

Form Codes DEPO, EWPO

# SAT Reasoning Test™

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Question-and-Answer Service  
January 2008 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

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

This booklet contains the SAT Reasoning Test™ you took in January 2008. 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

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). You can also find this information in your online score report at [collegeboard.com/sat](http://collegeboard.com/sat). This can help you understand your academic strengths and identify areas for improvement.

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, and 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](http://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 test you took. Do not try to score any other tests using them.

## Preparing to Take the SAT Again

Taking the SAT again might be to your advantage. Now that you’re familiar with the test, you’re more prepared for the kinds of questions on it. You’re also more comfortable with the test-taking process, including the time limits. On average, students who take the SAT a second time increase their combined critical reading, mathematics, and writing scores by approximately 40 points.

The best way to prepare for the SAT is to take challenging high school classes, read extensively, and practice writing as often as possible. For practice questions and approaches, visit the SAT Preparation Center™ at [collegeboard.com/satprep](http://collegeboard.com/satprep). Focus on the kinds of questions that you found most challenging. You can register to take the SAT again at [collegeboard.com/sat](http://collegeboard.com/sat).

# 1 ESSAY

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# ESSAY 1

## ESSAY

Time — 25 minutes

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

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

### 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.
- If your essay does not reflect your original and individual work, your test scores may be canceled.

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 better to try to be original than to merely imitate others. People should always try to say, write, think, or create something new. There is little value in merely repeating what has been done before. People who merely copy or use the ideas and inventions of others, no matter how successful they may be, have never achieved anything significant.

**Assignment:** Is it always better to be original than to imitate or use the ideas of others? 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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The supervisor will tell you how much time you have to write an essay on the topic assigned below.

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

Often we see people who persist in trying to achieve a particular goal, even when all the evidence indicates that they will be unlikely to achieve it. When they succeed, we consider them courageous for having overcome impossible obstacles. But when they fail, we think of them as headstrong, foolhardy, and bent on self-destruction. To many people, great effort is only worthwhile when it results in success.

Adapted from Gilbert Brim, "Ambition"

**Assignment:** Is the effort involved in pursuing any goal valuable, even if the goal is not reached? Plan and write an essay in which you develop your point of view on this issue. Support your position with reasoning and examples taken from your reading, studies, experience, or observations.

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

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

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Time — 25 minutes

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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.

Newness has become our obsession. Novelty is more interesting to us than continuing with whatever is "tried and true." We discard the old so we can acquire the most recent model, the latest version, the newest and most improved formula. Often, we replace what is useful just because it is no longer new. Not only with material goods but also with cultural values, we prefer whatever is the latest trend.

**Assignment:** Should people always prefer new things, ideas, or values to those of the past? 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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**ESSAY**  
Time — 25 minutes

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- If your essay does not reflect your original and individual work, your test scores may be canceled.

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.

Since we live in a global society, surely we should view ourselves as citizens of the whole world. But instead, people choose to identify and associate with smaller and more familiar groups. People think of themselves as belonging to families, nations, cultures, and generations—or as belonging to smaller groups whose members share ideas, views, or common experiences. All of these kinds of groups may offer people a feeling of security but also prevent them from learning or experiencing anything new.

**Assignment:** Is there any value for people to belong only to a group or groups with which they have something in common? Plan and write an essay in which you develop your point of view on this issue. Support your position with reasoning and examples taken from your reading, studies, experience, or observations.

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

If you finish before time is called, you may check your work on this section only.

Do not turn to any other section in the test.



## SECTION 2

Time — 25 minutes

24 Questions

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

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

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

**Example:**

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

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

Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

1. Momentum gathered for a new property tax, but the ----- from home owners was so great that this proposal had to be -----.

  - (A) anticipation . . endorsed
  - (B) publicity . . revealed
  - (C) penalty . . abridged
  - (D) opposition . . abandoned
  - (E) backlash . . included

2. Most of the students found the lecturer's speech -----; in fact, it was so dull that some even nodded off.

  - (A) illuminating
  - (B) cryptic
  - (C) tedious
  - (D) disjointed
  - (E) unsettling

3. The attempts of epidemiologists to ----- the infectious disease ultimately proved futile: as soon as they managed to ----- it in one community, it would emerge somewhere else.

  - (A) contain . . check
  - (B) control . . extend
  - (C) eradicate . . unleash
  - (D) defend . . cure
  - (E) replicate . . monitor

4. The accused affected a ----- air during the interview; he made no vehement protestation of innocence, just a ----- denial of guilt.

  - (A) subdued . . scathing
  - (B) bombastic . . remorseful
  - (C) pugnacious . . terse
  - (D) quizzical . . loquacious
  - (E) nonchalant . . perfunctory

5. The award-winning novel is such ----- tale that its very intricacy has a daunting effect on readers.

  - (A) a convoluted
  - (B) a culpable
  - (C) a succinct
  - (D) an enthralling
  - (E) a felicitous



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

**Questions 6-7 are based on the following passage.**

This all started on a Saturday morning in May, one of those warm spring days that smell like clean linen. Delia had gone to the supermarket to shop for the week's meals. She was standing in the produce section, languidly choosing a bunch of celery. Grocery stores always made her reflective. Why was it, she was wondering, that celery was not called "corduroy plant"? That would be much more colorful. And garlic bulbs should be "moneybags," because their shape reminded her of the sacks of gold coins in folktales.

6. The reference to "clean linen" (line 2) primarily serves to

(A) explain a course of action  
 (B) evoke a particular sensation  
 (C) describe an unexpected development  
 (D) show nostalgia for a past experience  
 (E) point out a pressing obligation

7. The word "colorful" in line 8 conveys a sense of something

(A) garish  
 (B) robust  
 (C) subtly hued  
 (D) vividly descriptive  
 (E) eye-catching

**Questions 8-9 are based on the following passage.**

Beginning in the 1780's, novelist Charlotte Smith's explicit and implicit criticism of English life and laws, of England's social organization, earned her a reputation as a "subversive." Her novels contain some of the earliest literary attacks on the English legal system. In comparison to later exposés by nineteenth-century novelists such as Charles Dickens, Charlotte Smith's attacks appear somewhat timorous. However, it cannot be denied that it was Smith who introduced such a target for later novelists and that when she did, her action was considered so audacious that it laid her open to the charge of being a "menace."

8. The passage suggests that many of Smith's critics considered her novels to be

(A) marred by frivolous and pointless descriptions  
 (B) riddled with historical inaccuracies  
 (C) harmful to the established social order  
 (D) indifferent to questions of morality  
 (E) disrespectful of British literary traditions

9. The author of the passage mentions Charles Dickens primarily as an example of a novelist who

(A) found success by simply exposing rather than attacking social institutions  
 (B) rebelled against a literary tradition that Smith had originated  
 (C) developed the same themes as Smith, but received far less criticism for doing so  
 (D) concurred with Smith's criticisms of the English legal system  
 (E) made literary attacks that were bolder than those made by Smith



**Questions 10–15 are based on the following passage.**

*This passage is excerpted from a novel first published in 1887. Here, the narrator is describing his friend, a private detective renowned for his brilliance and eccentricity.*

His ignorance was as remarkable as his knowledge. Of contemporary literature, philosophy and politics he appeared to know next to nothing. Upon my quoting Line 5 Thomas Carlyle,\* he inquired in the naivest way who he might be and what he had done. My surprise reached a climax, however, when I found incidentally that he was ignorant of the Copernican Theory and of the composition of the solar system. That any civilized human being in this nineteenth century should not be aware that the 10 earth traveled round the sun appeared to me to be such an extraordinary fact that I could hardly realize it.

"You appear to be astonished," he said, smiling at my expression of surprise. "Now that I do know it I shall do my best to forget it."

15 "To forget it!"

"You see," he explained, "I consider that a man's brain originally is like a little empty attic, and you have to stock it with such furniture as you choose. A fool takes in all the lumber of every sort that he comes across, so that the 20 knowledge which might be useful to him gets crowded out, or at best is jumbled up with a lot of other things, so that he has a difficulty in laying his hands upon it. Now the skillful workman is very careful indeed as to what he takes into his brain-attic. He will have nothing but the tools which may 25 help him in doing his work, but of these he has a large assortment, and all in the most perfect order. It is a mistake to think that that little room has elastic walls and can distend to any extent. Depend upon it there comes a time when for every addition of knowledge you forget something that you knew before. It is of the highest importance, therefore, not to have useless facts elbowing out the useful 30 ones."

"But the solar system!" I protested.

"What the deuce is it to me?" he interrupted impatiently. 35 "You say that we go round the sun. If we went round the moon it would not make a pennyworth of difference to me or to my work."

\*Thomas Carlyle (1795–1881) was a nineteenth-century British historian and essayist.

10. It can most reasonably be inferred from lines 1–5 ("His . . . done") that the narrator believes that

(A) Carlyle was the foremost writer of his age  
(B) educated people should know who Carlyle was  
(C) Carlyle's views are unpopular in some quarters  
(D) Carlyle's ideas are not relevant to most people's daily lives  
(E) most readers do not fully appreciate the complexity of Carlyle's thinking

11. The narrator's remarks about "any civilized human being" (line 8) primarily serve to express his

(A) annoyance with a common state of affairs  
(B) regret over a particular occurrence  
(C) shock at an unexpected revelation  
(D) disappointment at his friend's actions  
(E) surprise at his friend's gullibility

12. In line 11, "realize" most nearly means

(A) clarify  
(B) actualize  
(C) accomplish  
(D) conceive  
(E) gain

13. The phrase "To forget it!" (line 15) primarily emphasizes the narrator's

(A) extreme displeasure  
(B) undisguised embarrassment  
(C) surprised disbelief  
(D) sense of urgency  
(E) feelings of regret

2



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2

14. The friend suggests that a “fool” (line 18) is one who

- (A) possesses only specialized knowledge
- (B) has no practical experience
- (C) is easily deceived
- (D) has little respect for learning
- (E) acquires information indiscriminately

15. The friend’s attitude toward the acquisition of knowledge as described in lines 16-37 is best characterized as

- (A) open-minded
- (B) pragmatic
- (C) delighted
- (D) disillusioned
- (E) apathetic

Lin



Questions 16-24 are based on the following passage.

The following passage was adapted from a book published in 2000.

