Practice with this full-length PSAT/NMSQT

Preliminary SAT/
National Merit Scholarship Qualifying Test

Timing  The PSAT/NMSQT® has five sections. You will have 25 minutes each for Sections 1–4 and 30 minutes for Section 5.

Scoring  For each correct answer, you receive one point. For questions you omit, you receive no points. For a wrong answer to a multiple-choice question, you lose a quarter (¼) of a point. For a wrong answer to a math question that is not multiple choice, you do not lose any points.

Guessing  If you can eliminate one or more choices as wrong, you increase your chances of choosing the correct answer and earning one point. If you can't eliminate any choices, move on. You can return to the question later if there is time.

Marking Answers  You must mark all of your answers on your answer sheet to receive credit. Make sure each mark is dark and completely fills the circle. If you erase, do so completely. You may write in the test book, but you won't receive credit for anything you write there.

Checking Answers  You may check your work on a particular section if you finish it before time is called, but you may not turn to any other section.

DO NOT OPEN THE TEST BOOK UNTIL YOU ARE TOLD TO DO SO!

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Preliminary SAT/National Merit Scholarship Qualifying Test

Co-sponsored by

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NATIONAL MERIT SCHOLARSHIP CORPORATION

4FPT1
TAKE THE PRACTICE TEST

Take the practice test on the following pages to become familiar with the kinds of questions (critical reading, mathematics and writing skills) on the PSAT/NMSQT. The test you take in October will be similar, containing 5 sections: critical reading questions in 2 sections, mathematics questions in 2 sections and writing skills questions in 1 section.

Set aside time to take the entire test; you'll need about 2 hours and 10 minutes. Use the practice answer sheet on pages 3 and 4. Have your calculator available for the math sections. After the test, check your answers to see how you scored.

TEST-TAKING STRATEGIES

Try these out when you take the practice test:

- **Expect easy questions at the beginning of each set of sentence completion questions (in the critical reading sections) and math questions.** Within a set, questions generally get harder as you go along. However, sets of passage-based reading questions (in the critical reading sections) and writing skills questions are not necessarily arranged by difficulty.

- **Earn as many points as you can on easy questions.** For each correct answer you receive one point, no matter how hard or easy the questions are. Beware of careless errors on questions you know how to answer.

- **You don't have to answer every question.** You can do well even though you omit some questions.

- **Work steadily.** Don't waste time on a question that is hard for you. If you can't answer it, mark it in your test book and go on. Go back to it later if there is time. Bring a watch with you to help with pacing.

- **Try guessing** when you can eliminate at least one answer to a multiple-choice question.

- **Mark your answers in the correct row of circles on the answer sheet.** Be especially careful if you skip questions.

- **Write your answers to math questions 29–38 in the boxes above the circles.** Then enter your answer accurately and as completely as the grid will accommodate. **You MUST grid the correct answer in the circles to receive credit.** If the correct answer is written above the grid, but the incorrect circles are marked, the answer is incorrect. A common mistake is marking two circles in the same column, so be sure to double-check your grids. You do not lose points for a wrong answer to a Student-Produced Response Question.

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GET CREDIT FOR ALL YOU KNOW

- **Use a No. 2 pencil.**
- **Follow instructions for grids.**
- **Mark only one answer to each question.**
- **Make dark marks and fill circles completely.**
- **Erase completely if you change a response.**
The actual test will include much more space for scratch work around each math question than is available on this practice test.

Make each mark a dark mark that completely fills the circle and is as dark as all your other marks. If you erase, do so completely. Incomplete erasures may be read as intended responses.

**COMPLETE MARK**

1. **CRITICAL READING**
   - 25 minutes
   - Questions 1-8

2. **MATHEMATICS**
   - 25 minutes
   - Questions 9-16

3. **CRITICAL READING**
   - 25 minutes
   - Questions 17-24

4. **Writing Skills**
   - 30 minutes
   - Questions 25-32

5. **CRITICAL READING**
   - 25 minutes
   - Questions 33-40

6. **Mathematics**
   - 25 minutes
   - Questions 41-48

**MARKS MUST BE COMPLETE**
Reminder: If you erase, do so completely.

4

MATHEMATICS
25 minutes

Only answers entered in the circles in each grid area will be scored. Mark only one circle in any column. You will not receive credit for anything written in the boxes above the circles.

5

WRITING SKILLS
30 minutes

4 2011 PSAT/NMSQT Student Guide: Practice Test
SECTION 1
Time — 25 minutes
24 Questions
(1-24)

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. Samantha was known for her ______ personality, but when she saw someone being bullied, she had a very ______ response.

(A) genial . . . friendly
(B) irritable . . . annoyed
(C) serene . . calm
(D) complex . . intricate
(E) cheerful . . angry

2. If the ______ of tropical rain forests is not stopped, the world will lose species of wildlife that are ______ those locations.

(A) planting . . seeking out
(B) evolution . . competing for
(C) destruction . . unique to
(D) conservation . . thriving in
(E) clearing . . foreign to

3. The Communist Manifesto is often attributed to Karl Marx, but the work is actually ______ effort, since he wrote it with Friedrich Engels.

(A) a literary (B) an unorthodox
(C) a collaborative (D) an esoteric
(E) a representative

4. Early demonstrators from the Student Nonviolent Coordinating Committee (SNCC) were ______ appearances; they dressed with care to project a responsible image rather than a ______ one.

(A) oblivious to . . threatening
(B) serious about . . reassuring
(C) attentive to . . disorderly
(D) unconscious of . . subversive
(E) undeceived by . . discreet

5. Unlike Earth’s high-speed jet streams, which are confined to narrow bands, the high-speed winds of Venus ______ that entire planet.

(A) illuminate (B) endanger (C) dwarf
(D) strain (E) envelop

6. To ______ detection, the thieves ______ the stolen collection, selling it off a piece at a time over a period of months.

(A) monitor . . spirited away
(B) court . . camouflaged
(C) avoid . . appraised
(D) ensure . . doled out
(E) avert . . broke up

7. The clever child’s highly imaginative excuses confirmed his ______ but would never persuade anyone of his sincerity.

(A) ingenuity (B) humility (C) vulnerability
(D) perseverance (E) indignation

8. The professor’s comments on Eleanor’s laboratory report were ______: they were purely routine and showed little real engagement with Eleanor’s work.

(A) peremptory (B) astute (C) deferential
(D) perfunctory (E) caustic

(The passages for this test have been adapted from published material. The ideas contained in them do not necessarily represent the opinions of the College Board, National Merit Scholarship Corporation, or Educational Testing Service.)

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Questions 9-10 are based on the following passage.

