhaps a gardenia for courage—that she was about ten years old and her petticoat was showing. Her throat would tickle. She would wonder desperately if she had a
55 clean handkerchief in her bag. She would also feel thirsty. Without firing a shot in the cause of freedom she would retreat ingloriously from the field of battle.

And on that unassaulted field—in that room where no leeway was given to the personality, where a thing was
60 black or white, right or wrong, polite or rude, simply because Miss Dove said it was, there was a curiously soothing quality. The children left it refreshed and restored, ready for fray or frolic. For within its walls they enjoyed what was allowed them nowhere else—
65 a complete suspension of will.

10. The narrator refers to "the signs of the zodiac" (lines 1-2) as an example of things that are

- (A) mysterious
- (B) countless
- (C) unchanging
- (D) ominous
- (E) unattainable

11. In line 2, "rehearsed" most nearly means

- (A) directed
- (B) listed
- (C) practiced
- (D) perfected
- (E) demonstrated

12. The series of statements in lines 6-16 ("If a student's . . . silence") is best described as a

- (A) series of anecdotes about memorable events
- (B) collection of advice regarding student conduct
- (C) string of accusations and excuses
- (D) list of punishments for various infractions
- (E) rationalization for some unfair penalties



13. In line 17, the narrator inserts the phrase "that was all" in order to emphasize that
- (A) the infraction was not a serious one
 - (B) a spoken reproach was unnecessary
 - (C) the student openly acknowledged wrongdoing
 - (D) only one offense had been committed
 - (E) even a single offense brought punishment
14. In line 41, "author" refers to a
- (A) child who told a lie
 - (B) child who reported a liar
 - (C) teacher who criticized a liar
 - (D) mother of Miss Dove's students
 - (E) writer of fiction
15. Lines 56-57 ("Without . . . battle") gently mock the situation by describing it in terms of a
- (A) sporting competition
 - (B) political debate
 - (C) popularity contest
 - (D) courtroom trial
 - (E) military event
16. In the final paragraph, the narrator suggests that the students in Miss Dove's classroom benefited from
- (A) an animated exchange of conflicting views
 - (B) an atmosphere of demanding challenges
 - (C) the example set by an outstanding role model
 - (D) the application of rigorous academic standards
 - (E) the subordination of individual opinion and desire
17. The primary purpose of the passage is to
- (A) analyze a commonplace problem
 - (B) criticize a type of teacher
 - (C) analyze a particular lifestyle
 - (D) present a character sketch
 - (E) describe a childhood memory



Questions 18-24 are based on the following passage.

This passage discusses the search during the 1950's for a vaccine to fight polio, an infectious disease affecting the muscular system.

In little over a year, a small laboratory experiment had become a national event of a size and complexity never seen before. The testing of the Salk vaccine was the largest field trial ever held, the greatest peacetime mobilization of civilians in United States history, and the most eagerly observed and heavily publicized scientific program until the space launches a decade later. Jonas Salk became an instant hero and an enduring celebrity, the idol and icon of his age. The announcement that his vaccine worked was a landmark in twentieth-century history, and one of the few events that burned itself into the consciousness of the world because the news was good.

Privately funded, privately organized and supervised, and quite publicly and conspicuously successful, the discovery and testing of the Salk vaccine was in many ways a crowning example of democratic self-help, the mass organization of individual citizens in a united effort for the public good. It was also an effort marred by bitter disputes over procedure, vicious struggles for power and prestige, a small but tragic residue of avoidable injury, and a complete failure to make an orderly transition from experimentation to implementation and from laboratory prototypes to large-scale commercial production.

The conflicts that surrounded the Salk vaccine field trial were not between good and evil, right and wrong, but between different ideas about what constituted the good and the right. For over twenty years, several groups had been attacking the problems of polio along entirely separate lines. The National Foundation for Infantile Paralysis created a national network of concerned volunteers, community "experts" on polio who raised money for medical costs at the same time that they raised awareness of the malady itself. Research scientists, many supported in whole or part by the National Foundation, studied problems in virology and immunology. Doctors learned to recognize the elusive symptoms of polio and prescribe ever better treatments and therapies. The Public Health Service charted epidemics and quarantined patients. The public worried, hoped, and waited.