It was so rare to see a real Asian American on television when I was a kid that we had a family ritual when one was spotted. It constituted what I now call an "Asian sighting."

A hoot went out: "Hey, come see this, look now!"

Line 5 Real Asians didn't include Hop Sing, the Cartwright family's houseman on the TV show *Bonanza*, or David Carradine, Jerry Lewis, or the numerous other white actors who donned makeup to play Asians. We only shouted when we saw regular Asian Americans like us, on the news, game shows, variety programs, or beauty pageants. It was a rare event.

We would then drop everything and make a frenzied rush to the tube to see who had entered that mysterious TV land where people of Asian descent 15 were virtually nonexistent. My parents participated enthusiastically in the routine as well. They liked to assess for us kids the looks, ethnicity, demeanor, intelligence and other vital signs of the real Asian, a commentary they delivered in a manner as succinct 20 and passionate as that of a sports announcer. Most irksome was their habit of comparing us to the TV Asian. When an Asian beauty contestant competed for Miss World or Miss Universe, my father invariably turned to me and said, in all seriousness, "Helen; 25 why don't you try for Miss World?" My brothers snickered and taunted in the background while I seethed in embarrassed fury.

One day I became one of those real Asians on TV. In 1972, I visited China as one of the first Americans 30 to get into the country after President Nixon's historic visit. The TV game show *To Tell the Truth* asked me to be a contestant on the show, which had celebrities guess the real contestant from imposters after receiving 35 clues about the real person. The show would cover my train fare to New York from New Jersey. I wouldn't get paid, but for every celebrity panelist who guessed wrong, I'd win \$50.00. That was enough to entice me, the struggling student, and I hopped the train to New York. On the set, I met the two Asian American actors 40 hired to play me: not only were they older than I, they were Miss World material. The available selection of Asian American actors must have been as sparse as the roles available for them to play. When it came time to pick the real Asian American college student who 45 went to China, somehow all the panelists picked me.

On the scheduled air date, my whole family crowded around the television. Mom and Dad held back from 50 doing their usual critique. At first we all watched in stunned silence, to see me as the Asian sighting. In those pre-video cassette recorder days, it was startling to see

yourself on screen. My three older brothers made wisecracks and my little sister and brother jumped up and down in excitement. Finally Dad said, "Your voice sounds different." Mom said I should have worn more makeup. They stopped foisting the Miss World pageant on me. So much for my television career. Most mind-boggling was the thought that my brief, shining moment on *To Tell the Truth* was an Asian sighting for other Asian American families across America.

55 Asian sightings are more common now, but they are still infrequent enough to create a thrill whenever real Asians appear on the screen, as martial artists, for example, or television reporters. We cheer to see a Chinese man, chubby and middle-aged, as the star of a television series. 60 We heave a sigh of relief when a movie like *Mulan* is released, using real Asian American actors' voices. Each Asian sighting that breaks through the constricting stereotypes gives another reason to celebrate.

16. The primary purpose of the passage is to

- (A) demand an end to regressive industry practices
- (B) examine the impact of a modern invention
- (C) analyze the causes of a historical phenomenon
- (D) recount a difficult and life-altering event
- (E) offer a personal view of a cultural development

17. The family's usual reaction to an "Asian sighting" (line 3) is best characterized as

- (A) excitement
- (B) shock
- (C) respect
- (D) anxiety
- (E) disdain

18. In line 5, "Real" most nearly means

- (A) serious
- (B) authentic
- (C) practical
- (D) utter
- (E) fundamental

19. The list of vital signs in lines 17-18 suggests that the parents' commentary was

- (A) innocent and amusing
- (B) technical and bewildering
- (C) critical and demoralizing
- (D) thorough and systematic
- (E) contentious and overwrought

2



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2

20. The author's description in lines 16-22 ("They liked . . . TV Asian") suggests that she was
- angry about her parents' outdated opinions
  - impressed by her parents' perceptive observations
  - irritated by her parents' comprehensive critiques
  - delighted with her parents' spirited contributions
  - troubled by her parents' inconsistent arguments
21. Lines 39-43 ("On the . . . play") imply that the actors
- had a good deal of professional experience
  - made the author question her own identity
  - would be unlikely to fool the panelists
  - needed money more than the author did
  - were unlike other Asian American performers
22. The comment in lines 43-45 ("When it . . . me") suggests that the author was
- relieved that the experience was over
  - resentful of the other contestants
  - concerned about her family's reaction
  - not surprised by the panelists' selection
  - untroubled by the repercussions of the episode

23. The observation about "pre-videocassette recorder days" (lines 49-51) primarily implies that
- an engineering breakthrough has had unfortunate consequences
  - a filming technique has improved the quality of television programming
  - a technological innovation has made a certain experience more common
  - a common piece of equipment has made television more accessible
  - an everyday object has reshaped the public's preferences
24. The example in lines 63-64 ("We cheer . . . series") primarily serves to
- applaud the increasing visibility of apparently ordinary Asian Americans on television
  - indicate dismay over some characters featured in recent television shows
  - express approval of the quality of the television performances of Asian American actors
  - underscore the importance of ethnic diversity in the entertainment industry
  - emphasize the need for more high-quality dramatic series on television

**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 3**  
**Time — 25 minutes**  
**20 Questions**

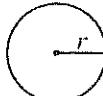
**Turn to Section 3 (page 4) of your answer sheet to answer the questions in this section.**

**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

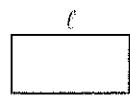
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is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



$$A = \pi r^2$$

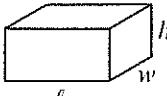
$$C = 2\pi r$$



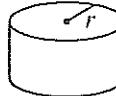
$$A = lw$$



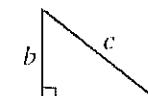
$$A = \frac{1}{2}bh$$



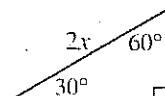
$$V = lwh$$



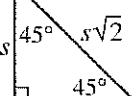
$$V = \pi r^2 h$$



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



Special Right Triangles



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

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

1. If  $4x + 4y = 18$  and  $x = 2$ , what is the value of  $2y$ ?
  - (A) 5
  - (B) 7
  - (C) 9
  - (D) 10
  - (E) 16
2. A store will print an order of shirts with a special design. The store charges a one-time fee of \$200 for creating the artwork, plus \$6 for each shirt that it prints. Which of the following gives the total charge, in dollars, to print an order of  $n$  shirts?
  - (A)  $194n$
  - (B)  $200n + 6$
  - (C)  $206 + n$
  - (D)  $200 + 6n$
  - (E)  $200 + n + 6$

GO ON TO THE NEXT PAGE 

3

3

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3. Point  $M$  is the midpoint of  $\overline{AB}$ . Points  $C$  and  $D$  are located on  $\overline{AB}$  in such a way that  $AC = CM$  and  $MD = DB$ . If  $MD = 5$ , what is the length  $AD$ ?

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

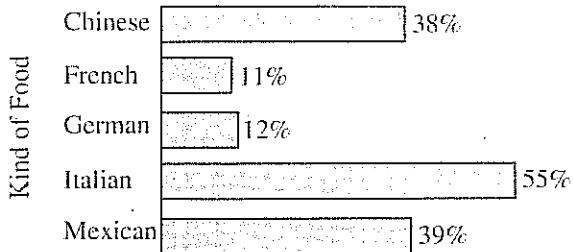
4. If  $5^{k-2} + 5^2 = 50$ , what is the value of  $k$ ?

(A) 2  
(B) 4  
(C) 5  
(D) 10  
(E) 20

5. For which of the following pairs of numbers is the ratio of the smaller number to the larger number 3 to 5?

(A) 4, 6  
(B) 5, 10  
(C) 6, 9  
(D) 8, 8  
(E) 9, 15

#### ETHNIC FOOD SURVEY



6. For each of 5 kinds of food, the graph above shows the percent of 800 people surveyed who said they enjoy that kind of food. Based on the information in the graph, which of the following statements must be true?

- Some of the people said they enjoy more than one kind of food.
  - More than half the people said they enjoy Italian food.
  - All the people who said they enjoy Mexican food also said they enjoy Italian food.
- (A) II only  
(B) III only  
(C) I and II only  
(D) II and III only  
(E) I, II, and III

7. If  $\frac{5}{x+1} = \frac{5}{2x-1}$ , what is the value of  $x$ ?

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

3

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3

8. How many integers between 9 and 100 have the tens digit equal to 4 or 5 and the units digit (ones digit) equal to 7, 8, or 9?

(A) Two  
(B) Three  
(C) Four  
(D) Six  
(E) Nine

10. For all positive integers  $a$  and  $b$ , let  $a \diamond b$  be defined by  $a \diamond b = ab^2$ . What is the value of  $2 \diamond 3$ ?

(A) 6  
(B) 12  
(C) 18  
(D) 27  
(E) 36

Sequence  $P$ : 2, 4, 8, ...

Sequence  $T$ : 10, 20, 30, ...

9. The first term of sequence  $P$  is 2, and each term after the first is 2 times the preceding term. The first term of sequence  $T$  is 10, and each term after the first is 10 more than the preceding term. What is the least value of  $n$  such that the  $n$ th term of sequence  $P$  is greater than the  $n$ th term of sequence  $T$ ?

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

Lonnie sometimes goes to comedy movies.  
Greta never goes to mystery movies.

11. If the two statements above are true, which of the following statements must also be true?

I. Lonnie never goes to mystery movies.  
II. Greta sometimes goes to comedy movies.  
III. Lonnie and Greta never go to mystery movies together.