Because of the new emphasis on the individual that developed during the Renaissance, more records exist for art produced in sixteenth-century Europe than for art produced in earlier eras. Although more information is needed, the sixteenth century is the first period that has provided historians with both the biographies of many female artists and significant quantities of their work. In Late Renaissance Italy and northern Europe, female painters and sculptors worked in a wide range of subjects, styles, and scales, from portrait miniatures to large-scale altarpieces. Like their male contemporaries, many achieved widespread fame in their native countries and beyond, attracting the attention of distinguished writers and patrons.

9. What was the result of the “new emphasis” (line 1)?
   (A) It led artists to be increasingly concerned with portraying the individuality of their subjects.
   (B) It encouraged artists to develop more individualistic styles.
   (C) It made female artists more conscious of the distinctive characteristics of their work.
   (D) It allowed more female artists the opportunity to study abroad.
   (E) It increased the chance that information about artists and their work would be preserved.

10. In lines 10 and 11, the author refers to “miniatures” and “altarpieces” in order to
   (A) illustrate the variety of work created by Renaissance female artists
   (B) explain what was distinctive about the work of Renaissance female artists
   (C) suggest that Renaissance female artists worked both individually and collaboratively
   (D) indicate that some Renaissance female artists confined their work to one or another genre
   (E) specify historians’ main sources of information about Renaissance female artists

Questions 11-12 are based on the following passage.

Our sense that television has always existed makes it difficult to sit back and determine its role in societal changes over the past 60 years. Some of those changes are obvious and can be documented by facts and figures—the average hours of daily television viewing, the costs of election campaign commercials, and the growing prominence of highly televised sports like professional football and NASCAR racing. Yet the deeper effects of such changes and the simply overwhelming number of television’s other influences, including many of the most significant, tend to be overlooked, and many of the most important questions go unanswered.

11. Lines 1-3 (“Our sense...years”) primarily serve to
   (A) criticize the shortsightedness of public opinion
   (B) question the relevance of a certain line of research
   (C) note an apparent obstacle to a goal
   (D) defend a solution to a long-standing puzzle
   (E) dissuade others from grappling with a problem

12. The author implies which of the following about the things listed in lines 5-8?
   (A) They are negative effects of television’s role in society and cannot easily be reversed.
   (B) They are less profound than some other consequences of the changes brought by television.
   (C) They are societal changes associated with television that could not have been predicted 60 years ago.
   (D) They are possibly effects of other changes in society that happened to coincide with television’s rise.
   (E) They are examples of subtle social changes attributed to television in recent years.
Questions 13-24 are based on the following passages.

Passage 1 is from the preface to a 2004 report by the National Endowment for the Arts entitled Reading at Risk, which presents the results of a large-scale survey that investigated, among other things, the percentage and number of adults who read literature (novels, plays, short stories, and poems). Passage 2 is from a 2004 article commenting on that report.

Passage 1

Reading at Risk is not a report that we are happy to issue. This comprehensive survey of American literary reading presents a detailed but bleak assessment of the decline of reading’s roles in the nation’s culture. For the first time in modern history, less than half of the adult population now reads literature, and this trend reflects a larger decline in other sorts of reading. Anyone who loves literature or values the cultural, intellectual, and political importance of active and engaged literacy in American society will respond to this report with grave concern.

Reading at Risk is not a collection of anecdotes, theories, or opinions. It is a descriptive survey of national trends in adult literary reading. Based on an enormous sample of more than 17,000 adults, it covers most major demographic groups—providing statistical measurements by age, gender, education, income, region, race, and ethnicity. Conducted by the Census Bureau and spanning 20 years of polling, the Survey of Public Participation in the Arts, the data source for Reading at Risk, is as reliable and objective as any such survey can be. The key results of the survey can be summarized in a single sentence: literary reading in America is not only declining rapidly among all groups, but the rate of decline has accelerated, especially among the young. The concerned citizen in search of good news about American literary culture will study the pages of this report in vain.

Although the news in the report is dire, I doubt that any careful observer of contemporary American society will be greatly surprised—except perhaps by the sheer magnitude of decline. Reading at Risk merely documents and quantifies a huge cultural transformation that most Americans have already noted—our society’s massive shift toward electronic media for entertainment and information. Reading is not a timeless, universal capability. Advanced literacy is a specific intellectual skill and social habit that depends on a great many educational, cultural, and economic factors. As more Americans lose this capability, our nation becomes less informed, active, and independent-minded. These are not qualities that a free, innovative, or productive society can afford to lose.

Passage 2

Reading at Risk is one of those hardy perennials, a government survey telling us that in some vital area things are even worse than we thought. Such surveys are as meat and drink to editorialists, who can usually be counted upon to discover the findings anywhere from worrying to alarming to frightening. They haul out their best solemn tone; words such as “distressing” and “grave concern” and “dire” are brought to play; “serious action,” one need scarcely add, is called for. For the first time in our history, apparently, less than half the population bothers to read any literature at all.

However, what Reading at Risk doesn’t acknowledge is that a great many people do a vast amount of reading, chiefly in newspapers, magazines, and on the Internet, but little of it in books and none of it in the realm of imaginative literature. Many people read primarily for information, and there is no reason to presume that it is best available in the form of books.

Still, skewed though Reading at Risk may be, the demographic fact remains that the audience for the reading of novels, poems, and plays, even fusty ones, fell over the past 20 years from 56 percent to 47 percent of the nation’s population. The decline, moreover, was across the board: “In fact,” the survey has it, “literary reading rates decreased for men, women, all ethnic and racial groups, all education groups, and all age groups.”

But what do such figures really tell us? Reading at Risk is an example of the style of statistical thinking dominant in our time. It’s far from sure that statistics are very helpful in capturing so idiosyncratic an act as reading, except in a bulky and coarse way. That the Swedes read more novels, poems, and plays than Americans and the Portuguese read fewer than we do is a statistical fact, but I’m not sure what you do with it, especially when you don’t know the quality of the material being read in the three countries. Read any amount of serious imaginative literature with care and you will be highly skeptical of the statistical style of thinking. You will quickly grasp that, in a standard statistical report such as Reading at Risk, serious reading, always a minority interest, isn’t at stake here. Nothing more is going on, really, than another trendy and high profile crisis report, soon to be replaced by the report on fuel depletion or the harmfulness of aspirin.
13. Lines 4-7 ("For the . . . reading") suggest that the situation described should be considered
   (A) suspect
   (B) irreversible
   (C) noteworthy
   (D) appropriate
   (E) commonplace

14. The author of Passage 1 suggests that a "sample" (line 13) should ideally be
   (A) large enough to reflect society as a whole
   (B) determined by professional statisticians
   (C) comprised of completely anonymous respondents
   (D) designed to include both adults and children
   (E) similar to the samples used in prior studies

