



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.

Both in society and in our own lives, today's problems are serious and require serious solutions. Increasingly, however, people are taught to laugh at things that aren't usually funny and to cope with difficult situations by using humor. They are even advised to surround themselves with funny people. There is strong evidence that laughter can actually improve health and help fight disease.

Adapted from Marshall Brain, "How Laughter Works"

Assignment: Is using humor the best way to approach difficult situations and problems? 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.

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

Call it a clan, call it a network, call it a family. Whatever you call it, whoever you are, you need one. You need one because you are human. You didn't come from nowhere. Before you, around you, and, presumably, after you, there are others. Even if you live alone and even if your solitude is by your own choice, you still cannot do without a network or a family.

Adapted from Jane Howard, "All Happy Clans Are Alike: In Search of the Good Family"

Assignment: Does everyone, even people who choose to live alone, need a network or family? Plan and write an essay in which you develop your point of view on this issue. Support your position with reasoning and examples taken from your reading, studies, experience, or observations.

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

Good news is, for the most part, no news. It is not sufficiently compelling or important to make leading stories and front pages in the media, certainly not as often as bad news. Bad news sells, or so it seems from the books, newspapers, and television reports that fill our lives. But in this endless focus on the bad, the media present a distorted view of the world.

Adapted from Richard B. McKenzie, *The Paradox of Progress: Can Americans Regain Their Confidence in a Prosperous Future?*

Assignment: Do books, newspapers, and other media focus too much on bad news? Plan and write an essay in which you develop your point of view on this issue. Support your position with reasoning and examples taken from your reading, studies, experience, or observations.

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

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

People distinguish between knowledge and action and pursue them separately, believing that one must know everything about a problem before one can take any action on it. This idea that people should put knowledge first and save action for later is not new. There have always been people who waste precious hours of their lives in this manner, saying that they will wait until they truly know all there is to know before putting their knowledge into practice.

Adapted from Wang Yang-ming, cited in *A Source Book in Chinese Philosophy*

Assignment: Is it better for people to know everything they can about something before taking action, or should they act first and get more information later? 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.

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Do not turn to any other section in the test.**

**SECTION 2**

Time — 25 minutes

25 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

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

- Although the hardy emperor penguin survives in Antarctica in great numbers, the region's harsh climate is ----- to many species.
(A) demeaning (B) necessary (C) inhospitable
(D) sustaining (E) predictable
- The defendant's ----- demeanor on the witness stand tended to ----- the jury's impression that he had little respect for the law.
(A) remorseful . . bolster
(B) insolent . . weaken
(C) defiant . . reinforce
(D) deferential . . confirm
(E) lackadaisical . . dispel
- Metis, the innermost ----- of Jupiter, completes a full revolution around this giant planet every seven hours.
(A) atmosphere (B) constellation (C) core
(D) satellite (E) meteor
- Civil rights activist Fannie Lou Hamer's statement "I'm sick and tired of being sick and tired" was an intentional ----- that illustrated Hamer's ----- about the plight of African Americans in the 1960s.
(A) redundancy . . frustration
(B) euphemism . . despair
(C) irony . . exultation
(D) aspersion . . despondency
(E) paradox . . optimism
- It was not until Dr. Anna Reinstein ----- the results of her several different research projects that the findings ----- into a single, definitive pattern.
(A) compromised . . coalesced
(B) synthesized . . crystallized
(C) verified . . degenerated
(D) commandeered . . amalgamated
(E) repudiated . . regressed
- Benjamin Franklin was renowned for being a -----, having delved deeply into fields as diverse as politics, business, diplomacy, statecraft, science, and publishing.
(A) sycophant (B) pedant (C) pundit
(D) nemesis (E) polymath
- Readers who delight in rarefied words cannot help but be ----- by the esoteric ----- Annie Dillard expertly wields in her novel *The Maytrees*.
(A) enthralled . . portent
(B) incensed . . diction
(C) extolled . . syllogism
(D) entranced . . lexicon
(E) embroiled . . entropy
- Media reports alleged that the candidate's campaign strategy was designed to ----- her opponent's chances for election by defaming his reputation.
(A) hobble (B) decode (C) expedite
(D) disseminate (E) augment



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

Questions 9-10 are based on the following passage.

Line Through a friend's father, Elizabeth found a job at
5 a publishing company. Her parents were puzzled by this.
The daughters of their friends were announcing their
engagements in the *Times*, and those who joined the Peace
Corps or had gone to graduate school were filed under the
10 heading of "Useful Service," as if they had entered
convents or dedicated themselves to the poor. Elizabeth
further puzzled her parents by refusing to take a cent of
their money, although her mother knew the truth: what you
dole out to the young binds them to you. To have Elizabeth
owing nothing was disconcerting, to say the least.

9. The narrator mentions the daughters of Elizabeth's parents' friends in line 3 primarily to

- (A) criticize a behavior
- (B) praise an activity
- (C) explain a reaction
- (D) note a transformation
- (E) advocate an action

10. The passage suggests that Elizabeth's parents found which quality to be "disconcerting" (line 11) in their daughter?

- (A) Magnanimity
- (B) Independence
- (C) Frugality
- (D) Lack of ambition
- (E) Unwillingness to take risks

Questions 11-12 are based on the following passage.

Line Some critics believe that the frequent use of repetition
5 in Native American ceremonial texts was a result of their
oral nature and helped make the works easy to remember.
Native American scholar Paula Gunn Allen argues that
this factor must be peripheral, however, because people
10 in societies without writing traditionally have had more
finely developed memories than do people who use writing.
Native American children learned early to remember
complicated instructions and long stories by heart. For
a person who couldn't run to a bookshelf to look up
information, reliance on memory became very important
in everyday life. Such a highly developed everyday
memory is not likely to fail on ceremonial occasions.