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

3

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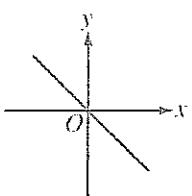
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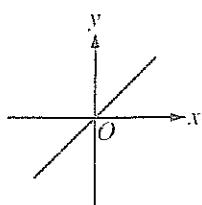
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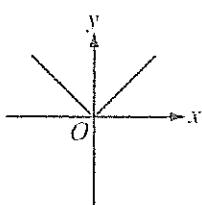


12. The figure above shows the graph of  $y = f(x)$ .  
Which of the following is the graph of  $y = |f(x)|$ ?

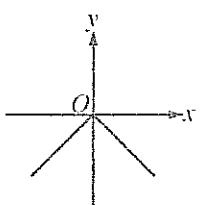
(A)



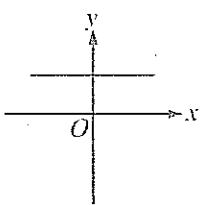
(B)



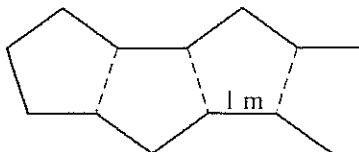
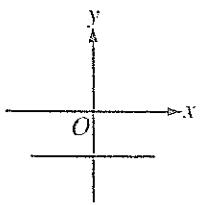
(C)



(D)



(E)



13. A garden consists of a continuous chain of flower beds in the shape of pentagons, the beginning of which is shown in the figure above. There are 17 flower beds in the chain, and each one, except the first and last, shares two of its sides with adjacent flower beds. If the length of each side of each bed is 1 meter, what is the perimeter of the garden?
- (A) 50 meters  
(B) 51 meters  
(C) 53 meters  
(D) 55 meters  
(E) 57 meters

14. If  $y + x < y - x$ , which of the following statements must be true?

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

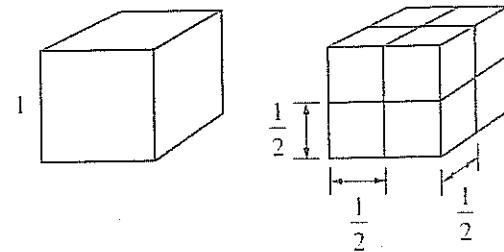
15. If the average (arithmetic mean) of the measures of two noncongruent angles of an isosceles triangle is  $70^\circ$ , which of the following is the measure of one of the angles of the triangle?
- (A)  $50^\circ$   
 (B)  $60^\circ$   
 (C)  $80^\circ$   
 (D)  $90^\circ$   
 (E)  $100^\circ$

17. If  $s$  is the sum of 3 consecutive odd integers and  $n$  is one of the 3 odd integers, which of the following could be true?
- (A)  $s = 3n$   
 (B)  $s = 3n + 3$   
 (C)  $s = 3n - 3$   
 (D)  $s = 6n$   
 (E)  $s = 6n + 1$

ANNA'S DAILY SERVINGS OF FRUITS AND VEGETABLES

Day	Fruits	Vegetables
Monday	5	0
Tuesday	1	4
Wednesday	2	2
Thursday	3	2
Friday	3	3

16. A nutrition expert recommends that a person eat a minimum of 5 servings of fruits or vegetables a day; these 5 servings are to include at least 2 servings of fruit and at least 2 servings of vegetables. On how many days listed in the table above did Anna satisfy all the recommendations of the nutrition expert?
- (A) One  
 (B) Two  
 (C) Three  
 (D) Four  
 (E) Five



18. If a 1-inch cube of cheese were cut in half in all three directions as shown above, then the total surface area of the separated smaller cubes would be how much greater than the surface area of the original 1-inch cube?
- (A) 2 square inches  
 (B) 4 square inches  
 (C) 6 square inches  
 (D) 8 square inches  
 (E) 12 square inches

3

3

3

3

3

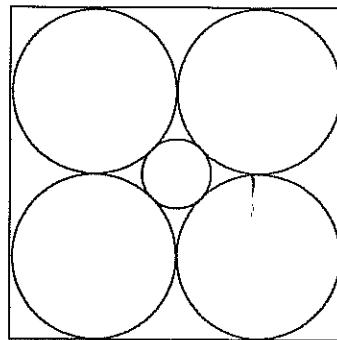
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3

3

19. If  $w = x + y + z$ , what is the average (arithmetic mean) of  $w$ ,  $x$ ,  $y$ , and  $z$  in terms of  $w$ ?

- (A)  $\frac{w}{2}$
- (B)  $\frac{w}{3}$
- (C)  $\frac{w}{4}$
- (D)  $\frac{w}{6}$
- (E)  $\frac{w}{8}$



20. In the figure above, each of the four large circles is tangent to two of the other large circles, the small circle, and two sides of the square. If the radius of each of the large circles is 1, what is the radius of the small circle?

- (A)  $\frac{1}{4}$
- (B)  $\frac{1}{2}$
- (C)  $\frac{\sqrt{2} - 1}{2}$  (approximately 0.207)
- (D)  $\sqrt{2} - 1$  (approximately 0.414)
- (E)  $\frac{\sqrt{2}}{2}$  (approximately 0.707)

**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

24 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. Women in the United States gained ----- long after Black American men did, but Black citizens had greater difficulty exercising their new voting rights.  
 (A) restitution (B) suffrage (C) solace  
 (D) initiatives (E) levies
2. Marketing firms rely heavily on ----- information: statistical data about the size, growth, and distribution of human populations.  
 (A) classified (B) demographic (C) conjectural  
 (D) qualitative (E) anecdotal
3. Electing not to stay in subordinate positions in large firms, some attorneys -----, seeking more ----- and independence elsewhere.  
 (A) compromise . . servility  
 (B) persevere . . competence  
 (C) acquiesce . . banality  
 (D) resign . . autonomy  
 (E) recant . . conformity

4. The kiwi bird's wings are -----: that is, they are rudiments of wings and serve no function.  
 (A) ostentatious (B) vestigial (C) prodigious  
 (D) invasive (E) kinetic
5. Because all members of this organization are idealists, they ----- any assertion that political enterprises should be purely -----.  
 (A) ignore . . universal  
 (B) criticize . . visionary  
 (C) condemn . . benevolent  
 (D) denounce . . pragmatic  
 (E) condone . . indulgent
6. The critic noted that the ----- tone that characterizes much of the writer's work stands in stark contrast to his gentle disposition.  
 (A) benign (B) somber (C) stoic  
 (D) conciliatory (E) strident
7. Peter was ----- without being -----: he held fast to his beliefs but avoided arguing about them with others.  
 (A) decisive . . philanthropic  
 (B) haphazard . . quarrelsome  
 (C) sentimental . . litigious  
 (D) resolute . . polemical  
 (E) steadfast . . acquiescent
8. African American poet Lucille Clifton writes in a notably ----- style, achieving great impact in a few unadorned words.  
 (A) incantatory (B) economical (C) disaffected  
 (D) unstinting (E) evenhanded



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

**Questions 9–12 are based on the following passages.**

**Passage 1**

Because chimpanzees exhibit behavior so remarkably similar to some human behavior, scientists observing them in the wild often develop a degree of empathy with the individuals being studied. In itself this is not a bad thing. Subtle communication cues among chimpanzees are more readily detected and recorded once an observer has established this empathy.

However, scientists must guard against the constant danger of automatically interpreting what they see as if chimps act from human motivations. Their observations must be as objective as possible. Intuitive interpretations may initially be based on an understanding stemming directly from empathy, but they must be tested afterward against the facts set out in the data.

**Passage 2**

My first day observing a community of forest chimpanzees showed me a richer and more satisfying world than I had imagined. I suddenly recognized why I, a non-scientist, or anyone should care about what happens to them: not, ultimately, because they use tools and solve problems and are intellectual beings, but because they are emotional beings, as we are, and because their emotions are so obviously similar to ours.

I was moved by the play, the adult male chasing a toddler round and round a tree, the mother nibbling her baby's toes and looking blissful, the three females playing with and adoring a single infant. They feel! That was my discovery.

9. Both passages support which generalization about wild chimpanzees?

- (A) Their family structures are somewhat similar to those of humans.
- (B) Their behavior often resembles that of humans.
- (C) Their actions are prompted by strong psychological urges.
- (D) Their facial expressions can be interpreted accurately by nonspecialists.
- (E) Their reactions differ from those of other apes.

10. The primary purpose of Passage 2 is to

- (A) describe a typical day's work on a scientific project
- (B) report details about an attempt to train wild chimpanzees
- (C) propose an alternative method of studying animal behavior
- (D) convey an unexpected and memorable insight
- (E) relate an unusual and fleeting experience

11. The experience described in Passage 2 most directly suggests that the statement about the "danger" (line 9, Passage 1)

- (A) accurately assesses the strength of a common human impulse
- (B) needlessly exaggerates the risks a person faces among wild chimpanzees
- (C) appropriately warns professionals about the necessity of keeping their research current
- (D) discourages overly optimistic observers from expecting to make new discoveries
- (E) fails to consider the consequences of a flawed research methodology

12. The author of Passage 1 would most likely respond to lines 26–27 in Passage 2 ("They . . . discovery") by

- (A) applauding the author for maintaining scientific objectivity
- (B) chiding the author for not submitting findings for scientific review
- (C) criticizing the author for having poorly defined research goals
- (D) urging the author to rely less on observations made in the wild
- (E) cautioning the author against failing to verify a conclusion



Questions 13–24 are based on the following passage.

This passage, adapted from a 1998 book, discusses the ability of some sea creatures to emit light, a phenomenon known as bioluminescence.

Sailing at night in luminescent seas is something splendid that is not given to everyone. On a quiet night, with just enough wind to ghost along without the engine, it can be euphoric. Euphoria is worth seeking; we don't often achieve it in this rush-around world. You need a pause, or you miss it. Sitting in the cockpit on a night watch, it takes a little time to become adapted to the dark and to realize how much is going on in the sea around you. What you generally see first is a cloudy luminescence.

One source of such luminescence is an alga\* called *Noctiluca*. Each of these organisms is barely a millimeter across and practically transparent, so that it is difficult to see even if you know what you are looking for. It is not much to look at if you haven't got a microscope aboard, but a more interesting question is not what *Noctiluca* looks like, flashing or quiescent, but why it bothers to flash. Isn't it suicidal to advertise your presence in this blatant way, when you are near enough invisible if you sit tight and do nothing? The answer, for the alga, is copepods, the next step up in the food chain and the most abundant small predators in the sea. Crustaceans, copepods are related to shrimps, crabs, and lobsters. But they are only three or four millimeters long—big enough to see in a bucket, if you shine a bright light and watch for their shadows, for they, too, do their best to be transparent. Copepods move in jerks, pouncing on yet smaller prey.