Early in 1953, when reports began to appear that a polio vaccine might be at hand, each of these groups, and each individual within each group, was firmly in possession of a set of assumptions about how matters would proceed. Unfortunately, they were rarely the same assumptions. Everyone agreed that it would be a great thing to eliminate polio. After that the consensus started to break down. Many involved in organizing the Salk vaccine field trial seemed to operate on the theory that, if they moved ahead as fast as possible, their own course of action would develop unstoppable momentum, enough to bring all opposition

into line. This wasn't true, but for a time it led to the ragged spectacle of a program moving briskly in several directions at once, like an unruly parade in which each section has its own band and travels its own route, banging its own drums as loudly as possible. Through most of 1953 and 1954, the march against polio was accompanied by the loud clash of agendas, the shrill noise of shattering assumptions, and the whoosh of fond dreams punctured and expectations dashed.

18. The first paragraph (lines 1-12) reveals which of the following about the Salk vaccine?

- (A) Its creation was dependent on a number of other events.
- (B) Its success was jeopardized by those who were skeptical of the project.
- (C) It made other avenues of scientific research possible.
- (D) It represented a vital achievement in its time.
- (E) It was developed by using the most important new technology of the twentieth century.

19. The discussion of the Salk vaccine in lines 1-7 ("In . . . later") employs which of the following?

- (A) A historical timeline citing key events leading to the testing of the vaccine
- (B) Comparisons between the vaccine's development and other important accomplishments
- (C) A listing of groups and individuals most directly affected by the vaccine's creation
- (D) Various attitudes about the vaccine gathered from different sources
- (E) The juxtaposition of a critical and an admiring view of the vaccine

20. Lines 9-12 ("The announcement . . . good") imply that

- (A) the reaction to the news of the Salk vaccine was somewhat overblown
- (B) the media had a great deal of influence on the public response to the Salk vaccine
- (C) the twentieth century had more medical achievements than did any previous period
- (D) people usually overlook problems until they become impossible to ignore
- (E) disasters were usually more widely known and better remembered than were successes



21. The primary purpose of lines 24-27 ("The conflicts ... right") is to
- (A) expand upon a point made in the previous paragraph
 - (B) argue in favor of a relatively unpopular position
 - (C) offer an argument that runs counter to the one made in the first paragraph
 - (D) relate an anecdote to dramatize the social significance of a breakthrough
 - (E) call into question the relevance of the examples that follow
22. Lines 29-38 ("The National ... patients") serve primarily to
- (A) clarify a little-understood philosophy
 - (B) undermine an argument put forth by an authority
 - (C) illustrate a general statement using specific examples
 - (D) praise the scope of a powerful international effort
 - (E) offer evidence of scientific improprieties
23. In line 39, the attitude of the "public" can best be described as
- (A) belligerent
 - (B) cynical
 - (C) apathetic
 - (D) anxious
 - (E) critical
24. Which is true of the groups and individuals described in lines 40-46 ("Early ... down") ?
- (A) They agreed on the same goal but not on the way to achieve it.
 - (B) They had similar doubts about how effective a vaccine for polio could be.
 - (C) They were eager to work together but unsure of how to proceed.
 - (D) They were willing to tolerate different levels of risk when working with a contagious disease.
 - (E) They were uncertain that the public would continue to wait patiently for a cure.

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) (E)

1. Crucial to the expedition's ----- will be accurate assumptions about the weather; without them, the safety of the mountain climbers may be -----.

- (A) prosperity . . enhanced
- (B) survival . . demonstrated
- (C) futility . . compromised
- (D) plausibility . . ensured
- (E) success . . jeopardized

2. The university's aggressive transformation from a teaching-centered college to a major research institution has brought ----- that teaching is now being -----.

- (A) suspicions . . promoted
- (B) recommendations . . discussed
- (C) accusations . . neglected
- (D) insinuations . . praised
- (E) recriminations . . emphasized

3. Certain plant seeds are able to remain ----- for years, appearing lifeless when in fact they are merely inactive.

- (A) conspicuous (B) verdant (C) pliant
- (D) dormant (E) stunted

4. Wanting desperately to be perceived as learned and authoritative, Johnson affected a ----- tone when speaking in public.

- (A) licentious (B) nihilistic (C) magisterial
- (D) propitiatory (E) rapturous

5. Critics characterized the memoir as ----- because of the author's excessively sentimental description of her childhood.