11. The primary purpose of the passage is to

- (A) refute a claim
- (B) describe a process
- (C) analyze a discovery
- (D) advocate a practice
- (E) reveal a problem

12. In context, what does the final sentence suggest about Native American ceremonial texts?

- (A) Understanding them requires a highly developed memory.
- (B) Their inclusion of complicated and detailed material is traditional.
- (C) They are not always oral in nature, nor are they always repetitive.
- (D) They are important in the everyday lives of many Native Americans.
- (E) Their use of repetition cannot be explained as an aid to memorization.



Questions 13-25 are based on the following passage.

This passage is adapted from a 2003 novel about a character named Gogol Ganguli, the American-born son of Indian immigrants. Just before leaving home for college, Gogol changed his name to Nikhil.

Line 5 When he is alone in his dorm room, he types out a written request, notifying the registrar's office of his name change, providing examples of his former and current signatures side by side. He gives these documents to a secretary, along with a copy of the change-of-name form. He tells his freshman counselor about his name change; he tells the person in charge of processing his student ID and his library card. He corrects the name in stealth, not bothering to explain to Jonathan and Brandon, 10 his new roommates, what he's so busy doing all day, and then suddenly it is over. After so much work it is no work at all. By the time the upperclassmen arrive and classes begin, he's paved the way for a whole university to call him Nikhil: students and professors and teaching assistants and 15 girls at parties. Nikhil registers for his first four classes: Introduction to the History of Art, Medieval History, a semester of Spanish, Astronomy to fulfill his hard science requirement. At the last minute he registers for a drawing class in the evenings. He doesn't tell his parents about the 20 drawing class, something they would consider frivolous at this stage of his life, in spite of the fact that his own grandfather was an artist. They are already distressed that he hasn't settled on a major and a profession. His parents expect him to be, if not an engineer, then a doctor, a 25 lawyer, an economist at the very least. These were the fields that brought them to America, his father repeatedly reminds him, the professions that have earned them security and respect.

30 But now that he's Nikhil it's easier to ignore his parents, to tune out their concerns and pleas. With relief, he types his name at the tops of his freshman papers. He reads the telephone messages his roommates leave for Nikhil on assorted scraps in their room. He opens up a checking account, writes his new name into course books. 35 "*Me llamo Nikhil,*"* he says in his Spanish class. It is as Nikhil, that first semester, that he grows a goatee and discovers musicians like Brian Eno and Elvis Costello and Charlie Parker. It is as Nikhil that he takes the train into Manhattan with Jonathan. It is as Nikhil that he 40 introduces himself to people he meets.

45 There is only one complication: he doesn't feel like Nikhil. Not yet. Part of the problem is that the people who know him as Nikhil have no idea that he used to be Gogol. They know him only in the present, not at all in the past. But after eighteen years of Gogol, two months of Nikhil feel scant, inconsequential. At times he feels as if he's cast himself in a play, acting the part of twins, indistinguishable

to the naked eye yet fundamentally different. At times he still feels his old name, painfully and without warning, 50 the way his front tooth had unbearably throbbed in recent weeks after a filling. He fears being discovered, having the whole charade somehow unravel, and in nightmares his files are exposed, his original name printed on the front page of the student newspaper. Once, he signs his 55 old name by mistake on a credit card slip at the college bookstore. Occasionally he has to hear "Nikhil" three times before he answers.

60 Even more startling is when those who normally called him Gogol refer to him as Nikhil. For example, when his parents call on Saturday mornings, if Brandon or Jonathan happens to pick up the phone, they ask if Nikhil is there. Though he has asked his parents to do precisely this, the fact of it troubles him, making him feel in that instant that he is not related to them, not their child. "Please come 65 to our home with Nikhil one weekend," his mother, Ashima, says to his roommates when she and his father visit campus during parents weekend in October. The substitution sounds wrong to Gogol, correct but off-key, the way it sounds when his parents speak English to him 70 instead of Bengali. Stranger still is when one of his parents addresses him, in front of his new friends, as Nikhil directly: "Nikhil, show us the buildings where you have your classes," his father suggests. Later that evening, out to dinner with Jonathan, Ashima slips, asking, "Gogol, 75 have you decided yet what your major will be?" Though Jonathan, listening to something his father is saying, doesn't hear, Gogol feels helpless and annoyed yet unable to blame his mother, caught in the mess he's made.

*"My name is Nikhil!"

13. Taken as a whole, the passage is best described as a portrayal of

- (A) two parents' acceptance of their son's leaving home
- (B) an immigrant family's adjustment to new surroundings
- (C) the stimulating possibilities open to a college student
- (D) a young man's struggle to define himself
- (E) a young man's success at achieving independence