They don't like prey that flashes. Grab it, it explodes into light in their scratchy little arms, and they drop it. An odd bit of behavior, really, because the alga, so far as we know, doesn't taste nasty, or sting, or do anything unpleasant to the predator, and you might reasonably expect the copepod to habituate to the flashes after a few tries. But it does not, apparently, and since practically every animal that has ever been studied habituates to stimuli that repeatedly prove harmless, there must be some other explanation. The most likely possibility is that the copepod itself wishes to remain invisible. Chomp down the alga, and the unfortunate copepod would be, for a while, lit up by the glow in its gut, a sitting target for a fish or anyone else with a taste for seafood.

In some of the larger luminescent species, in which the patterns of light differ between sexes, it is a fair bet that luminescence serves as an identification signal, a means of bringing the sexes together in places that have so little light that shapes and normal, reflected

colors won't do. Others use lights to attract prey, like deep-sea anglerfish, with luminous-tipped rods that wave seductively in front of cavernous mouths, invisible in the abyssal dark. Or searchlights. One outstandingly devious group of deep-sea predatory fish, *Malacosteus*, has developed a system of red searchlights that are probably invisible to everybody except themselves. Red light hardly penetrates beyond the first few meters of water, even at the sea surface, and most mid-to-deep-water marine animals have visual systems that cannot perceive red light. *Malacosteus*, one must suppose, has the jump on almost everybody around: night sights to target prey that will never even be aware that they have been spotted.

But by far the most widespread use is camouflage. Deep down, or even in shallow water at night, an animal is often invisible except as a silhouette against the feeble light filtering from above. A predator can come up from below, itself invisible to a victim in the water above it. Lights along the underside, carefully matched to the light coming from above, can destroy the silhouette. In principle, the system would work in broad daylight. Indeed, a system like this was used briefly at the beginning of the Second World War, to hide military aircraft hunting submarines. It reduced the range at which planes could be spotted from a dozen miles to around two, uncomfortably close for a submarine recharging its batteries at the surface and needing time to crash dive. But then radar became commonplace, and lights became obsolete.

\*singular of “algae”

13. The passage as a whole is best characterized as

- (A) a case study of an unusual type of bioluminescence
- (B) a survey of popular misconceptions about the function of bioluminescence
- (C) a discussion of the evolutionary origins of bioluminescence
- (D) an overview of the various functions of bioluminescence in sea creatures
- (E) an examination of luminescent species that use camouflage



14. In line 2, “given” most nearly means

- (A) inclined
- (B) transported
- (C) devoted
- (D) applied
- (E) granted

15. The phrase “ghost along” (line 3) primarily serves to suggest

- (A) misleading appearance
- (B) labored motion
- (C) unexplained phenomena
- (D) alarming effects
- (E) silent travel

16. In line 7, “adapted” most nearly means

- (A) evolved
- (B) committed
- (C) acclimated
- (D) predisposed
- (E) altered

17. The author suggests that the best answer to the “more interesting question” (line 15) is that flashing

- (A) serves to deter potential predators
- (B) enables *Noctiluca* to see its environment better
- (C) helps *Noctiluca* attract a mate
- (D) improves *Noctiluca*’s chances of finding an adequate food supply
- (E) functions as a mode of communication with other algae

18. The question in lines 17-19 (“Isn’t it . . . nothing?”) primarily serves to

- (A) reveal the scientific community’s limited understanding of *Noctiluca*
- (B) imply that some research on luminescence is flawed
- (C) suggest that an adaptation serves no biological purpose
- (D) note an apparent drawback to luminescence in *Noctiluca*
- (E) indicate that luminescence can serve a variety of functions

19. In line 25, the author most likely mentions that copepods “do their best to be transparent” in order to

- (A) explain why they are luminescent
- (B) account for their apparent dislike of eating *Noctiluca*
- (C) account for their relative abundance
- (D) reinforce the point that they are more difficult to detect than are *Noctiluca*
- (E) indicate what makes them so successful as predators

20. The author argues that copepods “don’t like prey that flashes” (line 27) because they

- (A) are confused by the lights
- (B) want to avoid detection by predators
- (C) rarely encounter luminescence
- (D) know that luminescent animals taste bitter
- (E) are temporarily blinded by the flashes

21. In line 29, the author describes the copepod’s “behavior” as “odd” because it

- (A) is rarely seen in aquatic animals
- (B) is a rapid response to prolonged stimuli
- (C) seems to defy typical response patterns in animals
- (D) does not appear to help the organism locate food
- (E) occurs sporadically rather than regularly

22. The expression “fair bet” (line 42) is used to make the point that

- (A) a hypothesis is most likely accurate
- (B) a prediction will probably prove fruitless
- (C) a theory is likely to be rejected
- (D) an event will probably occur
- (E) an observation is likely to be understood

4



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4

23. The luminescence of *Malacosteus* (line 50) differs from that of other species in that it
- (A) is only possible in deep water
  - (B) temporarily startles other animals
  - (C) is more obvious near the surface of the ocean
  - (D) is most likely visible only to a *Malacosteus*
  - (E) often protects *Malacosteus* from its predators

24. A “submarine recharging its batteries at the surface” (line 71) is most analogous to a
- (A) crab temporarily outside of its protective shell
  - (B) shark continually foraging for food in the ocean
  - (C) koala living in captivity in a zoo
  - (D) bat emitting sounds to track an insect
  - (E) goose flying south for the winter

S T O P

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

## SECTION 5

Time — 25 minutes

18 Questions

**Turn to Section 5 (page 5) 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.

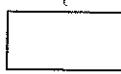
Notes

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



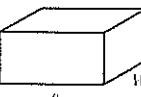
$$A = \pi r^2$$



$$A = \ell w$$



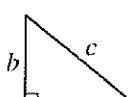
$$A = \frac{1}{2}bh$$



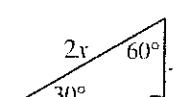
$$V = \ell wh$$



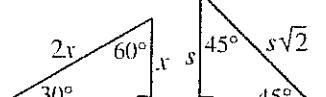
$$V = \pi r^2 h$$



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



$$\begin{array}{l} 2x \\ 30^\circ \\ x\sqrt{3} \end{array}$$



$$\begin{array}{l} s \\ 45^\circ \\ s\sqrt{2} \end{array}$$

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 NOT a factor of  $10^2 - 10$ ?
  - (A) 10
  - (B) 15
  - (C) 30
  - (D) 45
  - (E) 50
2. Ms. Stevens will purchase 2 pens and 1 notebook for each of her 6 children. If the cost of each pen is  $p$  dollars and the cost of each notebook is  $n$  dollars, which of the following represents the total cost, in dollars, of the pens and notebooks Ms. Stevens will purchase?
  - (A)  $6p + n$
  - (B)  $12p + n$
  - (C)  $6(p + n)$
  - (D)  $6(p + 2n)$
  - (E)  $6(2p + n)$

GO ON TO THE NEXT PAGE 

5



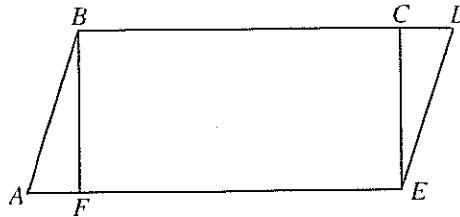
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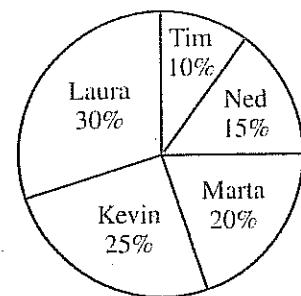
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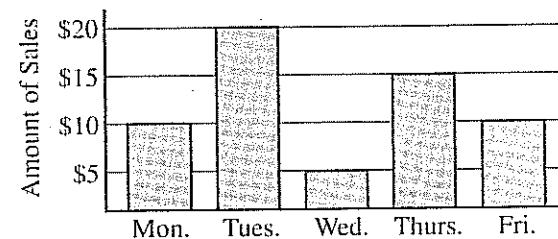
3. In the figure above,  $ABDE$  is a parallelogram and  $BCEF$  is a rectangle. If  $BD = 14$ ,  $BF = 6$ , and  $AF = 2$ , what is the area of rectangle  $BCEF$ ?

- (A) 72
- (B) 81
- (C) 84
- (D) 90
- (E) 96

#### TOTAL DOLLAR SALES



#### ONE STUDENT'S SALES



4. Five students sold candy bars for a total of \$400 over a 5-day period to raise money for their debate team. The circle graph above shows each student's sales as a percent of the total dollar sales. The bar graph shows the sales of one student over the five days. The sales of which student are represented by the bar graph?

- (A) Tim
- (B) Ned
- (C) Marta
- (D) Kevin
- (E) Laura

5. If  $\frac{x}{y} = 2$  and  $\frac{z}{x} = 4$ , what is the value of  $\frac{x+y+z}{x}$ ?

(A)  $4\frac{1}{2}$

(B) 5

(C)  $5\frac{1}{2}$

(D) 6

(E) 7

7. In the  $xy$ -plane, a line contains the points  $(4, 2)$ ,  $(-2, -1)$ , and  $(k, 5)$ . What is the value of  $k$ ?

(A) 6

(B) 7

(C) 8

(D) 9

(E) 10

1, -2, 3, -4, 5, -6, ...

6. The first six terms of a sequence are shown above. The odd-numbered terms are increasing consecutive positive odd integers starting with 1. The even-numbered terms are decreasing consecutive negative even integers starting with -2. What is the sum of the 50th and 51st terms of the sequence?

(A) -101

(B) -1

(C) 0

(D) 1

(E) 101

8. If  $x^{\frac{2}{3}} = y$ , what does  $x^4$  equal in terms of  $y$ ?

(A)  $y^2$

(B)  $y^{\frac{8}{3}}$

(C)  $y^3$

(D)  $y^5$

(E)  $y^6$

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

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

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

Write answer →  
in boxes.

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

Grid in →  
result.

Answer: 2.5

Fraction  
line

2	.	5
•	•	•
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
•	•	•
1	1	1
2	2	2
3	3	3
4	4	4

2	0	1
•	•	•
1	1	1
2	2	2
3	3	3
4	4	4

- 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  $\frac{7}{2}$ . (If  $\boxed{3}|\boxed{1}|\boxed{2}$  is gridded, it will be interpreted as  $\frac{31}{2}$ , not  $3\frac{1}{2}$ .)

342,198.75

9. If the digit 2 in the number above is replaced by the digit 6, by how much will the number increase?

- 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	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

10. In the  $xy$ -coordinate plane, point  $(1, 4)$  is on the line whose equation is  $y = 3x + b$ . What is the value of  $b$ ?