- (A) maudlin (B) candid (C) pedantic
- (D) enigmatic (E) eclectic

6. Ernest Gaines's *A Lesson Before Dying* is ----- of rural Louisiana: the writing is so evocative that the Southern atmosphere seems almost to ----- from the book's pages.

- (A) critical . . fade
- (B) suggestive . . ebb
- (C) reminiscent . . veer
- (D) dismissive . . seep
- (E) redolent . . waft



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.

*These passages relate to the notorious mutiny on the British naval ship *Bounty* in April 1789. At the time of the mutiny, the ship had recently left Tahiti, a place perceived by Europeans as extremely remote, after a six-month visit. Mutineers sailed the *Bounty* back to Tahiti, leaving the captain, William Bligh, and some of his followers in a small open boat with scanty supplies. Bligh successfully navigated 4,000 miles to the nearest European settlement, and the mutiny became an international sensation.*

But why did the mutiny happen? An edited version of Bligh's public answer appears in Passage 1. A writer of British naval history provides another answer in Passage 2.

Passage 1 (1790)

Line 5 As soon as I had time to reflect, after being cast off from my ship, I felt an inward satisfaction, which prevented any depression of my spirits. With full consciousness of my integrity, I found my mind wonderfully comforted. I began to conceive hopes, notwithstanding so heavy a calamity, that I should one day be able to account to my King and country for the misfortune.

A few hours earlier, my situation had been peculiarly flattering. The voyage had been two-thirds completed, to all appearance, in every promising way.

It will very naturally be asked, then, what could be the reason for such a revolt? I can only conjecture that the mutineers had flattered themselves with the hopes of a more happy life among the Tahitians than they could possibly enjoy in England. This, in addition to the sentimental ties many of the crew had formed with the much admired indigenous women, most probably occasioned the whole transaction.

The local chiefs were so attached to our crew that they encouraged their staying permanently and even made the crew promises of large possessions. It is now perhaps not so much to be wondered at (though scarcely possible to have foreseen) that a set of sailors, most without influential connections in England, should be led away.

The utmost, however, that any captain could have predicted is that some of the crew would have been tempted to desert. Desertions have happened from most of the ships that have been at Tahiti but it has always been in the captain's power to make the chiefs return the deserters. The knowledge that it was unsafe to desert, perhaps, first led my crew to consider with what ease so small a ship as the *Bounty* might be surprised and taken.

The secrecy of this mutiny is beyond all conception. To such a close-planned act of villainy, my mind being entirely free from any suspicion, it is no wonder that I

fell a sacrifice. Had their mutiny been occasioned by any grievances, either real or imaginary, I must have discovered symptoms of their discontent, which would have put me on my guard. The case was far otherwise. I was on most friendly terms with Mr. Christian, the leader of the mutineers. He had previously arranged to dine with me on the very day that the mutineers seized me from my bed at dawn.

Passage 2 (1987)

Bligh had an unpleasant character, which soon became obvious to a great many people who came into contact with him. Yes, Bligh was a courageous and eminently capable seaman—no one else could have accomplished that astonishing open-boat voyage following the mutiny. And yes, he was an efficient subordinate.

But he was not fit for command.

Bligh responded well to the leadership of a man such as Captain James Cook*; but after Cook's death while on an expedition, Bligh fell out with most of the other officers. In the margins of the official account of that expedition, Bligh wrote the phrase "a most infamous lie" and other rude comments of much the same nature.

The same aggressiveness and use of gross language came with him into the *Bounty*, made all the worse by his having no superiors or even equals in rank on board. His authority was final and could not be challenged. It is said that only two weeks into a voyage expected to last several years Bligh was scarcely on speaking terms with his officers.

The mutiny itself is sometimes put down to the charms of Tahiti, but the charms were the same for Wallis's men, for Cook's, and for Bougainville's, and these earlier captains had no very grave problems. The trouble seems to be that Bligh lacked natural authority and tried to make up for it by railing and cursing. During that terrible open-boat voyage, he quarreled steadily with the *Bounty*'s loyal carpenter, and when they reached home Bligh had the carpenter brought before a court-martial for disobedience and disrespect.