15. The author of Passage 2 would most likely argue that the "measurements" (Passage 1, line 15) are
   (A) more subject to change than the author of Passage 1 acknowledges
   (B) less important than the author of Passage 1 assumes
   (C) based on a less impressive sample size than the author of Passage 1 believes
   (D) more unusual than the author of Passage 1 believes
   (E) less impressive to the public than the author of Passage 1 supposes

16. The final paragraph of Passage 1 (lines 27-40) serves primarily to
   (A) chart a course of action based upon the survey's findings
   (B) argue that the survey was not as thorough as had been previously implied
   (C) place the results of the survey in a broad cultural context
   (D) shift from examining the survey's findings to analyzing its methodology
   (E) suggest that the report is not truly disturbing when understood as a historical trend

17. The author of Passage 2 would most likely consider the final two sentences of Passage 1 (lines 37-40) to be
   (A) sarcastic
   (B) perceptive
   (C) defiant
   (D) insincere
   (E) alarmist

18. Which of the following would the author of Passage 2 most likely consider to be another of the "hardy perennials" (line 41)?
   (A) A report arguing that young people in the United States are listening to more varied music than they have in the past
   (B) A survey revealing information about the career aspirations of teenagers in the United States and Canada
   (C) A study showing that the technological skills of children in the United States are declining in comparison to the skills of children in other countries
   (D) A chronicle describing important events in the Civil Rights movement from the 1950s to the present
   (E) An article contending that the trend toward reality television has made it more difficult for writers to get jobs in Hollywood

19. Lines 59-66 ("Still . . . groups’") focus on which aspect of the "demographic fact"?
   (A) Its timeliness
   (B) Its scope
   (C) Its permanence
   (D) Its deceptiveness
   (E) Its unexpectedness

20. The author of Passage 2 indicates that the "act" referred to in line 70 is
   (A) difficult and therefore more common among adults than children
   (B) pleasurable and therefore more widespread than is generally acknowledged
   (C) personal and therefore worthy of further discussion
   (D) individualized and therefore resistant to sweeping generalizations
   (E) time-consuming and therefore undertaken by few people

21. In line 71, "coarse" most nearly means
   (A) boorish
   (B) offensive
   (C) imprecise
   (D) grainy
   (E) uneven
22. The author of Passage 1 would most likely respond to the last statement in Passage 2 (lines 80-83) by asserting that

(A) a report about reading is as important as ones about fuel and aspirin
(B) Reading at Risk is one of the first “crisis” reports
(C) the public is sophisticated enough to reject misleading findings
(D) reports like Reading at Risk undergo thorough review before publication
(E) a report on national reading habits has lasting implications

23. Which best describes the tone of the first paragraph of Passage 1 and the tone of the first paragraph of Passage 2, respectively?

(A) Ominous vs. surprised
(B) Defensive vs. annoyed
(C) Complacent vs. amused
(D) Somber vs. wry
(E) Sad vs. exhilarated

24. Which best conveys the primary relationship between the two passages?

(A) Passage 2 discusses some limitations of a study whose results are discussed in Passage 1.
(B) Passage 2 provides a history of the events leading to the report described in Passage 1.
(C) Passage 2 disputes the accuracy of the statistics cited in Passage 1.
(D) Passage 2 uses the information presented in Passage 1 to argue for cultural change.
(E) Passage 2 contends that the author of Passage 1 understated the implications of the report.

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 2
Time — 25 minutes
20 Questions
(1-20)

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 scratch work.

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.

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 is the sum of $\sqrt{x-1}$ and $(x - 1)^2$ when $x = 5$?
   (A) 8
   (B) 12
   (C) 16
   (D) 18
   (E) 32

2. In the diagram above, circle $T$ represents the set of all multiples of 10, circle $N$ represents the set of all negative numbers, and circle $O$ represents the set of all odd integers. Which of the following numbers is in the set that the shaded region represents?
   (A) -20
   (B) -18
   (C) -11
   (D) 10
   (E) 13

3. If $3abc = 24$ and $ab = 4$, then $c =$
   (A) 2
   (B) 4
   (C) $\frac{20}{3}$
   (D) 12
   (E) 32

4. In the figure above, point $P$ is on line $\ell$. What is the value of $x$?
   (A) 25
   (B) 30
   (C) 35
   (D) 40
   (E) 45
5. Both $x = 3$ and $x = 2$ are solutions for which of the following equations?
   I. $(x + 3)(x + 2) = 0$
   II. $(x - 3)(x - 2) = 0$
   III. $2x = 6$

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

   The graph above shows the results of a survey in which high school students were asked how many meals they typically eat per day. If 900 students responded to the survey, how many of them reported that they typically eat two meals per day?
   (A) 252
   (B) 162
   (C) 135
   (D) 123
   (E) 117

   If $10 < 3t + 7 < 13$, which of the following could be a value of $t$?
   (A) $-2$
   (B) 0
   (C) $\frac{1}{2}$
   (D) 1
   (E) $\frac{3}{2}$

   In the $xy$-plane above, if the area of the shaded semicircular region is $8\pi$, what is the value of $t$?
   (A) 1
   (B) 2
   (C) 4
   (D) 8
   (E) 16
11. The members of a school club are ordering T-shirts. There is a one-time charge of $150 for artwork on the T-shirts and a $10 charge for each T-shirt ordered. If \( x \) represents the number of T-shirts ordered, which of the following represents the total cost, in dollars, per T-shirt?

(A) \( 10 + 150x \)
(B) \( x + 15 \)
(C) \( 10x + 150x \)
(D) \( \frac{10 + 150x}{x} \)
(E) \( \frac{10x + 150}{x} \)

12. In the top row of the table above, the first term of the sequence is 24, and each term after the first is 2 more than the preceding term. In the bottom row, the first term of the sequence is 10, and each term after the first is 5 more than the preceding term. If these sequences continue indefinitely, in how many columns of the table will the terms from both sequences be equal?

(A) None
(B) One
(C) Two
(D) Three
(E) More than three

13. If one face of rectangular solid \( R \) is known to be a rectangle that is not a square, what is the greatest number of faces of the solid that could be square?

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

14. Which of the following is the graph of a function \( f \) for which there is exactly one value of \( x \) that satisfies the equation \( f(x) = 0 \)?

(A) [Graph A]
(B) [Graph B]
(C) [Graph C]
(D) [Graph D]
(E) [Graph E]

15. The two spinners in the figure above are to be spun, and each arrow will stop inside a numbered region. It is equally likely that a spinner will stop in any one of its numbered regions. What is the probability that the sum of the numbers in the regions where the arrows stop will be at least 8?