GO ON TO THE NEXT PAGE

5



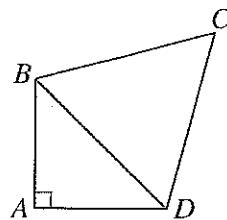
5



5



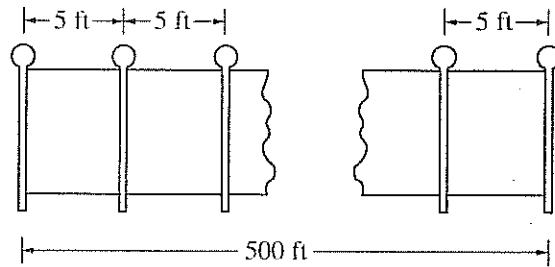
5



11. In the figure above,  $\triangle ABD$  is isosceles, and  $\triangle BCD$  is equilateral. What is the degree measure of  $\angle ADC$ ?  
(Disregard the degree symbol when gridding your answer.)

12. If  $0 < 3x - 2 < 1$ , what is one possible value for  $x$ ?

13. In the  $xy$ -plane, a circle has its center at the origin and a radius of 5. What is the length of the shortest line segment that has one endpoint on the circle and the other at  $(13, 0)$ ?



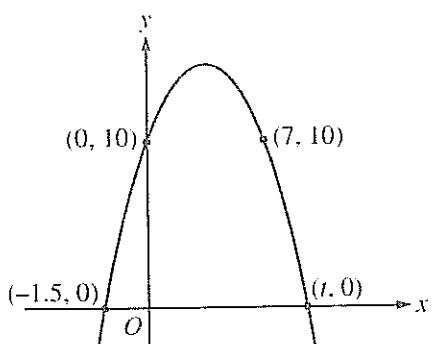
14. The figure above represents a stretch of fencing that is 500 feet long. If fence posts are placed at each end and also placed every 5 feet along the fence for support, how many fence posts in all are there in this stretch of fencing?

5

5

5

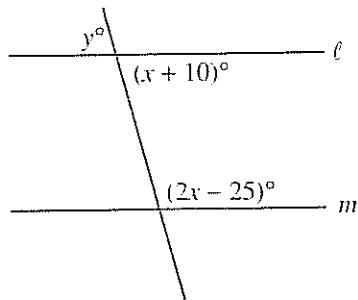
5



15. The figure above shows the graph of a quadratic function. What is the value of  $t$ ?

17. A fitness center purchased a number of exercise machines: 4 costing \$1,700 each, 8 costing \$1,300 each, and  $x$  costing \$1,200 each, where  $x$  is a positive odd integer. If the median price for all the exercise machines purchased by the fitness center was \$1,300, what is the greatest possible value of  $x$ ?

18. A car traveled 10 miles at an average speed of 20 miles per hour and then traveled the next 10 miles at an average speed of 40 miles per hour. What was the average speed, in miles per hour, of the car for the 20 miles?



16. In the figure above,  $\ell \parallel m$ . What is the value of  $y$ ?

**S T O P**

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

## SECTION 7

Time — 25 minutes

35 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.

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. Teddy bears comforted and amused children throughout the twentieth century, and it will be cherished to those born in the future as well.
- (A) it will be cherished to
  - (B) they are still cherished to
  - (C) it is still cherished by
  - (D) being still cherished by
  - (E) they will be cherished by

2. The film was full of suspense, this made Riya keep her hands gripped tightly to her seat.

  - (A) The film was full of suspense, this made Riya keep her
  - (B) The film, which was full of suspense, keeping Riya's
  - (C) The suspenseful film made Riya keep her
  - (D) Because of how suspenseful the film was, this is what kept Riya's
  - (E) Being full of suspense, Riya found that the film made her keep her

3. In his old age, the painter James McNeill Whistler walked to the beach almost every day, and he was carrying a small easel and his paints in order to paint the sky, the water, and the shore.

  - (A) and he was carrying
  - (B) when he carries
  - (C) where he carried
  - (D) carrying
  - (E) to carry

4. The ideas for songs, games, and skits that fill the *Cub Scout Leader's Guide* is invaluable for scout leaders when they try to find creative activities for the children.

  - (A) is invaluable for scout leaders when they try to find creative activities
  - (B) are invaluable for scout leaders trying to find creative activities
  - (C) are those with the invaluable creative activities scout leaders try to find
  - (D) for scout leaders trying to find creative activities, is invaluable
  - (E) and which is invaluable for scout leaders who try to find creative activities

5. In researching an individual's life, the biographer must sift through facts, opinions, untruths, and different accounts of the same events.
- (A) different accounts of the same events  
(B) different people telling different accounts of the same events  
(C) events told in different ways by different people  
(D) accounts about events that are different  
(E) people that tell different accounts of events
6. Although talking while gesturing with one's hands was once considered undesirable, researchers have now found that to use gestures when you converse makes it easier for many people to think and speak.
- (A) to use gestures when you converse makes it easier for many people to think and speak  
(B) to make thinking and speaking easier for many people during conversations you should use gesturing  
(C) for the ease of many people during conversations one should gesture to think and speak  
(D) using gestures during conversation makes thinking and speaking easier for many people  
(E) thinking, as well as to speak, are easier for many people when gesturing while conversing
7. There is increasingly widespread reliance on electronic mail, some people still resist using it, especially those who prefer handwritten letters.
- (A) There is  
(B) There are  
(C) Because there are  
(D) Although there is  
(E) In that there is
8. The ancient Egyptians had a varied diet and ate no refined sugar, they did not suffer from the tooth decay associated with the consumption of processed sugar.
- (A) The ancient Egyptians had a varied diet and ate no refined sugar, they  
(B) The ancient Egyptians, who had a varied diet and did not eat refined sugar, and  
(C) With a varied diet and them not eating refined sugar, the ancient Egyptians  
(D) What with a varied diet and being free of refined sugar, the ancient Egyptians  
(E) Because the ancient Egyptians had a varied diet that was free of refined sugar, they
9. When visiting a rain forest, the preservation of the environment should be the tourist's concern.
- (A) the preservation of the environment should be the tourist's concern  
(B) the environment and its preservation should be the tourist's concern  
(C) the preservation of the environment should be what concerns tourists  
(D) the tourist should be concerned with the preservation of the environment  
(E) the tourist, regarding the preservation of the environment, should be concerned
10. Government regulations aimed at encouraging fuel economy requires automakers to produce one fuel-efficient vehicle for every inefficient one.
- (A) requires automakers to produce  
(B) require automakers to produce  
(C) require automakers producing  
(D) that requires automakers to produce  
(E) are requiring automakers producing
11. A severe northeastern storm struck Boston on New Year's Day, 1900, slowing down the loading of ships in the harbor, the city was caught off guard because of the Weather Bureau being closed for the holidays.
- (A) harbor, the city was caught off guard because of the Weather Bureau being closed for the holidays  
(B) harbor, because the Weather Bureau was closed for the holidays, the city was caught off guard  
(C) harbor; catching the city off guard because the Weather Bureau was closed for the holidays  
(D) harbor; the city was caught off guard because the Weather Bureau was closed for the holidays  
(E) harbor and catching the city off guard, which was caused by the Weather Bureau being closed for the holidays

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.** Many years after Ernest Just received the NAACP's

Spingarn medal for his groundbreaking discoveries

A B

in cell biology, the nation issuing a postage stamp

C

to honor him. No error

D E

**13.** Many jazz enthusiasts would have to admit that

A

their having unjustly overlooked the music of

B C

Bennie Nawahi, who popularized the Hawaiian

D

steel guitar sound in the early 1930's. No error

E

**14.** Joseph Pulitzer, a Hungarian-born immigrant to the

A

United States and an innovator in the field of popular

B

journalism, who established the Pulitzer Prizes in

C

D

journalism and literature. No error

E

**15.** Ethel Payne, the tough investigative reporter which  
A  
is well known for her coverage of the Civil Rights  
B  
movement, first received critical acclaim for a diary  
C  
she kept while living in Japan after the Second World  
D  
War. No error  
E

**16.** By incorporating Pueblo figures into her  
A  
strongly geometric and abstract work is why  
B C  
Pueblo artist Helen Hardin has had a significant  
impact on contemporary Native American art.  
D  
No error  
E

**17.** There are a short but substantive list of  
A B  
major innovations in American education that  
resulted from the efforts of mathematician  
C D  
Winifred Merrill. No error  
E

**18.** The bus would not have had to take the long  
A  
detour instead of the main highway if the bridge  
B  
did not become treacherous in the aftermath of  
C D  
an ice storm. No error  
E

19. Although one of the most frequently taught of  
 A  
 William Faulkner's works, *Light in August* remains  
 B  
 one of the least understood, one of the hardest to bring  
 C  
 into either intellectual or aesthetic focus. No error  
 D  
 E

20. By using electromagnetic sensors to record  
 A  
 the frequency of lightning strikes throughout  
 B  
 the United States, meteorologists have  
 C  
 determined that it occurs at the rate of  
 D  
 2,000 per hour. No error  
 E

21. Despite research on the diagnosis of heart disease and  
 A  
 the use of increasingly sophisticated technology  
 B  
 in its treatment, the condition of coronary arteries is  
 C  
 still difficult to assess precisely. No error  
 D  
 E

22. The African violet is among the most popular house-  
 A  
 plants because their flowers bloom throughout the  
 B  
 year and come in a wide array of colors. No error  
 C  
 D  
 E

23. No one but a fool would readily lend money to  
 A  
 a person who is known to be a frequent gambler.  
 C  
 D

No error  
 E

24. The plans proposed by the students for the home-

coming celebrations are perfectly clear and it is well  
 A  
 within our budget; however, the plans are not likely  
 C  
 to be approved by the administration. No error  
 D  
 E

25. It was obvious that all of the candidates had planned

carefully for the televised debate, for each answer to  
 A  
 B  
 C  
 the opening question showed evidence of having been  
 D  
 rehearsed. No error  
 E

26. For any mayor of a vast metropolitan area, an  
 A  
understanding of current issues in all districts  
 B  
is not only desirous but also vital. No error  
 C  
 D  
 E

27. Because of the exceptionally hilly terrain, the  
 A                    B

final miles of the racecourse were difficult for  
 C  
 the other runners and me. No error  
 D                    E

28. The seven-month-old baby was considered precocious

to her family because she was already able to grasp  
 A                    B  
 tiny items delicately between her thumb and  
 C                    D  
 forefinger. No error  
 E

29. To those of us who had heard the principal of

A                    B  
 the high school talk about the budget, the news  
 C  
 of the staff cuts was not surprising. No error  
 D                    E

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

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

**Questions 30-35 refer to the following passage.**

(1) Many people believe that failure can be the source of success. (2) Although it may sound ludicrous to some, there is much truth to it, as those who have experienced such failures can attest. (3) To fail, one must first make an attempt. (4) In that attempt, experience expands, new ideas blossom, and viewpoints change. (5) And yet, even if one does not always accomplish what he or she sets out to do, one gains new knowledge from the attempt. (6) Taking medication, for example. (7) Drugs have to be tested and proven effective before being approved and dispensed. (8) Almost all drugs go through strict testing before approval and failing at least once. (9) Such trial and error is behind nearly every new idea and method.