There was another court-martial some years later when Bligh, as captain of the *Warrior*, was accused of tyrannous, oppressive, and unofficer-like behavior to Lieutenant Frazier and that ship's other officers. The evidence showed that Bligh was a foul-mouthed bully, and the court found the charges "in part proved." Bligh was reprimanded.

* James Cook (1728-1779): British naval officer who led voyages of discovery and exploration to the Pacific



7. In the opening paragraph of Passage 1, the mood Bligh describes is primarily one of
- (A) intense indignation
 - (B) wary pragmatism
 - (C) cheerful forgiveness
 - (D) optimistic confidence
 - (E) patriotic pride
8. The "satisfaction" mentioned by Bligh in line 2 of Passage 1 is based primarily on his sense of the
- (A) loyalty demonstrated by his friends
 - (B) feasibility of travel in the open boat
 - (C) correctness of his own conduct
 - (D) inevitability of punishment for the mutineers
 - (E) adventurous aspect of his situation
9. The parenthetical comment in lines 22-23 of Passage 1 can best be characterized as
- (A) apologetic
 - (B) cynical
 - (C) flippant
 - (D) defensive
 - (E) insolent
10. In line 36, Bligh's choice of the word "sacrifice" most directly reveals his
- (A) anxiety about punishment for having lost a naval ship
 - (B) willingness to place great importance on his duties
 - (C) desire to be perceived as an innocent victim
 - (D) eagerness to portray his crew as reckless and impulsive
 - (E) fear of future repercussions from relatives of the mutineers
11. In Passage 1, Bligh presents himself as trying to
- (A) defend a controversial decision
 - (B) revisit a seemingly settled dispute
 - (C) admit to a catastrophic mistake
 - (D) condemn a ruthless crime
 - (E) make sense of a puzzling event
12. In line 64, "charms" most nearly means
- (A) ornaments
 - (B) attractions
 - (C) incantations
 - (D) deceptions
 - (E) novelties
13. In Passage 2, the story about the carpenter (lines 69-73) primarily serves to
- (A) illustrate one of Bligh's personality traits
 - (B) suggest an alternative view of Bligh's skills as a seaman
 - (C) introduce a revealing episode in maritime history
 - (D) provide an example of Bligh's respect for military justice
 - (E) explain an apparent contradiction in Bligh's nature
14. Passage 2 implies that which change to the Bounty expedition might have prevented the mutiny?
- (A) A more equitable use of punishment by Bligh
 - (B) The complete isolation of British sailors from Tahitian leaders
 - (C) The presence of other high-ranking officers on board
 - (D) Some regularly scheduled intervals of shore leave during the voyage
 - (E) The inclusion of some of Cook's former staff among the crew
15. In contrast to the author of Passage 2, Bligh suggests in Passage 1 that the mutineers acted primarily out of
- (A) desire for power
 - (B) contempt for authority
 - (C) despair
 - (D) loneliness
 - (E) self-interest
16. In contrast to Passage 1, Passage 2 suggests that the primary motivation of the mutineers was
- (A) exasperation with Bligh
 - (B) nostalgia for Tahiti
 - (C) frustration with their long journey
 - (D) fear of British authorities
 - (E) contempt for Bligh's use of favoritism



17. Which additional information provided by Passage 2 is most useful in evaluating the persuasiveness of the argument made in Passage 1?

- (A) Bligh's bravery and skill were beyond dispute.
- (B) Bligh had no superiors or equals in rank on board the Bounty.
- (C) An otherwise loyal sailor from the Bounty behaved disrespectfully.
- (D) Bligh was officially punished for his behavior on a subsequent voyage.
- (E) Bligh had gotten access to a logbook on another expedition.

18. Lines 57-63 (Passage 2) suggest that Bligh failed to address his crew's "discontent" (line 38, Passage 1) for which reason?

- (A) He believed that all sailors have grievances, so there was no particular cause for worry.
- (B) He did not suspect that the sailors were disgruntled as they took pains to hide their feelings.
- (C) He knew the sailors were dissatisfied but hoped to win them over in the future.
- (D) He sensed problems among the crew yet hesitated to trust his impressions.
- (E) He had closed off communication with officers and so did not know the extent of the crew's displeasure.

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

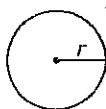
Turn to Section 9 (page 7) of your answer sheet to answer the questions in this section.