(A) \( \frac{1}{24} \)
(B) \( \frac{1}{12} \)
(C) \( \frac{1}{8} \)
(D) \( \frac{1}{4} \)
(E) \( \frac{1}{3} \)
16. The table above shows values for the function \( f \). What is the value of \( 2f(5) - f(4) \) ?

(A) 3  
(B) 5  
(C) 7  
(D) 9  
(E) 11

17. The three points shown on the number line above have coordinates \( x \), \( y \), and \( z \). If \( x \), \( y \), and \( z \) are each integers such that \( xyz \) is a negative odd integer, which of the following must be true?

I. \( x \), \( y \), and \( z \) are each odd integers.  
II. \( x < 0 \)  
III. \( yz > 0 \)

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

18. In the circle above, the two diameters shown intersect. If the sum of the areas of the unshaded regions is equal to the average (arithmetic mean) of the areas of the shaded regions, what is the value of \( x \) ?

(A) 120  
(B) 90  
(C) 60  
(D) 45  
(E) 30

19. How many positive integers less than 1,000 do not have 7 as any digit?

(A) 700  
(B) 728  
(C) 736  
(D) 770  
(E) 819

20. Points \( A \), \( B \), and \( X \) do not all lie on the same line. Point \( X \) is 5 units from \( A \) and 3 units from \( B \). How many other points in the same plane as \( A \), \( B \), and \( X \) are also 5 units from \( A \) and 3 units from \( B \) ?

(A) None  
(B) One  
(C) Two  
(D) Four  
(E) More than 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.
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

25. Despite his outstanding talent and profound commitment to his art, soloist Roland Hayes never achieved celebrity: he never ______ the ______ enjoyed by the most commercially successful entertainers.

(A) avoided . . renown
(B) acknowledged . . allure
(C) deplored . . charisma
(D) attained . . popularity
(E) acquired . . simplicity

26. Caroline is ______ though not ______: she works intently on her assignments, but rarely hands them in on time.

(A) diligent . . punctual
(B) versatile . . efficient
(C) frivolous . . dedicated
(D) astute . . prompt
(E) obsessive . . diplomatic

27. As an actor, Wilson ______ excessively, expressing his characters' feelings in a decidedly histrionic manner.

(A) emotes (B) fawns (C) exhorts
(D) pontificates (E) remonstrates

28. The women in the Hsu family are known for their ______: they are generous even during difficult financial times.

(A) affability (B) munificence (C) candor
(D) realism (E) assiduousness

29. Describing life among the Cherokee people as ______, the English woman's account contradicted eighteenth-century European misconceptions about the reputedly ______ lives of Native Americans.

(A) tedious . . feckless
(B) rustic . . unaffected
(C) quiescent . . tranquil
(D) halcyon . . onerous
(E) vigorous . . pragmatic
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 30-33 are based on the following passages.

Passage 1 (2000)

When it comes to looking for new planets outside our solar system, small is beautiful, but big is easier. Many planets with a mass similar to or greater than that of Jupiter have been discovered from observatories on Earth by using an indirect technique known as radial velocity. Unable to observe an extrasolar planet directly, astronomers "see" it through its effects on the parent star; the star "wobbles" as the planet orbits it, alerting astronomers to the planet's presence. But because the radial velocity technique does best at detecting big planets close to their parent stars, it is unlikely to help us find planets as small as Uranus, with a mere twentieth of Jupiter's mass.

Passage 2 (2004)

A team of astronomers led by Barbara McArthur recently discovered a new planet orbiting a star known as rho1 Cancri. This planet is considerably smaller than the other 120 or so known extrasolar planets. McArthur's quest began when she decided to analyze Hubble Space Telescope data to look for the motion of parent stars as seen from space. McArthur then collected over 100 radial velocity readings from several observatories to complement the Hubble data. A colleague remarked, "This discovery is a leap forward into a new domain of extrasolar planets. Finally, we find planets with masses that... resemble [those of] our Neptune or Uranus."

30. This pair of passages considers which of the following?

(A) The tendency of large planets to shroud the appearance of smaller ones
(B) The inadvertent perception of "wobble" in certain planetary observations
(C) The inclination of skeptics to question attempts to explore extrasolar planets
(D) The need for substantial funding for extrasolar research
(E) The challenge of finding small planets outside our solar system

31. The "colleague" mentioned in line 21, Passage 2, would most likely consider the last sentence in Passage 1 (lines 9-12) to be

(A) a provocative proposal
(B) a reliable summation
(C) an outlandish claim
(D) an exaggerated projection
(E) an inaccurate prediction

32. The tone of lines 21-24 ("This... Uranus") is best described as

(A) celebratory
(B) amused
(C) skeptical
(D) wistful
(E) defiant

33. Both passages mention planets in our solar system to

(A) cite instances of planets that were discovered using radial velocity
(B) provide a comparison that indicates the mass of some extrasolar planets
(C) offer examples of planets whose existence has long been known
(D) identify the clues that led astronomers to discover certain extrasolar planets
(E) revisit an erroneous assumption about the relationship of stars and planets
Questions 34-42 are based on the following passage.

This passage, adapted from a 1982 novel set in India, is about a boy named Hari who has left his village and gone on his own to the city of Bombay (Mumbai), where he has found work as a kitchen helper in a cheap restaurant.

The boys in the kitchen, now that they knew he was there to help them and not to take away their work or food, looked at him with less hostility and sullenness. The owner, Jagu, seemed pleased with Hari, too, and sometimes handed him a glass of tea in the middle of the day or, when he had a few moments to spare, sat down at one of the long wooden tables, drummed loudly on it, and sang a song in a dialect Hari did not know. When he caught Hari listening and smiling, he smiled back. Then Hari knew that Jagu also had a village somewhere that he called home, that he remembered it, and that the memory made him happy. It was just that he was a silent, hard-worked, worried man and had no time and no gift for speech that might have made him a friend as well as a benefactor.

It was the watchmender who worked in the stall next door, Mr. Panwallah, who was truly a benefactor, the kindest and most helpful of all. One afternoon, during those hot, still hours when there were no customers for a change, Hari was standing in front of the eating house, idly watching the traffic because he was too tired to do anything else, and Mr. Panwallah called to him to come and sit beside him on the bench behind the counter in his shop.

"Want to help?" he asked. "Want to learn how to make a clock tick? I'm just going to open this big grandfather clock sent me for repair—you'll be able to see the workings plain. Look," he said, swinging open the door at the back and revealing the machinery to a fascinated Hari, who felt as if the door had opened into a new and strange house.