(10) The idea that success arises from failure is one of the basic truths behind the scientific method. (11) When a scientist collects data and forms a hypothesis, he or she hopes that the hypothesis is correct. (12) However, a result contradicting the educated guess can be just as welcome. (13) Even disappointing results can increase scientific knowledge. (14) A scientist who finds that a hypothesis is false can then try to develop a new one based on the information obtained.

30. In context, which is the best version of the underlined portion of sentence 2 (reproduced below)?

*Although it may sound ludicrous to some, there is much truth to it, as those who have experienced such failures can attest.*

- (A) (as it is now)
- (B) to be told about it
- (C) from the source
- (D) to this sentiment
- (E) to be perceived

31. Which of the following is the best version of sentence 3 (reproduced below) ?

*To fail, one must first make an attempt.*

- (A) (As it is now)
- (B) To fail, you must first have been making an attempt.
- (C) In failing one must make an attempt first.
- (D) First, you must make an attempt to have failed.
- (E) One must make an attempt first, to fail.

32. In context, which of the following is the best replacement for "And yet" in sentence 5 ?

- (A) Nevertheless
- (B) In other words
- (C) However
- (D) In contrast
- (E) Supposedly

33. In context, which of the following is the best way to revise the underlined portion of sentences 6 and 7 (reproduced below) in order to combine the sentences?

*Taking medication, for example. Drugs have to be tested and proven effective before being approved and dispensed.*

- (A) Taking medication, one sees that drugs
- (B) One example is medication: drugs
- (C) Take as an example medication, for instance, drugs
- (D) We see medication as one example; it shows us that drugs
- (E) Regarding medication, drugs

34. Which of the following is the best version of the underlined portion of sentence 8 (reproduced below) ?

*Almost all drugs go through strict testing before approval and failing at least once.*

- (A) (as it is now)
- (B) approval, failing
- (C) approval; failure occurring
- (D) approval; they failed
- (E) approval but they have failed

35. Which of the following is the best version of the underlined portion of sentence 14 (reproduced below) ?

*A scientist who finds that a hypothesis is false can then try to develop a new one based on the information obtained.*

- (A) (As it is now)
- (B) A scientist, finding a hypothesis is false, can have tried to develop
- (C) Finding a hypothesis as false, a scientist would try to develop
- (D) A false hypothesis can have a scientist now try to develop
- (E) Hypotheses that are false can teach a scientist; they develop

## STOP

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

**SECTION 8**

Time — 20 minutes

19 Questions

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

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

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

**Example:**

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

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

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

1. Unlike some entertainers whose performances rarely vary, jazz great Louis Armstrong frequently ----- during his performances, spontaneously ----- new phrasing in existing songs.
  - (A) vocalized . . eliminating
  - (B) improvised . . introducing
  - (C) deliberated . . satirizing
  - (D) ad-libbed . . rehearsing
  - (E) extemporized . . bungling
2. Not wanting to speak -----, Julia ----- the urge to announce her scientific findings until she had double-checked the data.
  - (A) harshly . . indulged
  - (B) prematurely . . suppressed
  - (C) inappropriately . . acknowledged
  - (D) rashly . . advanced
  - (E) enthusiastically . . defined

3. Some readers find the crime fiction of Patricia Highsmith to be ----- because her protagonists are not always punished for their -----.

- (A) unprincipled . . altruism
- (B) ethical . . malfeasance
- (C) redemptive . . temperance
- (D) immoral . . transgressions
- (E) prescriptive . . foibles

4. People did not suddenly learn to use fire, but did so slowly over time with countless advances offset by ----- periods.

- (A) explosive (B) fertile (C) predictable
- (D) contemplative (E) regressive

5. Hoping to preserve natural habitats, conservationists lobbied for legislation that would ----- commercial development in these areas.

- (A) mandate (B) accommodate (C) economize
- (D) diversify (E) arrest

6. Because her new job required daily attendance, Joan was obliged to ----- her formerly ----- lifestyle as a traveling musician.

- (A) forgo . . sedentary
- (B) perpetuate . . nomadic
- (C) glorify . . dissolute
- (D) augment . . lavish
- (E) relinquish . . itinerant



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 7-19 are based on the following passages.**

*The following passages address the issue of accuracy in the translation of poetry. Passage 1 discusses epic poems composed in ancient Greek and attributed to Homer. Passage 2 considers a tenth-century poem written in Anglo-Saxon, an early form of English.*

**Passage 1**

In the mid-nineteenth century, a scholar named Francis William Newman attempted a literal translation of the works of Homer. His purpose was to publish a translation that would contrast with the elegance of Alexander Pope's eighteenth-century translation. Newman's book would be forgotten today had it not been reviewed by Matthew Arnold, one of the nineteenth century's most famous essayists and poets.

10 Newman supposed that a literal translation must be the most faithful translation. Arnold, however, argued that in Homer's works, several qualities were to be found —clarity, nobility, simplicity, and so on. He thought that a translator should always convey the impression of those qualities, even in cases where the original text did not bear them out. Arnold pointed out that a literal translation made for oddity and for uncouthness.

20 For example, in the Romance languages we do not say "It is cold" to describe a winter's day—we say "It makes cold": *Il fait froid* in French, *Fa freddo* in Italian, and so on. Yet I don't think anybody should translate "Il fait froid" as "It makes cold."

Matthew Arnold pointed out that if a text is translated literally, then false emphases are created. I do not know whether he came across Captain Burton's translations of a classic Arabic language book during the same time period. Perhaps he did, but too late to refer to it in his remarks about translation. Burton translates the title *Qitah alif laila wa laila* as *Book of the Thousand Nights and a Night*, instead of *Book of the Thousand and One Nights*. This translation is a literal one. Yet it is false in the sense that the words "book of the thousand nights and a night" are a common form in Arabic, while in English we have a slight shock of surprise. And this, of course, had not been intended by the original.

Nowadays, a hundred years after Matthew Arnold, we are fond of literal translation; in fact, many of us accept only literal translations because we want to give the original authors their due. That attitude would have seemed a crime to European translators in ages past. They were

thinking of something far worthier than the individual person. They wanted to prove that the vernacular, the language of their contemporaries, was as capable of a great poem as the ancient language in which the original

45 poem was composed. I don't think any contemporary of Alexander Pope thought about Homer and Pope. I suppose that the readers, the best readers anyhow, thought of the poem itself. They were interested in Homer's two great epic poems, and they had no care for verbal trifles.

50 All throughout the Middle Ages in Europe, people thought of translation not in terms of a literal rendering but in terms of something being re-created. They thought of translators as having read a work and then somehow evolving that work from themselves, from their own might, from the known possibilities of their own languages.

**Passage 2**

"The Seafarer," translated in 1911 by Ezra Pound, shows Pound's method of translating which, when he is so inclined, produces not so much a translation as a new poem in the spirit of the original. In translating "The Seafarer" Pound aims to reproduce the "feel" of the original by reproducing Anglo-Saxon sounds, whether or not the modern words correspond literally to the meaning of the original words.

This way of translating offended scholars who believed that translation must be literal to be accurate. Pound provoked their wrath by stating in print that his version of "The Seafarer" was "as nearly literal" as any translation could be. Obviously it is not. Where the Anglo-Saxon has *wrecan* ("to make, compose"), Pound has "reckon." 70 Where the Anglo-Saxon has *sumeres weard* ("guardian of summer"), Pound has "summerward." And so on. Moreover, there are unfortunately some mistakes, as when Pound misreads *purh* ("through") as *pruh* ("coffin").

Nevertheless, Pound's translation conveys the important meaning of the Anglo-Saxon poem and does something that a literal translation fails to do—renders it into poetic English, finding new equivalents for old emotions. This was Pound's contribution as a translator—he showed that to translate accurately you must do more than find words that have the same meaning as words in another language. Literal translation sounds like no language at all. The aim of translation is to find words that bring over the sense and spirit of the original so that they are understood. Therefore the translator must aim at making an "equation" rather than 85 a literal translation.