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

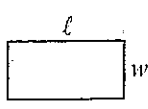
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is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

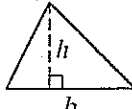


$$A = \pi r^2$$

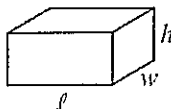
$$C = 2\pi r$$



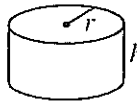
$$A = \ell w$$



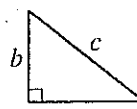
$$A = \frac{1}{2}bh$$



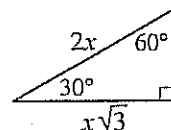
$$V = \ell wh$$



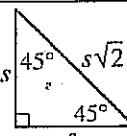
$$V = \pi r^2 h$$



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



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. Which of the following is equivalent to the equation $3(a + 2) + 2(a - 3) = 6$?

- (A) $5a - 1 = 6$
 (B) $5a + 3 = 6$
 (C) $5a + 12 = 6$
 (D) $5a = 6$
 (E) $a = 6$

2. A machine requires 4 gallons of fuel to operate for 1 day. At this rate, how many gallons of fuel would be required for 16 of these machines to operate for $\frac{1}{2}$ day?

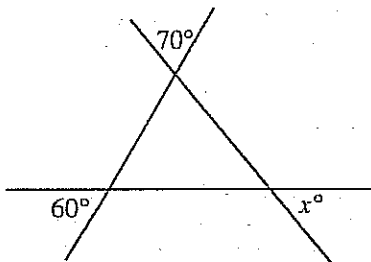
- (A) 12
 (B) 24
 (C) 32
 (D) 48
 (E) 64

GO ON TO THE NEXT PAGE



3. At a certain music store, compact discs cost \$15 each and tapes cost \$12 each. Pauline buys x compact discs and y tapes and pays no tax. Which of the following represents the total she pays, in dollars, for x compact discs and y tapes?

(A) $(15x)(12y)$
 (B) $15x + 12y$
 (C) $27(x + y)$
 (D) $(15 + x) + (12 + y)$
 (E) $(15 + x)(12 + y)$



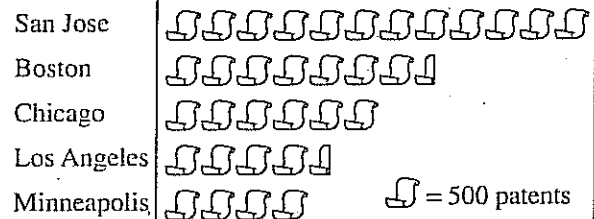
4. In the figure above, what is the value of x ?

(A) 50
 (B) 55
 (C) 60
 (D) 65
 (E) 70

5. If r is a number chosen at random from the set $\{1, 3, 5, 7\}$ and s is a number chosen at random from the set $\{2, 4, 6\}$, what is the probability that $r + s$ will be an odd number?

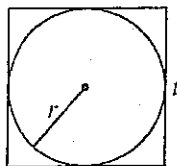
(A) 0
 (B) $\frac{1}{7}$
 (C) $\frac{1}{4}$
 (D) $\frac{1}{3}$
 (E) 1

TOP FIVE METROPOLITAN AREAS
 BY NUMBER OF PATENTS ISSUED
 IN 1999



6. According to the pictogram above, the number of patents issued in the San Jose metropolitan area in 1999 was closest to the combined number of patents issued in which of the following pairs of metropolitan areas?

(A) Boston and Chicago
 (B) Boston and Los Angeles
 (C) Chicago and Los Angeles
 (D) Chicago and Minneapolis
 (E) Los Angeles and Minneapolis



7. The circle with radius r is inscribed in a square with side t as shown above. What is the value of $\frac{r}{t}$?

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

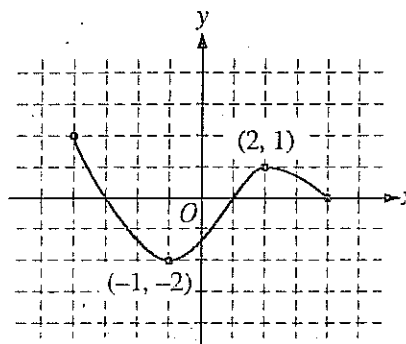
8. If Anna goes to the movies, Bill goes to the movies with her. If Bill goes to the movies, Carrie goes to the movies. If Carrie did not go to the movies, which of the following must be true?