Mr. Panwallah showed Hari what was wrong with it, what had made it stop. "Interesting, isn't it? How would you like to learn? Tell you what—I'll take you on as an apprentice—in the afternoons, when you don't have to work in the kitchen. You don't have much to do between two and four, do you? Of course you will have to ask Jagu first. I can pay you a little, not much, and you can help me for two hours a day. Perhaps I can make a watchmender of you. That's not a profession many know. How would you like that, eh?"

Hari could not believe that Mr. Panwallah actually meant that, that he was actually willing to share his secrets with a village boy who was working as a cook's help in a beggars' kitchen. The man's kindness and the possibility that Hari might make something of his life, learn to put his hands to good use, handle tiny, delicate tools and work upon intricate, complicated machinery, made him feel so dazed that he could not speak and only nodded silently.

That was how Hari became an apprentice watchmender and saw that it was possible to have a future, that one did not remain where one was stuck always but could move out and away and on. One needed to make great efforts for this to happen, but it helped to have a little luck as well.

34. The primary purpose of the passage is to describe
(A) a fortunate development in Hari's life
(B) an awkward encounter between two benefactors
(C) Hari's social adjustment in Bombay
(D) Hari's relationship with Jagu at work
(E) Hari's unhappiness at the restaurant

35. The first sentence of the passage (lines 1-3) suggests that the "boys in the kitchen" initially regarded Hari with
(A) respect
(B) affection
(C) pity
(D) resentment
(E) disdain

36. The action described in lines 4-5 ("sometimes . . . day") exemplifies Jagu's
(A) politeness
(B) kindness
(C) curiosity
(D) contempt
(E) impatience

37. Which of the following LEAST accurately characterizes Jagu as he is represented in lines 3-14?
(A) Pleasant
(B) Nostalgic
(C) Industrious
(D) Articulate
(E) Anxious
38. The primary purpose of Mr. Panwallah’s various questions in lines 24-38 is to
(A) gather information about Hari’s past
(B) get Hari’s perspective on a mechanical problem
(C) challenge Hari’s preconceptions about timekeeping
(D) assess Hari’s aptitude for technical training
(E) stimulate Hari’s interest in watch mending

39. The author uses the image of the “house” (line 29) to convey the impression of
(A) a structure to explore
(B) a place to reside
(C) an architectural oddity
(D) an eerie location
(E) an innovative design

40. The repetition of the word “actually” in lines 39-40 serves to emphasize Hari’s
(A) incredulity
(B) duplicity
(C) diffidence
(D) cynicism
(E) naïveté

41. The fourth paragraph (lines 39-47) represents Hari as
(A) skeptical
(B) pretentious
(C) noncommittal
(D) pensive
(E) stunned

42. The last paragraph (lines 48-53) suggests that until he encountered Mr. Panwallah, Hari believed that
(A) his struggle for advancement had been futile
(B) his prospects in life were severely limited
(C) businesspeople cared only about money
(D) an apprenticeship would be hard to endure
(E) success was due more to chance than to talent
Questions 43-48 are based on the following passage.

The following passage is from a 2001 article on the state of the lobster fishing industry in Maine.

Many of the leading scientists who track the North American lobster population do so mainly on computer screens in government laboratories, and from that vantage point, lobsters appear to be in danger. From the mid-1940s to the mid-1980s, Maine's lobstermen hauled in a remarkably consistent number of lobsters. But during the past fifteen years, they have nearly tripled their catch, raising fears about overharvesting. The situation recalls the recent history of the cod fishery in New England, in which an exponential rise in the catch was followed by a devastating biological and economic collapse.

In Maine, most men and women who harvest lobsters believe that their industry is healthy, perhaps even too healthy. They worry not about a population collapse but about recent lobster catches that would lead to sharp declines in prices. Even the lobstermen who admit that catches could decline do not see anything wrong with that. They say they are the lucky beneficiaries of a boom orchestrated by Mother Nature. If lobster catches soon return to more traditional levels, so be it.

The lobstermen argue that they are better biologists than the biologists are, and there's something to what they say. Fisheries scientists who gauge the effects of commercial lobster harvesting do so using techniques originally designed for tracking fish populations. Because fish are elusive and hard to study in the wild, estimates of how well their populations are faring rely heavily on mathematical models. But lobsters are not fish. Many of them dwell in shallow coastal water and are easy to observe, though until recently, few scientists had bothered to observe them. And unlike fish, lobsters are not harmed by being caught. Baby lobsters, oversized lobsters, and egg-bearing lobsters that lobstermen trap and return to the sea are none the worse for having taken the bait; in fact, they have gotten a free lunch. Lobstermen know their resource more intimately than do many other kinds of fishermen, and they feel justified in telling the government that lobsters are doing well enough to be left alone. The trouble is that lobstermen tend not to have advanced degrees and scientific data to back up their claims, so their opinion carries little weight.

Lately, a new breed of lobster scientist has appeared along the Maine coast. These scientists are ecologists, and they spend inordinate amounts of time underwater doing things almost no sane fisheries modeler with a computer and a comfortable office would ever do. They dig for days in the ocean floor to count tiny lobsters; they risk life and limb on shark-infested ledges 70 miles from shore to see how long lobster populations can survive predation. Gradually, they are concluding that some of the things lobstermen have been saying may be right.

43. The author refers to the "cod fishery" (line 9) primarily to illustrate
   (A) why scientists began using mathematical models to track fish populations
   (B) why many scientists are concerned about recent increases in lobster catches
   (C) why Maine's lobstermen are concerned about the future of their industry
   (D) how Maine's lobstermen learned strategies enabling them to triple their catch
   (E) how environmental patterns tend to recur in certain areas

44. In line 15, "sharp" most nearly means
   (A) acute
   (B) shrewd
   (C) gruff
   (D) caustic
   (E) piercing

45. The author supports the claim in lines 21-22 ("they . . . are") by asserting that lobstermen
   (A) are able to avoid harming lobsters that are caught and then released
   (B) believe that lobster catches may soon return to more traditional levels
   (C) have firsthand knowledge of the populations from which they harvest
   (D) have accumulated scientific data to back up their claims
   (E) have been able to triple their lobster catch in a fifteen-year period
46. The author uses the statement in lines 28-29 ("But ... fish") to emphasize that
(A) the commercial lobster fishing industry is economically healthier than many fisheries
(B) biologists are more qualified than lobstermen to make estimates of how well lobster populations are faring
(C) techniques used for tracking fish populations may not be appropriate for tracking lobster populations
(D) scientists tracking lobster populations must rely heavily on mathematical models
(E) lobster scientists must spend more time doing underwater research than fisheries scientists do

47. The passage suggests that all of the following are true of fish EXCEPT:
(A) They are generally less susceptible to over-harvesting than are lobsters.
(B) They are generally less familiar to the fishermen who harvest them than lobsters are to lobstermen.
(C) They can be physically harmed by being caught.
(D) Their populations are often estimated by using mathematical models.
(E) Their populations are difficult for scientists to observe directly.