14. Lines 1-8 (“When . . . card”) serve primarily to
- (A) describe the care Nikhil took to develop studious habits
 - (B) characterize Nikhil as having somewhat sinister motives
 - (C) detail the steps Nikhil followed to accomplish a goal
 - (D) reveal Nikhil’s lack of experience in navigating bureaucratic procedures
 - (E) provide information about Nikhil’s activities before arriving at college
15. The statement in lines 11-12 (“After . . . all”) suggests primarily that Nikhil is
- (A) saddened that the work is over
 - (B) surprised that his task is achieved
 - (C) uneasy about his new situation
 - (D) puzzled at his lack of success
 - (E) irritated at the amount of work involved
16. Lines 18-22 (“At the . . . artist”) suggest which of the following about Nikhil?
- (A) He enjoys provoking his parents.
 - (B) He has inherited his grandfather’s talent.
 - (C) He often prefers childish activities.
 - (D) He feels compelled to take additional courses.
 - (E) He has allowed an impulse to guide him.
17. In context, lines 23-25 (“His . . . least”) suggest that Nikhil’s parents believe that
- (A) Nikhil would not enjoy being an economist
 - (B) Nikhil secretly plans to become an artist
 - (C) Nikhil should pursue multiple professions
 - (D) certain professions are more prestigious than others
 - (E) their own career opportunities had been too limited
18. Lines 35-40 (“It is . . . meets”) are notable chiefly for their use of
- (A) metaphor
 - (B) paraphrase
 - (C) exaggeration
 - (D) parallel structure
 - (E) appeal to emotion
19. The sentence in lines 41-42 (“There is . . . Nikhil”) serves primarily to
- (A) introduce a shift in the narrative
 - (B) make an unusual comparison
 - (C) present a new character
 - (D) provide a temporary digression
 - (E) reinforce the previous observations
20. The description in lines 48-51 (“At times . . . filling”) suggests that Nikhil’s response is
- (A) intense and involuntary
 - (B) committed and intellectual
 - (C) virtuous and self-effacing
 - (D) skeptical and resistant
 - (E) intermittent and nonsensical
21. Lines 51-54 (“He . . . newspaper”) chiefly reveal Nikhil’s feelings of
- (A) anxiety
 - (B) sorrow
 - (C) anger
 - (D) defiance
 - (E) excitement
22. It is “startling” (line 58) to Nikhil to be called “Nikhil” by his parents because he
- (A) has not told them that he has changed his name
 - (B) has asked them not to address him in this way
 - (C) knows that they wanted him to adopt a different new name
 - (D) is not used to hearing his name spoken aloud by other people
 - (E) feels that it is unnatural for them to use his new name
23. In line 74, “slips” most nearly means
- (A) moves stealthily
 - (B) slides involuntarily
 - (C) forgets momentarily
 - (D) addresses awkwardly
 - (E) escapes easily



24. In the last paragraph, Nikhil's parents are presented as

- (A) amused by Nikhil's independence
- (B) compliant with Nikhil's decision
- (C) confused about how to behave
- (D) suspicious of Nikhil's motives
- (E) resentful toward Nikhil's roommates

25. The final sentence of the passage indicates that Nikhil is primarily

- (A) embarrassed that his roommate has learned that he changed his name
- (B) angry at his mother for using his original name in front of other people
- (C) surprised that his parents are unable to keep his names straight
- (D) feeling guilty that he has once again brought shame to his parents
- (E) frustrated with the complexities of the situation he has created

STOP

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Do not turn to any other section in the test.

SECTION 4

Time — 25 minutes

18 Questions

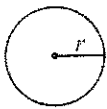
Turn to Section 4 (page 5) of your answer sheet to answer the questions in this section.

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 scratch work.

Notes

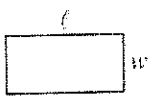
- The use of a calculator is permitted.
- All numbers used are real numbers.
- Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not drawn to scale. All figures lie in a plane unless otherwise indicated.
- 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

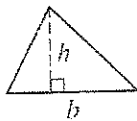


$$A = \pi r^2$$

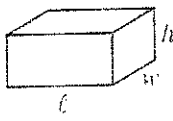
$$C = 2\pi r$$



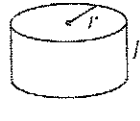
$$A = lw$$



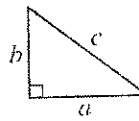
$$A = \frac{1}{2}bh$$



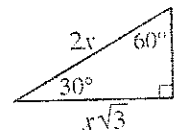
$$V = lwh$$



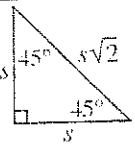
$$V = \pi r^2 h$$



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



Special Right Triangles

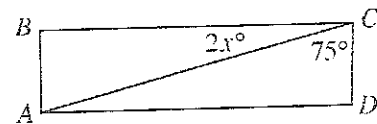


The number of degrees of arc in a circle is 360.

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

1. Which of the following is equivalent to $(y + z)x$?

- (A) xyz
 (B) $xy + z$
 (C) $xy + xz$
 (D) $x + yz$
 (E) $x + y + z$



2. In the figure above, $ABCD$ is a rectangle. What is the value of x ?

- (A) 2.5
 (B) 5
 (C) 7.5
 (D) 15
 (E) 25

GO ON TO THE NEXT PAGE



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

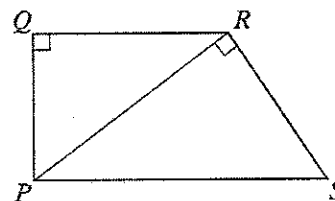
- (A) -2
- (B) -1
- (C) 0
- (D) 2
- (E) 7

4. A bookcase contains a total of 30 books, each of which is either a hardcover book or a paperback book. If the number of hardcover books is $\frac{1}{2}$ the number of paperback books, how many hardcover books are in the bookcase?

- (A) 5
- (B) 10
- (C) 15
- (D) 20
- (E) 25

5. In a sequence, each term after the first is found by adding the constant k to the preceding term. The 10th term in the sequence is 23, and the 16th term is 41. What is the 7th term in the sequence?

- (A) -23
- (B) -22
- (C) -18
- (D) 14
- (E) 18



Note: Figure not drawn to scale.

6. In the figure above, $\overline{PQ} \perp \overline{QR}$ and $\overline{PR} \perp \overline{RS}$. If the lengths of \overline{PQ} , \overline{QR} , and \overline{RS} are each 1, what is the length of \overline{PS} ?

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

GO ON TO THE NEXT PAGE



7. The average (arithmetic mean) weight of 8 rocks in a pile is 15 pounds. Another rock is added, and the average weight of the rocks in the pile increases to 16 pounds. What is the weight, in pounds, of the added rock?