7. The authors of the two passages are most similar in their
- idealization of certain ancient poets
  - disdain for scholarly debate
  - preference for ancient over modern poetry
  - interest in the recasting of ancient works for modern readers
  - emphasis on a faithful rendering of sound when translating ancient literature
8. The author of Passage 2 would most likely consider which question most important in judging the quality of Alexander Pope's translation of Homer?
- Does it use English words to replicate the sound of ancient Greek verse?
  - Does it correctly reproduce the exact meaning of each ancient Greek word?
  - Does it satisfy the standards of modern scholarship?
  - Does it faithfully preserve the essence of the original poem?
  - Does it make archaic ways of thinking appealing to modern readers?
9. Pound (Passage 2) would most likely challenge Newman's assumption about "the most faithful translation" (line 11, Passage 1) by arguing that the
- ideas most prized by an ancient Greek audience may be unfamiliar to modern readers
  - unique qualities of a poem go beyond the definitions of individual words
  - subtlety of meaning in a poem limits the translator's choice of words
  - vision of the original poet cannot be preserved in loose translations
  - accurate understanding of a poem requires familiarity with its social context
10. In line 24, "false" most nearly means
- fictional
  - counterfeit
  - misleading
  - treacherous
  - insincere
11. The statement "we want . . . due" (lines 38-39) refers to the tendency to
- debate at length the merits of certain poets
  - adhere closely to the author's intended meaning
  - compare various translations of the same work
  - overlook the flaws in famous works of literature
  - insist that translations are superior to the originals
12. The "European translators" might argue that those guilty of the "crime" (line 40) are likely to
- force ancient ideas into a modern mold
  - encourage literary accomplishment while neglecting traditional scholarship
  - insist that ancient poems be read only in their original language
  - treat authors with excessive reverence
  - pursue commercial success rather than artistic excellence
13. For which of the following qualities would the "European translators" (line 40) most likely praise Pound's version of "The Seafarer" (Passage 2) ?
- Its skillful display of the beauties of modern English
  - Its sensitive demonstration of the original poet's genius
  - Its faithful reproduction of Anglo-Saxon sounds
  - Its subtle presentation of human emotions
  - Its imaginative interpretation of individual words
14. The "scholars" in line 64, Passage 2, most directly share the attitude of
- the author of Passage 1
  - the author of Passage 2
  - Newman (Passage 1)
  - Pope (Passage 1)
  - Arnold (Passage 1)



15. The author of Passage 2 suggests that the “wrath” (line 66) of the scholars was
- (A) irrational, because it ignored Pound’s good intentions
  - (B) meaningless, because the scholars were not translators
  - (C) inevitable, because Pound’s method had attracted considerable attention
  - (D) genuine, because the scholars felt personally insulted
  - (E) understandable, because Pound’s claim could be disputed
16. In lines 68–71, the author of Passage 2 provides definitions of Anglo-Saxon words primarily in order to
- (A) reinforce the idea that a word may have more than one meaning
  - (B) reveal the developmental changes leading to modern English words
  - (C) question an assertion put forth by Pound
  - (D) illustrate the thematic power of an ancient poem
  - (E) challenge assumptions about the sounds of the ancient words
17. Which of the following, referred to in Passage 1, would the author of Passage 2 most likely cite as an illustration of something that sounds like “no language at all” (line 81) ?
- (A) Pope’s translation of Homer
  - (B) Arnold’s review of Newman’s book
  - (C) The translation of “Il fait froid” as “It makes cold”
  - (D) The title *Book of the Thousand and One Nights*
  - (E) Translations from the Middle Ages
18. In line 82, “sense” most nearly means
- (A) meaning
  - (B) awareness
  - (C) practicality
  - (D) intelligence
  - (E) appreciation
19. Both Arnold (Passage 1) and Pound (Passage 2) assume that a good translation captures the
- (A) distinctive nature of the original poem
  - (B) poet’s thoughts about the creative process
  - (C) values and ideals of the poet’s era
  - (D) sound and rhythm of the original language
  - (E) subtleties of the poet’s reasoning

S T O P

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



## SECTION 9

Time — 20 minutes

16 Questions

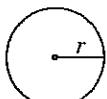
**Turn to Section 9 (page 7) of your answer sheet to answer the questions in this section.**

**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.

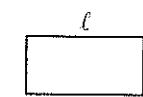
Notes

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.

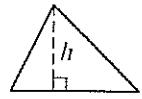
Reference Information



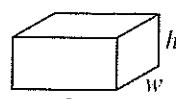
$$A = \pi r^2$$



$$A = lw$$



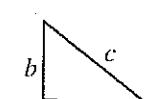
$$A = \frac{1}{2}bh$$



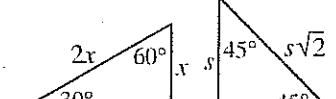
$$V = lwh$$



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



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



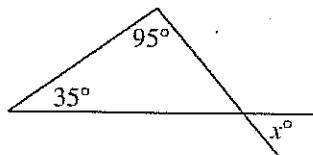
Special Right Triangles

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

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

1. What number increased by 3 is equal to 16 decreased by 3?

- (A) 9  
 (B) 10  
 (C) 12  
 (D) 16  
 (E) 22



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

- (A) 30  
 (B) 35  
 (C) 40  
 (D) 45  
 (E) 50

**GO ON TO THE NEXT PAGE**

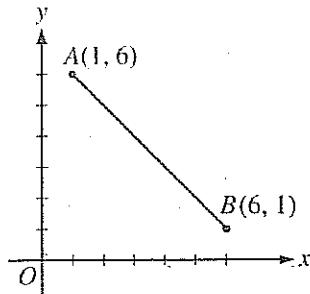


3. A survey of households in a small city showed that there was an average (arithmetic mean) of 3.2 persons per household and an average of 2.5 radios per household. Based on these results, if 48,000 people live in the city, which of the following is the best estimate of the total number of radios in the households of this city?

(A) 18,520  
 (B) 26,300  
 (C) 35,200  
 (D) 37,500  
 (E) 61,440

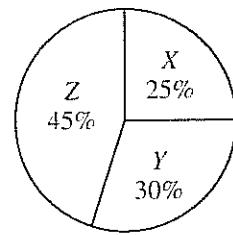
4. If  $6x + 3 = 2x + 9$ , what is the value of  $4x$ ?

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



5. In the figure above,  $\overline{AB}$  is a diagonal of a square (not shown). Which of the following are the coordinates of one point on the other diagonal of the square?

(A) (6, 6)  
 (B) (6, 5)  
 (C) (1, 3)  
 (D) (1, 2)  
 (E) (0, 0)



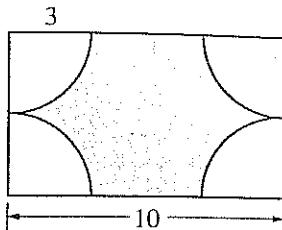
6. The circle graph above shows the division of a quantity into three parts. What is the ratio of the amount of  $X$  to the amount of  $Y$ ?

(A) 1 to 3  
 (B) 2 to 3  
 (C) 5 to 6  
 (D) 5 to 9  
 (E) 5 to 11



7. A certain snack recipe contains only raisins, chocolate bits, and peanuts. In the recipe, the weights of the raisins and the chocolate bits are equal and the weight of the peanuts is twice the weight of the raisins. How many ounces of chocolate bits are there in 30 ounces of this recipe?

(A) 6  
(B) 7.5  
(C) 9  
(D) 10.5  
(E) 12



9. In the rectangle above, the radius of each quarter circle is 3. What is the area of the shaded region?

(A)  $16 - 3\pi$   
(B)  $16 - 9\pi$   
(C)  $32 - 9\pi$   
(D)  $60 - 3\pi$   
(E)  $60 - 9\pi$

8. Set  $S$  consists of the positive multiples of 6 that are less than 50, and set  $T$  consists of the positive multiples of 8 that are less than 50. How many numbers do sets  $S$  and  $T$  have in common?

(A) None  
(B) One  
(C) Two  
(D) Four  
(E) Eight

10. Of the 26 cookies in a tin, the most common type is oatmeal. What is the probability that a cookie randomly selected from the tin is not oatmeal?

(A)  $\frac{1}{26}$   
(B)  $\frac{6}{13}$   
(C)  $\frac{1}{2}$   
(D)  $\frac{25}{26}$

(E) It cannot be determined from the information given.

9



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any part of this page is illegal.

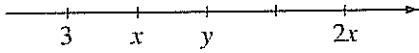


9

$x$	$f(x)$	$g(x)$
-1	2	3
0	1	-1
1	-1	2
2	0	-2

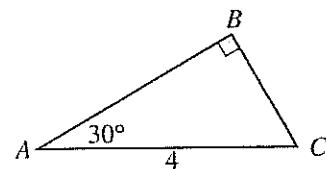
11. According to the table above, what is the value of  $f(-1) + g(2)$ ?

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



12. If the tick marks are equally spaced on the number line above, what is the value of  $y$ ?

- (A) 5
- (B) 6
- (C) 7
- (D) 8
- (E) 9



13. In the figure above, what is the area of  $\triangle ABC$ ?

- (A)  $2\sqrt{3}$
- (B) 4
- (C)  $4\sqrt{3}$
- (D) 8
- (E)  $8\sqrt{3}$

GO ON TO THE NEXT PAGE

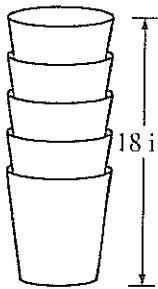


Figure I

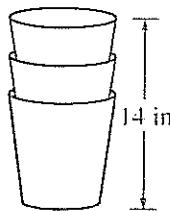


Figure II

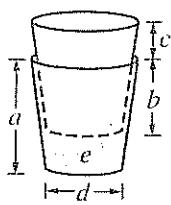


Figure III

Note: Figures not drawn to scale.

14. Figures I and II above show two stacks of identical pails and their heights. If  $n$  is the number of pails in a stack, and  $n > 1$ , the height of the stack, in inches, is given by  $h(n) = 2n + 8$ . The number 2 in the equation represents what quantity shown in Figure III?
- (A)  $a$ , the height of one pail  
 (B)  $b$ , the height of the overlap of two pails  
 (C)  $c$ , the distance between the top of one pail and the top of the next pail in the stack  
 (D)  $d$ , the diameter of the bottom of each pail  
 (E)  $e$ , the volume of the bottom pail that remains after the second pail is stacked on top of it

15. If  $x$  and  $y$  are integers and  $xy + x^2$  is odd, which of the following statements must be true?

- I.  $x$  is odd.
  - II.  $y$  is odd.
  - III.  $x + y$  is odd.
- (A) I only  
 (B) III only  
 (C) I and II  
 (D) I and III  
 (E) II and III

16. For how many integers  $n$  is  $(2n + 1)(3n - 11)$  a negative number?

- (A) None  
 (B) One  
 (C) Two  
 (D) Three  
 (E) Four

**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. As a place that is home to 131 species of fish, the Cahaba River is flowing for 190 miles through the heart of Alabama.

- (A) As a place that is home to 131 species of fish, the Cahaba River is flowing
- (B) A place that is home to 131 species of fish, the flow of the Cahaba River
- (C) Home to 131 species of fish, the Cahaba River flows
- (D) It is a home for 131 species of fish but also the Cahaba River flows
- (E) Home to 131 species of fish, the Cahaba River, flowing

2. To trap and remove large alligators greatly affected the ecosystems of some southeast swamplands.

- (A) To trap and remove large alligators
- (B) Large alligators, because of having been trapped and removed,
- (C) Having trapped and removed large alligators,
- (D) The trapping and removal of large alligators
- (E) The large alligators, by being trapped and removed,

3. Iceland, known for its colorful tales, which poetically depict the dangerous, complex lives of the country's earliest settlers.