48. The author indicates that the "new breed of lobster scientist" (line 42) does which of the following?
(A) Uses scientific data to advise the government
(B) Uses computers to model lobster populations
(C) Both studies and harvests lobsters
(D) Works with lobstermen in gathering data
(E) Observes lobsters in their native environment

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
18 Questions
(21-38)

Directions: This section contains two types of questions. You have 25 minutes to complete both types. For questions 21-28, 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 scratch work.

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

\[ A = \pi r^2 \quad C = 2\pi r \quad A = \ell w \quad A = \frac{1}{2}bh \quad V = \ell wh \quad V = \pi r^2h \]

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.

21. If \( a^2 = 4 \), then \( a^6 = \)

(A) 12
(B) 16
(C) 24
(D) 32
(E) 64

22. What is the average (arithmetic mean) of the first nine positive integers?

(A) 4
(B) 4.25
(C) 4.5
(D) 4.75
(E) 5

23. In the xy-coordinate system above, \( \overline{AB} \) is one side of a square. Of the following, which could be the coordinates of a vertex of this square?

(A) (3, -1)
(B) (3, 10)
(C) (6, 7)
(D) (7, 2)
(E) (7, 10)
24. What is the smallest integer whose square root is greater than 2?
   (A) 3
   (B) 4
   (C) 5
   (D) 6
   (E) 9

27. The lengths of the three sides of a triangle are \( a \), \( b \), and \( c \), where \( a \leq b \leq c \). If \( a \), \( b \), and \( c \) are integers and the perimeter of the triangle is 8, what is the greatest possible value of \( b \)?
   (A) 1
   (B) 2
   (C) 3
   (D) 4
   (E) 5

25. In \( \triangle ABC \) above, \( AB = BC \). What is the value of \( y \)?
   (A) 40
   (B) 55
   (C) 65
   (D) 70
   (E) 90

28. Of the following values for \( x \) and \( y \), which shows that the statement above is not true?
   (A) \( x = 0 \), \( y = 2 \)
   (B) \( x = 1 \), \( y = 1 \)
   (C) \( x = 2 \), \( y = 2 \)
   (D) \( x = 3 \), \( y = 1 \)
   (E) \( x = 4 \), \( y = 3 \)

26. If there are \( m \) minutes in \( h \) hours, what is \( m \) in terms of \( h \)?
   (A) \( \frac{60}{h} \)
   (B) \( \frac{h}{60} \)
   (C) \( 60 + h \)
   (D) \( 60h \)
   (E) \( 3,600h \)
Directions for Student-Produced Response Questions

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 scratch work.

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

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

**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 0.666 or 0.667. A less accurate value such as 0.66 or 0.67 will be scored as incorrect.

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

29. In a fund-raiser for a charity, 100 people registered for a 5-mile run. The charity earned $25 for each person who registered and an additional $50 for each person who completed the run. If 93 of the people completed the run, what was the total amount, in dollars, earned for the charity? (Disregard the $ sign when gridding your answer.)

30. If $0.607 = (6.07)10^{-n}$, what is the value of $n$?

31. If $\frac{1}{4}$ of $x$ is 100 and $\frac{1}{3}$ of $y$ is 900, what is the value of $x + y$?
32. In the figure above, $ABCD$ and $PQRS$ are squares with areas 36 and 16, respectively. $MDQP$ is a rectangle with area 32. What is the area of rectangle $DCLQ$?

33. The table above shows the five types of doughnuts that were sold at Wey's Cafe on a certain day. If 225 glazed doughnuts were sold, how many coconut doughnuts were sold on that day?

<table>
<thead>
<tr>
<th>Doughnut Type</th>
<th>Percent Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chocolate</td>
<td>24%</td>
</tr>
<tr>
<td>Creme filled</td>
<td>15%</td>
</tr>
<tr>
<td>Glazed</td>
<td>45%</td>
</tr>
<tr>
<td>Jelly filled</td>
<td>13%</td>
</tr>
<tr>
<td>Coconut</td>
<td>3%</td>
</tr>
</tbody>
</table>

34. In the figure above, $AC \parallel GD$ and $CE \parallel BF$. What is the value of $x$?

35. The lockers in a school are numbered from 1 to 1000. Jean’s locker number is an even number that is divisible by both 5 and 31. What is one possible locker number that Jean could have?

36. If $0 \leq x \leq 5$ and $-5 \leq y \leq 0$, what is the minimum value of $\frac{12}{|x - y|}$?

37. The total cost of 8 hats and 5 scarves is the same as the total cost of 5 hats and 7 scarves. The cost of each scarf is $d$ times the cost of each hat. What is the value of $d$?

38. In the $xy$-plane, the line with equation $ax + by = 1$, where $a$ and $b$ are constants, intersects the $y$-axis where $y = 2$. What is the value of $b$?

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.
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

2. By the time Gregory Hines was six years old, he has already been dancing and singing at the Apollo Theater in New York; two years later he would make his debut on Broadway.

(A) has already been
(B) was already
(C) will already be
(D) is already
(E) was already having been

3. The morning commuter train ran behind schedule, and this made the professor missing class.

(A) and this made the professor missing
(B) so as the professor was missing
(C) so the professor missed
(D) resulting in that the professor missed
(E) the professor was missing

4. Benjamin Banneker, having learned astronomy on his own, and then he was able to predict a solar eclipse in 1789.

(A) and then he was able to predict
(B) he was able to predict
(C) then was able to be predicting
(D) therefore he was able to predict
(E) was able to predict

5. The curator of the Houdini Historic Museum, in announcing that new interactive displays would help visitors to understand some of the secrets of the famous escape artist.