- (A) 16
- (B) 20
- (C) 24
- (D) 28
- (E) 31

8. A twin prime pair is defined as two prime numbers that differ by 2. For example, 17 and 19 are a twin prime pair because $19 - 17 = 2$. Which of the following statements must be true about any twin prime pair?

- I. The sum of the two numbers is a prime number.
 - II. The product of the two numbers is a prime number.
 - III. The squares of the two numbers are a twin prime pair.
- (A) None
 - (B) I only
 - (C) II only
 - (D) III only
 - (E) I and II

GO ON TO THE NEXT PAGE 



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 scratch work.

Write answer in boxes. →

Grid in result. →

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

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

← Fraction line

Answer: 2.5

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

← Decimal point

Answer: 201

Either position is correct.

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

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

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

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

- **Decimal Answers:** If you obtain a decimal answer with more digits than the grid can accommodate, it may be either rounded or truncated, but it must fill the entire grid. For example, if you obtain an answer such as 0.6666..., you should record your result as .666 or .667. A less accurate value such as .66 or .67 will be scored as incorrect.
- Acceptable ways to grid $\frac{2}{3}$ are:

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

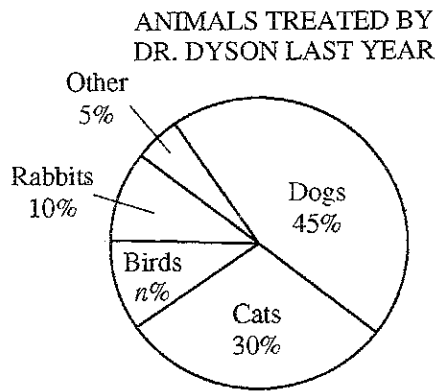
	.	6	6	6
•	○	○	○	○
1	○	○	○	○
2	○	○	○	○
3	○	○	○	○
4	○	○	○	○
5	○	○	○	○
6	○	○	○	○

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

9. The cost of a case of 12 computer adapters is \$75. When purchased separately, each adapter costs \$8. How many dollars would be saved by purchasing a case of adapters, rather than purchasing 12 adapters separately? (Disregard the \$ sign when gridding your answer.)

10. On a number line, the number x is halfway between 2 and 3. What is the value of $|1 - x|$?

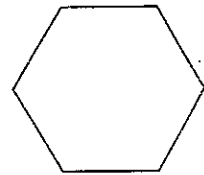
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11. Dr. Dyson, a veterinarian, treated a total of 2000 animals last year, as shown in the circle graph above. How many of these animals were not birds?

12. A certain number n is multiplied by 12. The number that is 3 less than n is also multiplied by 12. How much greater is the first product than the second?

13. In dry air, the speed of sound V , in meters per second, is modeled by the function $V(t) = 331.4 + 0.6t$, where t is the temperature in degrees Celsius. According to the model, for what value of t is the speed of sound in dry air 343.7 meters per second?

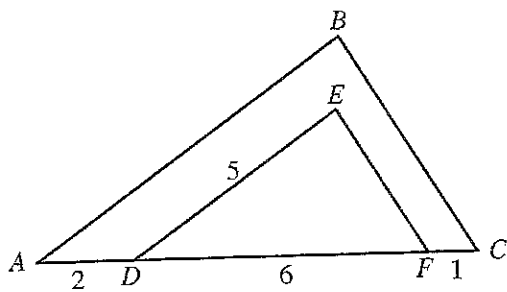


14. Any segment whose endpoints are two nonadjacent vertices of a polygon is called a diagonal of that polygon. What is the greatest number of diagonals that could be drawn in the hexagon shown above?

GO ON TO THE NEXT PAGE



15. For all positive integers a , let \boxed{a} be defined as the sum of the odd integers from 0 to a , inclusive. For example, $\boxed{8} = 1 + 3 + 5 + 7 = 16$. What is the value of $\boxed{100} - \boxed{96}$?



16. In $\triangle ABC$ above, points D and F lie on side \overline{AC} . Side \overline{AB} is parallel to side \overline{DE} , and side \overline{BC} is parallel to side \overline{EF} . What is the length of side \overline{AB} ?

17. How many positive integers less than 1000 are not divisible by 3?

18. In the xy -plane, the points with coordinates $(0, 1)$ and $(4, t)$ lie on line ℓ . If the slope of ℓ is greater than $\frac{3}{4}$ and less than 1, what is one possible value of t ?

STOP

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

**SECTION 5**

Time — 25 minutes

35 Questions

Turn to Section 5 (page 5) of your answer sheet to answer the questions in this section.**Directions:** For each question in this section, select the best answer from among the choices given and fill in the corresponding circle on the answer sheet.

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

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

EXAMPLE:

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

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

A B C D E

1. Astronaut Carlos Noriega, beginning his career as a Marine Corps pilot but then became a computer scientist and helped to assemble the International Space Station.

- (A) Noriega, beginning his career
- (B) Noriega began his career
- (C) Noriega, who began his career
- (D) Noriega, his career began
- (E) Noriega, his career had begun

2. Unlike apples and pears, oranges do not continue to ripen after they have been picked.

- (A) Unlike apples and pears, oranges do not continue
- (B) Unlike apples and pears, oranges, which do not continue
- (C) Unlike apples and pears, it is oranges not continuing
- (D) Oranges, unlike apples and pears, they do not continue
- (E) Oranges, unlike apples and pears, not continuing

3. As part of a five-year forest restoration program at several of the state's parks, teenagers are rebuilding paths, clearing underbrush, and vines are being cut back.