- I. Anna went to the movies.
 II. Bill went to the movies.
 III. Bill did not go to the movies.

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

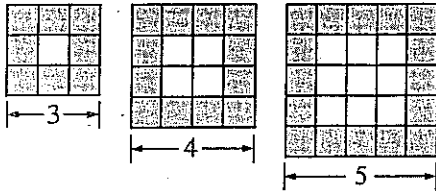
9. If $0 < x < 1$, which of the following is FALSE?

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



10. The figure above shows a portion of the graph of the function f . What are all the values of x between -4 and 4 for which f is increasing?

- (A) $-2 < x < 1$
 (B) $-1 < x < 2$
 (C) $1 < x < 4$
 (D) $-4 < x < -3$
 (E) $-4 < x < -1$ and $2 < x < 4$

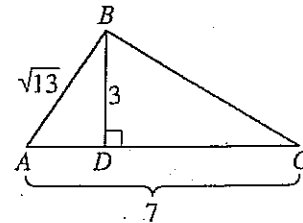


11. In each of the three square figures above, only the small 1-by-1 squares that border the outside edges of the figure are shaded. If a square whose side measures 100 were divided into 1-by-1 squares that are shaded in a similar fashion, how many squares in that figure would be shaded?

(A) 396
(B) 397
(C) 398
(D) 399
(E) 400

12. For all numbers x , let the function f be defined by $f(x) = 2x - 3$. If $f(k) = 5$, what is the value of k ?

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



13. In $\triangle ABC$ above, what is the length of side \overline{BC} ?

(A) 5
(B) 6
(C) $\sqrt{30}$ (approximately 5.48)
(D) $\frac{21}{\sqrt{13}}$ (approximately 5.82)
(E) $\sqrt{34}$ (approximately 5.83)

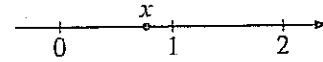
14. When the positive integer n is divided by 7, the remainder is 2. What is the remainder when $5n$ is divided by 7?

(A) 2
(B) 3
(C) 4
(D) 5
(E) 6



15. In the xy -plane, a point with coordinates (a, b) lies on both of the lines $y = 2x + 3$ and $y = 1 - 3x$. Which of the following equations must be true?

(A) $a = b$
(B) $a = b + 4$
(C) $a = 2b$
(D) $a = 2b + 4$
(E) $a = 4 - 2b$



16. On the number line above, x is the coordinate of the point shown. Which of the following must be true?

I. $|x| < 1$
II. $|x - 2| > 1$
III. $|x| + |x - 1| = 1$

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

STOP

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



SECTION 10

Time — 10 minutes

14 Questions

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

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

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

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

EXAMPLE:

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

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

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

1. Although my brother and I took our dogs to the same training school, my dog won more awards at obedience trials than my brother.

- (A) than my brother
- (B) than my brother's dog wins
- (C) than my brother's dog
- (D) but my brother's dog won fewer awards
- (E) but my brother did not

2. Nancy is a better skier than the rest of us because she has been doing it since she arrived in Colorado at age five.

- (A) she has been doing it
- (B) she has been skiing
- (C) of learning how
- (D) of learning to ski
- (E) she has been learning to do it

3. Under the new regulations governing tobacco advertising, the well-known ad that shows people riding horses smoking cigarettes will no longer be allowed.

- (A) that shows people riding horses smoking cigarettes
- (B) that shows people smoking cigarettes while riding horses
- (C) in which people are shown on horses smoking cigarettes while riding
- (D) showing people riding and smoking cigarettes while on horses
- (E) of people shown while riding horses and smoking cigarettes

4. Jared behaved like a person permanently on stage, he was always speaking in a dramatic voice and looking around to see who was listening.

- (A) he was always speaking
- (B) always he would speak
- (C) and he always spoke
- (D) always having spoken
- (E) always speaking

5. The Wooden Canoe Heritage Association is devoted to study, building, restoring, and use of the traditional North American canoe.