(A) Museum, in announcing that new interactive displays would help visitors to
(B) Museum, which announced new interactive displays will help visitors
(C) Museum, who announced that new interactive displays will help visitors
(D) Museum announced that new interactive displays would help visitors to
(E) Museum is announcing new interactive displays, they will help visitors
6. Bessie Smith, the most popular and successful blues singer of the 1920s and 1930s, is regarded by some as the most influential performer in the history of blues.
   (A) the most popular and successful blues singer of the 1920s and 1930s, is regarded by some
   (B) the most popular and successful blues singer of the 1920s and 1930s, and regarded by some
   (C) she was the most popular and successful blues singer of the 1920s and 1930s, some regarding her
   (D) as the most popular and successful blues singer of the 1920s and 1930s, and some regard her
   (E) being the most popular and successful blues singer of the 1920s and 1930s, and by some to be regarded

7. Half Dome, with its sheer northwest face and smooth curved shoulders, are widely recognized as a symbol of Yosemite National Park.
   (A) are widely recognized
   (B) receive wide recognition
   (C) is widely recognized
   (D) widely recognized
   (E) which are widely recognized

8. People entering the workforce for the first time are finding that many jobs call for a college degree, computer skills, and have basic knowledge of a foreign language.
   (A) have basic knowledge of a foreign language
   (B) basic knowledge of a foreign language
   (C) to have a basic knowledge of a foreign language
   (D) having a basic foreign language knowledge
   (E) with a basic foreign language knowledge

9. Robert Schumann’s piano composition *Toccata in C Major*, a difficult piece to perform, it requires that the right hand play two lines simultaneously, one with the thumb and index finger, the other with the fourth and fifth fingers.
   (A) Major, a difficult piece to perform,
   (B) Major, a difficult piece to perform because
   (C) Major, a difficult piece to perform in that
   (D) Major is a difficult piece to perform because
   (E) Major is a difficult piece to perform,

10. The attorney argued that “sampling” or by otherwise adapting her client’s music for commercial purposes was a violation of copyright law.
    (A) or by otherwise adapting
    (B) or if otherwise adapted
    (C) or to otherwise adapt
    (D) or otherwise adapted
    (E) or otherwise adapting

11. The swimmers, after training for many years, hope to win a place on the Olympic team to thus become a competitor at the highest level of their sport.
    (A) to win a place on the Olympic team to thus become a competitor
    (B) they will win places on the Olympic team, thus becoming a competitor
    (C) that they would win places on the Olympic team and thus become a competitor
    (D) to win places on the Olympic team and thus become competitors
    (E) to win places on the Olympic team, they thus compete

12. The scholar argued that seventeenth-century British poetry is more musical and descriptive than American poets who are from the same period.
    (A) American poets who are from the same period
    (B) American poets of the same period
    (C) American poetry of the same period
    (D) the same period of American poetry
    (E) those from the same period in American poetry

13. While visiting the Ocala National Forest, the oldest national forest east of the Mississippi, a huge tree fell and almost hit Joan’s car.
    (A) While visiting the Ocala National Forest, the oldest national forest east of the Mississippi, a huge tree fell and almost hit Joan’s car.
    (B) While visiting the Ocala National Forest, the oldest national forest east of the Mississippi, Joan’s car was almost hit by a huge tree that fell.
    (C) While Joan was visiting the Ocala National Forest, the oldest national forest east of the Mississippi, a huge tree fell and almost hit her car.
    (D) A huge tree fell while visiting the Ocala National Forest, the oldest national forest east of the Mississippi, and it almost hit Joan’s car.
    (E) A huge tree fell and almost hit Joan’s car while visiting the Ocala National Forest, the oldest national forest east of the Mississippi.

14. Excessive exposure to the sun’s ultraviolet rays are shown to have many unhealthy consequences, such as premature aging.
    (A) are shown to have
    (B) show that they have
    (C) has been shown that it has
    (D) has been shown to have
    (E) have been shown as having
15. Her books were reviewed widely during her lifetime, and she had an international readership. Charlotte Perkins Gilman earned her living primarily as a lecturer, not as an author.

(A) Her books were reviewed widely during her lifetime, and
(B) Her books were reviewed widely during her lifetime, although
(C) During her lifetime, her books were reviewed widely, and
(D) Despite her books being reviewed widely during her lifetime,
(E) Although her books were reviewed widely during her lifetime and

16. Every spring giant turtles fight their way through heavy surf, crawl ponderously inland to lay their eggs in the sand.

(A) inland to lay their eggs in the sand
(B) inland, and lay their eggs in the sand
(C) inland, where their eggs are laid in the sand
(D) inland, laying their eggs in the sand
(E) inland and in the sand their eggs are laid

17. If residents were to separate recyclable materials apart from the daily trash, the cost of refuse disposal would be greatly reduced.

(A) were to separate recyclable materials apart from the daily trash
(B) separate recyclable materials from the daily trash
(C) were to separate recyclable materials from the daily trash
(D) separate recyclable materials and the daily trash
(E) will separate recyclable materials apart from the daily trash

18. We should make our decision regardless of whether we will be able to take immediate action to implement it.

(A) of whether we will be able to take immediate action to implement it
(B) of if we can act immediately by its implementation
(C) of whether or not we can act immediately on implementing them
(D) of whether we can implement them by immediate action
(E) of if we could implement it by immediate action

19. Best known for the play A Raisin in the Sun, another notable work by Lorraine Hansberry is The Sign in Sidney Brustein's Window.

(A) another notable work by Lorraine Hansberry is The Sign in Sidney Brustein's Window
(B) The Sign in Sidney Brustein's Window is yet another notable work by Lorraine Hansberry
(C) Lorraine Hansberry wrote another notable work, The Sign in Sidney Brustein's Window
(D) Lorraine Hansberry's The Sign in Sidney Brustein's Window is another one of her notable works
(E) another work by Lorraine Hansberry entitled The Sign in Sidney Brustein's Window is also notable

20. The literary technique used by Gabriel Garcia Márquez, like some other Latin American writers, are described as magic realism.

(A) Márquez, like some other Latin American writers, are
(B) Márquez, like those of some other Latin American writers, are
(C) Márquez, like some other Latin American writers, is
(D) Márquez and some other Latin American writers are
(E) Márquez and some other Latin American writers is
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 accepted the resolution **drafted by the neutral states.** No error

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<tr>
<th>A</th>
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<th>C</th>
<th>D</th>
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21. Cutting the grass, washing the car, and to weed the garden were among the chores I did when I was a boy. No error

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22. Between 1994 and 2002, real estate developers built **about** 1.5 million new houses **every year**, most of **it suburban single-family homes.** No error

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23. Like other composers of his time, Bach **was dependent on the generosity of rich sponsors and patrons for his livelihood.**

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24. The arrival of swallows in San Juan Capistrano on the same day each spring **fascinates scientists, who continue to search for an explanation of the phenomenon.** No error

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25. In *Borderlands*, Gloria Anzaldúa writes *lyrical in a mixture of Spanish and English, meditating on the experiences of Chicanos in Anglo culture and of women in Hispanic culture. No error*

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26. Health experts warn that people who are sedentary are likely to gain weight, especially after you have reached middle age. No error