- (A) clearing underbrush, and vines are being cut back
- (B) clearing underbrush, and cutting back vines
- (C) they are clearing underbrush, and cutting back vines
- (D) underbrush is being cleared, and vines are being cut back
- (E) underbrush cleared, and vines cut back

4. Not filling out the forms carefully, there was a two-week delay in processing his paycheck.

- (A) Not filling out the forms carefully
- (B) The forms, not filled out carefully
- (C) Not carefully filling out the forms
- (D) Because he had not filled out the forms carefully
- (E) By him not being careful while filling out the forms



5. Our team has worked for several months on a robot for the science fair that we plan on entering in the robotics division.
- (A) months on a robot for the science fair that we plan on entering in the robotics division
 - (B) months on a robot that we plan to enter in the robotics division of the science fair
 - (C) months on a robot that we planned entering in the science fair, robotics division
 - (D) months, we plan to enter a robot for the science fair in the robotics division
 - (E) months, we are planning to enter a robot in the robotics division of the science fair
6. Frustrated with the lack of fashionable clothing at decent prices in most retail stores, a new discount store was opened on Main Street by a local clothing designer.
- (A) stores, a new discount store was opened on Main Street by a local clothing designer
 - (B) stores, it was on Main Street that a local clothing designer opened a new discount store
 - (C) stores, a local clothing designer opened a new discount store on Main Street
 - (D) stores; on Main Street a local clothing designer opened a new discount store
 - (E) stores led a local clothing designer to open a new discount store on Main Street
7. The theory that the mass extinctions of 250 million years ago were caused by increased volcanic activity and a warming climate are based around newly discovered evidence.
- (A) climate are based around
 - (B) climate were based around
 - (C) climate is based on
 - (D) climate, they based this on
 - (E) climate, this is based on
8. Gothic architecture is a style of architecture, associated particularly with cathedrals and other churches, that flourished in Europe during the Middle Ages.
- (A) architecture, associated particularly
 - (B) architecture, it was associated particularly
 - (C) architecture, in particular associating
 - (D) architecture that, being particularly associated
 - (E) architecture in that it was particularly associated
9. Small fish living among coral reefs face constant danger, swimming in open water makes them prey to larger fish, but hiding in crevices exposes them to eel attacks.
- (A) danger, swimming
 - (B) danger, their swimming
 - (C) danger; if they swim
 - (D) danger: swimming
 - (E) danger: when it swims
10. Disappointed by the results of last year's plantings and determined to do better this year, Aunt Marian prepared her garden with unusual care.
- (A) plantings and determined to do better this year, Aunt Marian prepared her garden with unusual care
 - (B) plantings and determined to do better this year, Aunt Marian's garden was prepared with unusual care
 - (C) plantings and, her being determined to do better this year, Aunt Marian prepared her garden with unusual care
 - (D) plantings, Aunt Marian prepared her garden with unusual care, she was determined to do better this year
 - (E) plantings, Aunt Marian, determined to do better this year, and her garden was prepared with unusual care
11. Just by unplugging your cell phone charger when you are not using it reduces carbon dioxide pollution.
- (A) Just by unplugging your
 - (B) Just unplugging one's
 - (C) Just unplugging your
 - (D) By just unplugging your
 - (E) If you just unplug your



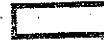
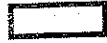
The following sentences test your ability to recognize grammar and usage errors. Each sentence contains either a single error or no error at all. No sentence contains more than one error. The error, if there is one, is underlined and lettered. If the sentence contains an error, select the one underlined 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. The book, which was published only yesterday, is
 A
sure to challenge serious the ordinary person's
 B C
definition of safe driving. No error
 D E
13. Professor Brown started yesterday's lecture
 A
by suggesting that if Benjamin Franklin were alive
 B C
 today, he probably worked for an advertising agency.
 D
No error
 E
14. Inscribed on the wall is the names of those
 A
who left their homes in the village to travel to the
 B C D
 United States. No error
 E
15. Although Duke Ellington did not collaborate with
 A B
 other composers on many of his jazz compositions,
 he works closely with pianist and composer
 C
 Billy Strayhorn on a number of successful works
 D
 over the years. No error
 E
16. Hiroko was sitting at the breakfast table, engrossed
 A
in a novel, when the telephone rang and abruptly
 B C
recalling her to the present moment. No error
 D E
17. Jason is the only one of the three people I knew well
 A B
 in middle school who still write to me regularly.
 C D
No error
 E



18. Arguing that every chemical element is composed of
A B

fundamental particles of a weight unique to that
C

element, the English meteorologist John Dalton

presented the first modern atomic theory in 1803.

D
No error
E

19. There is, in spite of the large bay window and
A B
the new floors, many reasons, such as the poor location

and the small basement, for Nancy not to buy the
C D

house. No error
E

20. Last month a committee created in response to
A B
employees' demands for safer working conditions
C

has sponsored a workshop on industrial safety.
D

No error
E

21. Set in South Carolina in 1964, the novel *The Secret*
A

Life of Bees is not about bees but about Lily, a
B C

fourteen year old who runs away from home.
D

No error
E

22. Since it opened in 1956, the Zelinski restaurant
A

has become famous for their unusual fare and
B C

its elaborately decorated dining room. No error
D E

23. Though I am acquainted with Mr. Bartholomew
A

and have long known of his interest in the painting,
B

that he has gone to such lengths to obtain it
C

astonishes me. No error
D E

24. A significant factor to include in the budget when
A

buying a car are the costs of fuel and maintenance
B C

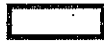
and the insurance payments. No error
D E

25. The habitat in which sequoia trees grow, extends
A B

from southern Oregon to northern California, is kept
C

damp year-round by heavy seasonal rains, cool coastal
D

air, and fog. No error
E



26. My mother always gave my sister and I the same

A

treats when we were little so that neither of us

B

would be jealous of the other. No error

C

D

E

27. Throughout the season the coach would often remind

A

us that the best teammates are not those who strive to

set individual records but those who fit in as

B

C

a member of a cohesive unit. No error

D

E

28. The acoustics of the ancient Greek theater at

Epidaurus are so good that an actor's words,

A

even when whispered, are auditory to those sitting

B

C

D

in the last row. No error

E

29. In *The Big Sea*, Langston Hughes recounts his

A

childhood and early adulthood in language that is

B

as simple and direct as another Missouri-born writer,

C

one much admired by Hughes, Mark Twain. 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.