- (A) is devoted to study, building, restoring, and use of
- (B) is devoting itself to the study of, building and restoring, and using
- (C) is devoted to studying, building, restoring, and using
- (D) has been devoting itself to the study, building, restoration, and using of
- (E) has been devoted to studying, building, restoration, and how we use



6. On many college campuses, the study of film has become as common as that of the novel.
- (A) as common as that of the novel
 - (B) like the novel, as common
 - (C) common, as is that of the novel
 - (D) as common as the novel's study
 - (E) just as the novel's study is common
7. Milkweed has many varieties, and one of these provide the monarch butterfly with a place to lay its eggs.
- (A) Milkweed has many varieties, and one of these provide
 - (B) The many varieties of milkweed, one of which provides
 - (C) One of the many varieties of milkweed provides
 - (D) One of many varieties of milkweed provide
 - (E) There are the many varieties of milkweed, and one of them provide
8. In his novels, Thackeray displayed his consciousness of the world about him, as does Dickens, but he sees the world from an entirely different vantage point.
- (A) as does Dickens, but he sees
 - (B) as with Dickens, but he saw
 - (C) as Dickens, but Thackeray sees
 - (D) as in those of Dickens, but he has seen
 - (E) as did Dickens, but Thackeray saw
9. Though three-fourths of Kenya is a barren plain, the highland area, where most people live, is farmed extensively.
- (A) the highland area, where most people live, is farmed extensively
 - (B) the highland area is where most people lived and it is extensively farmed
 - (C) where most people live is in the highland area, it is extensively farmed
 - (D) where most people live is in the highland area, extensively farmed
 - (E) most people live and extensively farm the highland area
10. Since they are advised to write what they know about, first novels tend to be heavily autobiographical.
- (A) Since they are advised to write what they know about
 - (B) Being advised to write about what they know
 - (C) Based on advice to beginning writers to write about what they know
 - (D) Advising beginning writers to write about what they know
 - (E) Because beginning writers are advised to write about what they know
11. The proposed methods for controlling pollution were presented more as temporary remedies than as permanent solutions to the problem.
- (A) more as temporary remedies than as
 - (B) as temporary remedies more than
 - (C) more for temporary remedies than
 - (D) for temporary remedies more than as
 - (E) as more temporary remedies than
12. Caricaturists evoke humor by blending the realistic with the comedy in portraits.
- (A) by blending the realistic with the comedy
 - (B) by blending the realistic and the comic
 - (C) in a blending of realism with the comic
 - (D) when their blending reality with the comic
 - (E) through blends of reality and comic



13. We now realize that the Earth has limited resources which, if they are wasted, you put everyone in danger.

- (A) which, if they are wasted, you put everyone in danger
- (B) and if you waste them it puts everyone in danger
- (C) and wasting it will be perilous
- (D) and it puts everyone in danger to waste them
- (E) that we waste at our own peril

14. Digging at the site, all power was cut off when the backhoe hit an electric cable; fortunately, no one was hurt.

- (A) Digging at the site, all power was cut off when the backhoe hit an electric cable
- (B) Digging at the site, an electric cable was hit by a backhoe, cutting off all power
- (C) Cutting off all power, the backhoe hit an electric cable digging at the site
- (D) All power was cut off when the backhoe digging at the site hit an electric cable
- (E) When digging at the site, an electric cable hit by the backhoe cut off all power

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

Number incorrect

Mathematics

Number incorrect

Writing Multiple-Choice

Number incorrect

-48-

The Scoring Process

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

- Each correct answer receives one point.
- Omitted questions do not count toward your score.
- One-fourth of a point is subtracted for each wrong answer to multiple-choice questions.

Example:

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

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

- If the raw score is a fractional number, it is rounded to the nearest whole number. For example, a raw score of 36.25 is rounded to 36, the nearest whole number. A raw score of 36.50 is rounded upward to 37.
3. **Essay scoring.** Using the scoring guide shown on page 50, experienced, trained high school and college faculty score the essay. Each essay is read independently by two readers who rate it on a scale of 1 to 6. (If the two scores differ by more than one point, a third reader scores the essay.) The two readers' scores are added together, and the essay subscore is reported on a scale of 2 to 12. The essay section is worth approximately 30 percent of the raw score, and the multiple-choice writing section counts for approximately 70 percent.
 4. **Converting raw scores to scaled scores.** Raw scores are then placed on the scale of 200–800 through a process that adjusts scores to account for minor differences in difficulty among different editions of the test. This process, known as equating, is performed so that a student's reported score is not affected by the edition of the test taken or by the abilities of the group with whom the student takes the test. As a result of placing SAT scores on the College Board scale, scores earned by students at different times can be compared. For example, an SAT mathematics score of 400 on a test taken at one administration indicates the same level of developed mathematics ability as a 400 score obtained on a different edition of the test taken at another time.