- (A) Iceland, known for its colorful tales, which
- (B) Iceland is known for its colorful tales, they
- (C) Iceland is known for its colorful tales, which
- (D) Iceland, with its colorful tales that
- (E) Iceland, its colorful tales are known to

4. The owner's manual for the refrigerator explained how to connect the icemaker, replacing the lightbulb, and positioning the shelves.

- (A) replacing the lightbulb, and positioning the shelves
- (B) both replacing the lightbulb as well as positioning the shelves
- (C) with replacing the lightbulb and then positioning the shelves
- (D) replace and position the lightbulb and the shelves
- (E) replace the lightbulb, and position the shelves

5. Saying nothing further, the table was cleared by the family in preparation for the evening meal.

- (A) Saying nothing further, the table was cleared by the family
- (B) By saying nothing further, the family cleared the table
- (C) Nothing further was said, and the family clears the table
- (D) The family said nothing further, the table was cleared
- (E) Saying nothing further, the family cleared the table



6. In his book on the Harlem Renaissance, Huggins makes clear his determination not only to emulate his intellectual forebears and recognizing that their challenges were unique.
- (A) and recognizing that  
 (B) while recognizing that  
 (C) but also to recognize that  
 (D) but also his recognition of how  
 (E) and also to recognize how
7. In the early eighteenth century, English poets and painters imagined the countryside filled with shepherds enjoying a life of leisure and drawing on nature's bounty for their sustenance.
- (A) enjoying a life of leisure and drawing  
 (B) enjoying a life of leisure, and they draw  
 (C) who were enjoying a life of leisure, to draw  
 (D) who enjoyed a life of leisure, then they drew  
 (E) they enjoyed a life of leisure to draw
8. Smallest of the copperhead snakes, the broad-banded copperhead, if disturbed, vibrates its tail rapidly, and they are also known to secrete a substance that smells like cucumbers.
- (A) rapidly, and they are also known to secrete a  
 (B) rapidly, and it is known that they secrete a  
 (C) rapidly and is also known to secrete a  
 (D) rapidly also secreting their  
 (E) rapidly, in addition, it secretes its
9. The reason Bapsi Sidhwā's novels make use of humor in addressing painful topics is that humor can both expose wrongs and defuse anger and resentment.
- (A) that humor can both expose wrongs and defuse  
 (B) it both exposed wrongs and it could defuse  
 (C) because humor expose wrongs and defuse  
 (D) because of it exposing wrongs and defusing  
 (E) that of exposing wrongs and defusing
10. Few poets combine passion with precise expression as well as Edna St. Vincent Millay's poetry.
- (A) Edna St. Vincent Millay's poetry  
 (B) Edna St. Vincent Millay  
 (C) the poetry of Edna St. Vincent Millay  
 (D) in the poems of Edna St. Vincent Millay  
 (E) Edna St. Vincent Millay would do
11. In winter, when the ponds froze over, the villagers went skating, and the most venturesome of whom played chase and executed complicated turns on the ice.
- (A) and the most venturesome of whom played chase and executed  
 (B) the most venturesome played chase and executed  
 (C) in that the most venturesome played chase and executed  
 (D) with the most venturesome playing chase and executing  
 (E) accordingly the most venturesome played chase and executed
12. According to journalist Howard Mansfield, a person feels a need to reconnect with and recover the past; therefore they preserve and endlessly recycle old objects.
- (A) a person feels a need to reconnect with and recover the past; therefore  
 (B) since a person feels a need to reconnect with and recover the past,  
 (C) since a person needs to feel a reconnection with and recovery of the past, therefore  
 (D) a need to reconnect with and recover the past is a feeling for many people, and therefore,  
 (E) many people feel a need to reconnect with and recover the past; therefore,



13. The Andes mountain chain, which includes some of the Western Hemisphere's highest peaks, are much more formidable as barriers to transportation than the Rocky Mountains are.

(A) are much more formidable as barriers  
(B) are barriers, and much more formidable  
(C) is a much more formidable barrier  
(D) as barriers, are much more formidable  
(E) was quite formidable and a barrier

14. Because European filmmaking all but shut down during the First World War is the reason why the film industry in the United States rose to prominence.

(A) Because European filmmaking all but shut down during the First World War is the reason why  
(B) Because European filmmaking all but shut down during the First World War,  
(C) European filmmaking all but shut down during the First World War,  
(D) With European filmmaking close to shutting down during the First World War, so  
(E) The fact that European filmmaking nearly shut down during the First World War is why

## STOP

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

## Correct Answers and Difficulty Levels Form Codes DEPO, EWPO

### **Graded Reading**

#### **Section 2**

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

#### **Section 4**

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

#### **Section 8**

COR. DIFF.	COR. DIFF.
ANS. LEV.	ANS. LEV.
1. B 1	11. B 3
2. B 1	12. D 5
3. D 2	13. A 5
4. E 3	14. C 3
5. E 4	15. E 5
6. E 5	16. C 5
7. D 3	17. C 3
8. D 3	18. A 3
9. B 3	19. A 3
10. C 1	

Number correct

Number correct

Number correct

Number incorrect

Number incorrect

Number incorrect

### **Mathematics**

#### **Section 3**

COR. DIFF.	COR. DIFF.
ANS. LEV.	ANS. LEV.
1. A 1	11. C 3
2. D 1	12. B 3
3. B 2	13. C 3
4. B 1	14. D 3
5. E 2	15. E 4
6. C 3	16. B 4
7. E 2	17. A 3
8. D 2	18. C 4
9. A 2	19. A 5
10. C 3	20. D 5

#### **Section 5**

Multiple-Choice Questions		Student-Produced Response Questions	
COR. DIFF.	COR. DIFF.	COR.	DIFF.
ANS. LEV.	ANS. LEV.	ANS.	LEV.
1. E 1	9. 4000	1.	1. B 2
2. E 1	10. I	2.	2. E 1
3. A 2	11. 105	3.	3. D 3
4. B 2	12. $2/3 < x < 1$ or $.666 < x < 1$	4.	4. D 2
5. C 3	13. 8	5.	5. A 2
6. D 3	14. 101	6.	6. C 2
7. E 3	15. $8.5 \text{ or } 17/2$	7.	7. B 2
8. E 4	16. 75	8.	8. C 2
	17. 11		9. E 3
	18. $80/3, 26.6 \text{ or } 26.7$		10. D 5

#### **Section 9**

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

Number correct

Number correct

Number correct  
(9-18)

Number correct

Number incorrect

Number incorrect

Number incorrect

### **Writing Multiple-Choice**

#### **Section 7**

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

#### **Section 10**

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

Number correct

Number correct

Number incorrect

Number incorrect

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

## The Scoring Process

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. No points are subtracted for wrong answers to the student-produced response mathematics 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 Codes DEPO, EWPO

From your responses on your QAS report, fill in the blanks below and do the calculations to get your critical reading, mathematics, 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 2: Questions 1–24 \_\_\_\_\_

Section 4: Questions 1–24 + \_\_\_\_\_

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

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

How many critical reading questions did you get wrong?

Section 2: Questions 1–24 \_\_\_\_\_

Section 4: Questions 1–24 + \_\_\_\_\_

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

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

× 0.25 = \_\_\_\_\_ (B)

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

Round the 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 3: Questions 1–20 \_\_\_\_\_

Section 5: Questions 1–18 + \_\_\_\_\_

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

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

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

Section 3: Questions 1–20 \_\_\_\_\_

Section 5: Questions 1–8 + \_\_\_\_\_

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

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

× 0.25 = \_\_\_\_\_ (B)

A – B = \_\_\_\_\_  
Mathematics Raw Score

Round the 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 7: Questions 1–35 \_\_\_\_\_

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

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

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

Section 7: Questions 1–35 \_\_\_\_\_

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

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

× 0.25 = \_\_\_\_\_ (B)

A – B = \_\_\_\_\_  
Writing Multiple-Choice  
Raw Score

Round the writing multiple-choice raw score to the nearest whole number.  
\_\_\_\_\_ (C)

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

Copy your essay score from your QAS report.  
\_\_\_\_\_ (D)

Use the appropriate writing composite table (pages 53–54) for your form code and look up your writing multiple-choice raw score (C) and your essay score (D) to find your writing composite scaled score.  
\_\_\_\_\_

**SAT Score Conversion Table**  
**Form Codes DEPO, EWPO**

Raw Score	Critical Reading Scaled Score	Math Scaled Score	Writing Multiple-Choice Scaled Score	Raw Score	Critical Reading Scaled Score	Math Scaled Score	Writing Multiple-Choice Scaled Score
67	800			31	500	540	55
66	800			30	490	530	54
65	800			29	490	520	53
64	780			28	480	520	52
63	760			27	470	510	51
62	750			26	470	500	50
61	730			25	460	490	49
60	720			24	460	490	49
59	710			23	450	480	48
58	700			22	440	470	47
57	690			21	440	460	46
56	680			20	430	460	45
55	670			19	420	450	44
54	660	800		18	420	440	43
53	650	790		17	410	430	42
52	640	760		16	400	430	42
51	630	740		15	400	420	41
50	630	720		14	390	410	40
49	620	710	80	13	380	400	39
48	610	700	80	12	380	390	38
47	600	690	77	11	370	390	37
46	600	680	75	10	360	380	36
45	590	670	73	9	350	370	35
44	580	660	71	8	340	360	34
43	580	650	69	7	330	350	33
42	570	640	68	6	320	340	32
41	560	630	66	5	310	330	31
40	560	620	65	4	300	310	30
39	550	610	63	3	280	300	28
38	540	600	62	2	270	290	27
37	540	590	61	1	250	270	25
36	530	580	60	0	230	250	23
35	520	570	59	-1	210	230	21
34	520	570	58	-2	200	210	20
33	510	560	57	-3	200	200	20
32	510	550	56	and below			

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

**SAT Writing Composite Score Conversion Table**  
**Form Code DEPO**

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

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

**SAT Writing Composite Score Conversion Table**  
**Form Code EWPO**

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

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