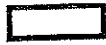
Questions 30-35 refer to the following passage.

(1) For more than a century automobiles have given us great freedom of mobility, but this freedom has come with enormous costs. (2) Our reliance on gasoline-powered vehicles resulted in the pollution of our environment. (3) The world's nonrenewable fossil fuels are being depleted.

(4) In recent years various efforts have been made to address these problems. (5) Many jurisdictions have enacted laws limiting automobile emissions and requiring greater fuel efficiency. (6) Another approach has been to develop alternatives to the traditional automobile. (7) They have cars that run on hydrogen, which produce no pollution at all, and those that run entirely on electricity. (8) There are even cars that run on used vegetable oil.

(9) Although none of these alternatives has caught on commercially, one that has is the hybrid vehicle, which runs on a combination of gasoline and electricity. (10) Hybrids require less gasoline than conventional cars, produce less pollution, and run relatively quietly. (11) Though more expensive than most conventional cars, they have become increasingly popular since they first appeared on the market several years ago.

(12) Still, hybrids are far from ideal. (13) Unlike hydrogen vehicles, hybrids require gasoline, so they do use up fossil fuels and produce pollution. (14) Some experts contend that the main reason the hybrid gets such good mileage is its aerodynamic design and not its mechanical engineering. (15) If a conventional car were similarly streamlined, however, it would get equally good mileage.



30. In context, which is the best way to revise and combine sentences 2 and 3 (reproduced below) at the underlined portion?

Our reliance on gasoline-powered vehicles resulted in the pollution of our environment. The world's nonrenewable fossil fuels are being depleted.

- (A) resulted in the pollution of our environment, and the world's nonrenewable fossil fuels are being depleted
- (B) resulted in the pollution of our environment, and we are depleting the world's nonrenewable fossil fuels
- (C) has resulted in the pollution of our environment, but the world's nonrenewable fossil fuels are also being depleted
- (D) has resulted not only in the pollution of our environment but also in the depletion of the world's nonrenewable fossil fuels
- (E) results in the pollution of our environment as well as the world's nonrenewable fossil fuels being depleted

31. In context, which of the following sentences would best be inserted immediately before sentence 5?

- (A) The solution is simple.
- (B) One approach is legislative.
- (C) There are some who disagree.
- (D) Progress has proved difficult to measure.
- (E) Others stress the need for reform.

32. In context, which is the best version of the underlined portion of sentence 7 (reproduced below)?

They have cars that run on hydrogen, which produce no pollution at all, and those that run entirely on electricity.

- (A) (As it is now)
- (B) They developed
- (C) These include
- (D) This means
- (E) For example,

33. In context, which of the following is the best version of the underlined portion of sentence 12 (reproduced below)?

Still, hybrids are far from ideal.

- (A) (As it is now)
- (B) After all, hybrids are
- (C) Thus, hybrids are
- (D) Hybrids, by contrast, are
- (E) Hybrids are likewise

34. In context, which of the following revisions would most improve sentence 15 (reproduced below)?

If a conventional car were similarly streamlined, however, it would get equally good mileage.

- (A) Changing "a conventional car" to "conventional cars" and "it" to "they"
- (B) Changing "were" to "is" and "would" to "will"
- (C) Changing "however" to "they argue"
- (D) Inserting "still" immediately before "get"
- (E) Deleting "equally"

35. Where is the best place to insert the following sentence?

Moreover, the car's fuel efficiency may have little to do with its hybrid nature.

- (A) Immediately before sentence 8
- (B) Immediately before sentence 10
- (C) Immediately before sentence 11
- (D) Immediately before sentence 12
- (E) Immediately before sentence 14

STOP

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

**SECTION 6**

Time — 25 minutes

24 Questions

Turn to Section 6 (page 6) of your answer sheet to answer the questions in this section.**Directions:** For each question in this section, select the best answer from among the choices given and fill in the corresponding circle on the answer sheet.

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

Example:

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

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

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

- The widely documented ----- between these two diseases has prompted scientists to undertake studies to determine if treating one can ----- the other.

(A) disconnect . . cure
(B) correlation . . ward off
(C) linkage . . duplicate
(D) disparity . . bring about
(E) incoherency . . eliminate
- Essentially a blues artist, Robert Cray plays music influenced by progressive rock, yet he remains ----- the blues tradition.

(A) superior to (B) hampered by
(C) distinct from (D) grounded in
(E) ambivalent toward
- The new composite material exhibits an extraordinary degree of -----, which enables it to be molded into almost any shape.

(A) plasticity (B) resonance (C) inertness
(D) buoyancy (E) impermeability
- The forest ranger cautioned the hikers that their proposed route might prove dangerous, but they ignored her ----- .

(A) vacillation (B) indiscretion
(C) admonition (D) transgression
(E) prohibition
- Eager to improve upon their journalistic skills, Inés and Juanita were disappointed in their editor for criticisms that were often more ----- than ----- .

(A) didactic . . extemporaneous
(B) captious . . edifying
(C) perceptive . . incisive
(D) quibbling . . inapt
(E) constructive . . diplomatic

GO ON TO THE NEXT PAGE



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

Questions 6-9 are based on the following passages.

Passage 1

I love to nap. When after-lunch grogginess hits and my eyelids start to droop, nothing makes me happier than finding a comfortable spot and drifting off to sleep.

Line 5 But to my family, my napping is the sign of a basic character flaw.

“You’re napping again? You’re so lazy!”