SAT Essay Scoring Guide

SCORE OF 6

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

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

SCORE OF 3

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

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

SCORE OF 5

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

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

SCORE OF 2

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

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

SCORE OF 4

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

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

SCORE OF 1

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

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

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

Scoring Worksheet for Form Code IUBB

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

Get Your Critical Reading Score

How many critical reading questions did you get right?

Section 4: Questions 1-25 _____

Section 7: Questions 1-24 + _____

Section 8: Questions 1-18 + _____

Total = _____ (A)

How many critical reading questions did you get wrong?

Section 4: Questions 1-25 _____

Section 7: Questions 1-24 + _____

Section 8: Questions 1-18 + _____

Total = _____

$\times 0.25 =$ _____ (B)

A - B = _____

Critical Reading
Raw Score

Round critical reading raw score to the nearest whole number.

Use the table on page 52 to find your critical reading scaled score.

Get Your Mathematics Score

How many mathematics questions did you get right?

Section 2: Questions 1-20 _____

Section 6: Questions 1-8 + _____

Section 9: Questions 1-16 + _____

Total = _____ (A)

How many multiple-choice mathematics questions did you get wrong?

Section 2: Questions 1-20 _____

Section 6: Questions 1-8 + _____

Section 9: Questions 1-16 + _____

Total = _____

$\times 0.25 =$ _____ (B)

A - B = _____

Mathematics Raw Score

Round mathematics raw score to the nearest whole number.

Use the table on page 52 to find your mathematics scaled score.

Get Your Writing Score

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

Section 5: Questions 1-35 _____

Section 10: Questions 1-14 + _____

Total = _____ (A)

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

Section 5: Questions 1-35 _____

Section 10: Questions 1-14 + _____

Total = _____

$\times 0.25 =$ _____ (B)

A - B = _____

Writing Multiple-Choice
Raw Score

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

_____ (C)

Use the table on page 52 to find your writing multiple-choice scaled score.

Copy your essay score from your QAS report.

_____ (D)

Use the writing composite table (page 53) to look up your writing multiple-choice raw score (C) and your essay score (D) to find your writing composite scaled score.

SAT Score Conversion Table

Form Code IUBB

Raw Score	Critical Reading Scaled Score	Math Scaled Score	Writing Multiple-Choice Scaled Score	Raw Score	Critical Reading Scaled Score	Math Scaled Score	Writing Multiple-Choice Scaled Score
67	800			31	510	550	56
66	800			30	500	540	55
65	800			29	500	530	54
64	780			28	490	530	53
63	760			27	490	520	52
62	750			26	480	510	51
61	730			25	470	500	50
60	720			24	470	490	49
59	710			23	460	480	48
58	700			22	460	480	47
57	690			21	450	470	46
56	680			20	440	460	45
55	670			19	440	450	44
54	660	800		18	430	440	43
53	650	780		17	420	440	43
52	640	750		16	420	430	42
51	640	730		15	410	420	41
50	630	720		14	400	410	40
49	620	710	80	13	390	400	39
48	610	700	80	12	390	390	38
47	610	690	78	11	380	380	37
46	600	680	75	10	370	380	36
45	590	670	73	9	360	370	35
44	590	660	71	8	350	360	34
43	580	650	70	7	340	340	33
42	580	640	68	6	330	330	32
41	570	630	67	5	320	320	31
40	560	620	65	4	310	310	30
39	560	620	64	3	300	290	29
38	550	610	63	2	280	270	27
37	550	600	62	1	270	260	26
36	540	590	61	0	250	230	24
35	530	580	60	-1	230	210	22
34	530	570	59	-2	210	200	20
33	520	570	58	-3	200	200	20
32	520	560	57	and below			

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

SAT Writing Composite Score Conversion Table

Form Code IUBB

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

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