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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</table>
27. Jonathan Swift's *Gulliver's Travels* being comprised of four sections, each of which A depicts the title character beginning a new B voyage as if he had learned nothing C from his previous experiences. No error D E

28. Unseasonably mild winter weather has caused A flowering trees to burst into colorful blooms that B have no chance of lasting until the arrival of C spring. No error D E

29. Different kinds of blood cells have a different life span A in the bloodstream: red cells last about three months, B platelets about ten days, and white cells anywhere C from days to years. No error D E

30. Fran would be happy to assist Brad, had he simply A requested help early enough to give her time C to complete her own assignments. No error D E

31. Scientists have recently discovered that not all A genes adhere to predictable Mendelian patterns B of inheritance; it has forced them to reexamine C some formerly unassailable assumptions. No error D E

32. Along one wall of the kitchen stands fine oak A cupboards and a massive walnut chest, each B dark with age and inscribed with the date 1660. C No error D E

33. When L'Enfant suggested to build the United States A Capitol at the center of Washington, D. C., he also B offered to design a landscaped mall nearby. No error C D E

34. That the American Discovery Trail comprises A more than 200 local, regional, and national trails B came as a surprise to the visitors from the city. C 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 35-39 refer to the following passage.

(1) Some people believe that spending solitary, quiet hours reading and thinking in a library are the best way to prepare for a debate tournament. (2) Most memory experts, however, would recommend preparing with team members. (3) Doing so increases the rate of learning and the likelihood of remembering. (4) When members of a debate team prepare together, they learn facts and master issues faster and more effectively than each individual could alone.

(5) Communication is essential to the ability to remember well, says a well-known psychologist, Art Shimamura. (6) The fact of being isolated, he has found, is about the worst thing you can do if you want to retain information. (7) In other words, when you talk with others, whether it is to describe a movie plot or complain about a difficult chapter in a textbook, you are actually strengthening your memory. (8) Companionship is essential for mental health, too.

(9) The human memory works like a filing system. (10) For a filing system to be effective, information has to be put in a logical place, inside a folder that includes related information. (11) When the members of a debate team practice by citing facts in support of an argument or counterargument, they are literally gathering related pieces of information into a single mental folder. (12) And during an actual debate, when the pressure is on, they will be more easily retrieved than those memorized as isolated pieces of information.

35. Which is the best version of the underlined portion of sentence 1 (reproduced below)?

Some people believe that spending solitary, quiet hours reading and thinking in a library are the best way to prepare for a debate tournament.

(A) (as it is now)
(B) the solitary, quiet hours they spent in a library reading and thinking were
(C) spending solitary, quiet hours reading and thinking in a library is
(D) if you spend solitary, quiet hours reading and thinking in a library, that is
(E) after spending solitary, quiet hours reading and thinking in a library one will have found

36. In context, which is the best version of the underlined portion of sentence 6 (reproduced below)?

The fact of being isolated, he has found, is about the worst thing you can do if you want to retain information.

(A) (As it is now)
(B) To be so isolated
(C) Such isolation
(D) Isolating yourself
(E) Being isolated like that

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

When the members of a debate team practice by citing facts in support of an argument or counterargument, they are literally gathering related pieces of information into a single mental folder.

(A) (as it is now)
(B) are nevertheless
(C) are, so to speak,
(D) are, for instance,
(E) are, on the contrary,
38. In context, which of the following phrases should be substituted for "they" in sentence 12?
(A) students who prepare for debates in groups
(B) facts learned in association with one another
(C) knowledge derived from personal experience
(D) folders containing information on a multitude of topics
(E) debate teams that have practiced both arguments and counterarguments

39. Which sentence should be deleted because it is irrelevant to the passage?
(A) Sentence 2
(B) Sentence 4
(C) Sentence 8
(D) Sentence 9
(E) Sentence 10

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.
Get your critical reading score.

1. Check your responses with correct answers at the bottom of this page.
2. How many critical reading questions (1–48) did you get wrong? ** Multiply by .25. ** (A)
3. How many critical reading questions did you get right? ** (B)
4. Subtract A from B. ** = Critical Reading Points
   Round up if .5 or more, down, if less than .5.
5. Use the table to find your Critical Reading Score. **

Get your mathematics score.

1. Check your responses with correct answers at the bottom of this page.
2. How many math questions between 1 and 28 did you get wrong? ** Multiply by .25. ** (C)
3. How many math questions (1–38) did you get right? ** (D)
4. Subtract C from D. ** = Mathematics Points
   Round up if .5 or more, down, if less than .5.
5. Use the table to find your Mathematics Score. **

Get your writing skills score.

1. Check your responses with correct answers at the bottom of this page.
2. How many writing skills questions (1–39) did you get wrong? ** Multiply by .25. ** (E)
3. How many writing skills questions did you get right? ** (F)
4. Subtract E from F. ** = Writing Skills Points
   Round up if .5 or more, down, if less than .5.
5. Use the table to find your Writing Skills Score. **

* Don’t count questions you omitted. For multiple-choice questions, you lose .35 (1/4) point for an incorrect response.

When you take the PSAT/NMSQT, you will receive critical reading, mathematics and writing skills scores; you will also receive a Selection Index, which National Merit Scholarship Corporation uses in its competitions. The formula for computing the Selection Index is CR+M+4W. For example, assuming that your critical reading score is 51, your mathematics score is 55 and your writing skills score is 50, your Selection Index would be 156.

Check Your Answers to the Practice Test.

Practice makes a difference! Take the full-length test on the preceding pages. Then compare your answers with the correct answers here, get your calculator, and follow the directions above for computing your scores.

For explanations of answers to questions on this practice test go to www.collegeboard.org/psatpractice.

The PSAT/NMSQT score scale ranges from 20 to 80. An average score for junior test-takers is approximately 47 for critical reading, 48 for mathematics, and 46 for writing skills.
Fill us in!

Use your ANSWER SHEET to get information from colleges and scholarship programs.

Get Information From Colleges

If you would like to receive information from colleges, universities, nonprofit educational opportunity organizations, some scholarship programs and the College Board, participate in the Student Search Service.

You must fill in circles correctly for your name and address (with ZIP code).

If you also want to receive information via e-mail, clearly print your e-mail address.

Get Information About a College Major

Review the majors list on page 7 of the Student Guide before taking the test.

Enter NMSC Scholarship Programs

National Merit Scholarship Corporation (NMSC) can determine whether you meet requirements to participate in its 2013 programs only if you fill in the circles for Section 13a–13d.

If you are a Black American and wish to enter the National Achievement Scholarship Program as well as the National Merit Scholarship Program, fill in the circle in Section 14.

Sign This Statement

Make sure you read the test regulations on page 4 in the Student Guide.