10 They’re not the only ones who feel this way. To be an enthusiastic napper in twenty-first-century North America is to be out of step with your time and place. A nap is seen as a sign of weakness, either physical or moral. Healthy, productive adults do not nap.

Passage 2

15 Sleep researchers have shown that the human body is programmed to become sleepy in the early afternoon. In some cultures people doze after the midday meal. But in many industrialized nations, the usual response is to try to jump-start the system with caffeine, a tactic that sleep experts say creates only the illusion of efficiency and alertness.

20 “Napping should not be frowned upon,” writes one researcher. “It should have the status of daily exercise.”

25 And in fact restorative naps may be making a comeback. Recognizing that many employees are chronically sleep deprived, some companies have set up nap rooms. If labor unions are interested in worker welfare, they should make such accommodations a standard item in contract negotiations.

6. The “Sleep researchers” (line 12, Passage 2) would most likely characterize the “grogginess” (line 1, Passage 1) as a
- (A) potentially dangerous problem
(B) symptom of stress
(C) normal human pattern
(D) response to an excess of caffeine
(E) personal failure
7. Passage 2 indicates that the view expressed in the final sentence of Passage 1 (“Healthy . . . nap”) has been
- (A) helpful for those who act on it
(B) evident in every human culture
(C) supported by sleep researchers
(D) opposed by many labor unions
(E) rejected by some employers
8. The author of Passage 2 would most likely agree with which statement about the “tactic” (line 16) ?
- (A) It is not understood by sleep experts.
(B) It is not encouraged by employers.
(C) It is less effective than it appears to be.
(D) It is often difficult to implement.
(E) It is adopted only for rare emergencies.
9. The sleep expert quoted in Passage 2 (lines 19-20) would most likely consider the position taken by the “family” (line 4, Passage 1) to be
- (A) self-contradictory
(B) misguided
(C) idiosyncratic
(D) ambiguous
(E) sympathetic



Questions 10-15 are based on the following passages.

Passage 1 is from the introduction to a Zen Buddhist manual on the art of “mindfulness,” the practice of paying close attention to the present moment.

Passage 2 is from an essay by a United States author.

Passage 1

Every morning, when we wake up, we have 24 brand-new hours to live. What a precious gift! We have the capacity to live in a way that these 24 hours will bring peace, joy, and happiness to ourselves and to others.

Line

5

Peace is right here and now, in ourselves and in everything we do and see. The question is whether or not we are in touch with it. We don't have to travel far away to enjoy the blue sky. We don't have to leave our city or even our neighborhood to enjoy the eyes of a beautiful child. Even the air we breathe can be a source of joy.

10

We can smile, breathe, walk, and eat our meals in a way that allows us to be in touch with the abundance of happiness that is available. We are very good at preparing how to live, but not very good at living. We know how to sacrifice ten years for a diploma, and we are willing to work very hard to get a job, a car, a house, and so on. But we have difficulty remembering that we are alive in the present moment, the only moment there is for us to be alive. Every breath we take, every step we make, can be filled with joy, peace, and serenity. We need only to be awake, alive in the present moment.

20

Passage 2

The argument of both the hedonist and the guru is that if we were but to open ourselves to the richness of the moment, to concentrate on the feast before us, we would be filled with bliss. I have lived in the present from time to time and can tell you that it is much overrated. Occasionally, as a holiday from stroking one's memories or brooding about future worries, I grant you, it can be a nice change of pace. But to “be here now,” hour after hour, would never work. I don't even approve of stories written in the present tense. As for poets who never use a past participle, they deserve the eternity they are striving for.

25

30

Besides, the present has a way of intruding whether you like it or not. Why should I go out of my way to meet it?

35

Let it splash on me from time to time, like a car going through a puddle, and I, on the sidewalk of my solitude, will salute it grimly like any other modern inconvenience.

If I attend a concert, obviously not to listen to the music but to find a brief breathing space in which to meditate on the past and future, I realize that there may be moments when the music invades my ears and I am forced to pay

40

attention to it, note for note. I believe I take such intrusions gracefully. The present is not always an unwelcome guest, so long as it doesn't stay too long and cut into my remembering or brooding time.

45

10. The author of Passage 1 would most likely view the author of Passage 2 as

- (A) attaching too much importance to the views of others
- (B) advocating an action without considering the consequences
- (C) paying attention exclusively to the most difficult aspects of life
- (D) squandering a precious opportunity on a daily basis
- (E) failing to respect the feelings of other people

11. In line 2, “precious” most nearly means

- (A) affected
- (B) adorable
- (C) elegant
- (D) meticulous
- (E) valuable

12. In line 16, the list (“a job . . . house”) presents things that most people

- (A) assume they will eventually obtain
- (B) eventually realize are overrated
- (C) are unwilling to make sacrifices for
- (D) believe that everyone is entitled to
- (E) see as worth much effort to acquire

13. The author of Passage 1 would most likely respond to the “argument” (line 22, Passage 2) with

- (A) complete agreement
- (B) partial acceptance
- (C) absolute neutrality
- (D) studied disinterest
- (E) surprised disbelief

6



6

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6




6

14. In lines 33-37, the “present” is characterized as

- (A) a dangerous threat
- (B) an elusive concept
- (C) an unsolvable puzzle
- (D) an unavoidable imposition
- (E) a burdensome obligation

15. Which of the following phrases from Passage 2 would the author of Passage 1 most likely choose as a title for Passage 1?

- (A) “the hedonist and the guru” (line 22)
- (B) “the feast before us” (line 24)
- (C) “the sidewalk of my solitude” (line 36)
- (D) “a brief breathing space” (line 39)
- (E) “an unwelcome guest” (line 43)

GO ON TO THE NEXT PAGE 

**Questions 16-24 are based on the following passage.**

This passage was written by a geologist and published in 2001.

Not long ago, while browsing in a bookstore, I came across a volume entitled *The New Atlas of the Universe*. The title of this handsome work, I admit, took me aback.
 Line 5 Could it be true that the entire cosmos had really been probed, explored, mapped, and updated? But the book turned out to be far less than this, and therefore, in many ways, far more interesting. It was, in fact, an atlas of our solar system (a somewhat provincial version of “the universe”), consisting mainly of detailed images and maps
 10 of the planets and their moons, along with respective lists of surface features recently identified by various spacecraft.

This might sound rather humdrum. Yet another view of Jupiter’s giant red spot? One more close-up of Saturn’s auroral rings? Mars, as we know it so well, still a rusty,
 15 windswept, and boulder-strewn surface? Such was the visual chorus I expected to find, a coda of images tantamount to photographic clichés. But I was in for a number of striking surprises. Leafing through the pages of this book, I found myself entering a “universe” I had no idea
 20 existed.

As a geologist, I had been generally aware of the visual riches culled from the two Voyager space probes launched by the United States in the late 1970s. These robot eyes sent out to wander among the worlds and satellites of
 25 Jupiter, Saturn, Uranus, and Neptune had reportedly brought back tales and wonders of these geographical new worlds. This I had known; but here was the overwhelming evidence, of which I had been ignorant. Here were images that revealed worlds of unaccountable
 30 feature and action. Here were the violently eruptive sulfur volcanoes on Jupiter’s moon Io, spewing gases and ions far into space. Here were the eerie, spidery lines of Jupiter’s moon Europa, stretching for hundreds of miles just beneath a glazed skin of frozen methane.
 35 Here, too, were the gigantic, broken ice cliffs on Uranus’ moon Miranda, rising to heights that dwarfed even the Himalayas, and the multiform terrain of Neptune’s moon Triton, whose patchwork landscapes seemed grafted onto each other without reason or order, as
 40 if by collision.

To geologists, the Earth is huge and visually infinite. This is a conceptual necessity. With its innumerable sub-fields and levels of scale, the geological Terra is a universe all its own. The famous portrait of our planet as a single
 45 ball, swirling with cloud, taken by Apollo astronauts on their way to the Moon, is in no way a geological view. It is too distant, too complete, too unified—indeed, too

much like the Moon itself. It is therefore something else: an aesthetic vision that has left the gravity of science
 50 behind.

Habituated by my own geological training and knowledge, I was not quite prepared upon opening this *New Atlas of the Universe* to encounter the faces of so many worlds, dangling in the black of space, their features available to
 55 the eye for instant interpretation. Within this book, each planet and moon had its accompanying map, composed of a computer-generated image that flattened its subject out on a single rectangular strip—the so-called Mercator projection. This, too, seemed interesting: a technique
 60 literally 400 years old invented at the height of the early colonial era, the Age of Exploration, now being employed to make visible the most advanced geographies in a new age of discovery. Indeed, what might Mercator have thought were it suggested to him that his scheme would
 65 one day be used to plot landscapes so far from terrestrial in aspect as to reflect back, in their magnificent alienness, the very idea of an old and exhausted Earth?

16. In lines 1-20, the author introduces *The New Atlas of the Universe* primarily by

- (A) inviting comparisons of maps in the book with maps of Earth
- (B) reviewing traditional ideas about Earth’s geology
- (C) provoking curiosity about his personal achievements
- (D) hypothesizing in advance about what the book might contain
- (E) establishing his extensive knowledge of the field of astronomy

17. The author’s response to the anticipated images of Jupiter, Saturn, and Mars (lines 12-15) can best be likened to that of

- (A) a singer looking over yet another arrangement of a familiar song
- (B) a chef tasting an herb for the first time
- (C) an art historian discovering the influence of one artist on another
- (D) a child finding a favorite toy that had been lost
- (E) an inventor testing a variety of specialized designs



18. In lines 30-40 ("Here . . . collision"), the author lists geographical details primarily in order to
- (A) emphasize the novelty and diversity of the photographs
 - (B) describe the alarming appearance of the satellites
 - (C) provide factual data about distant places
 - (D) praise the accomplishments of the Voyager program
 - (E) explain a personal fascination with new places and sights
19. In lines 43-44 ("the geological . . . own"), the author conveys a sense of the
- (A) astounding ability scientists have to look beyond Earth
 - (B) satisfaction that geological study brings to those who pursue it
 - (C) vastness of the array of Earth's features that geologists study
 - (D) surface features that Earth has in common with other planets
 - (E) need to persuade the reader that geology is a worthy endeavor
20. The photograph of Earth taken from space is "in no way a geological view" (line 46) because
- (A) a cloud cover obscures much of the Earth's outline
 - (B) the picture was not taken by trained photographers
 - (C) the image lacks the level of detail that is at the heart of what interests geologists
 - (D) Earth appears to exist outside the law of gravity
 - (E) geologists have a different aesthetic view of the Earth's surface
21. The author indicates that the atlas portrays "faces" (line 53) in such a way that their "features" (line 54) are
- (A) grossly distorted
 - (B) partially obscured
 - (C) artificially enhanced
 - (D) mysteriously attractive
 - (E) immediately understandable
22. The author finds which aspect of the "Mercator projection" (lines 58-59) most remarkable?
- (A) Its original role in the colonization of parts of the world
 - (B) Its usefulness in modern technological applications
 - (C) Its application of landscape design techniques to mapmaking
 - (D) Its ability to render three-dimensional objects as flat
 - (E) Its anticipation of scientific pursuits of the distant future
23. In line 65, "plot" most nearly means
- (A) plan
 - (B) chart
 - (C) conspire
 - (D) conceive
 - (E) narrate
24. Which best describes the function of the question in lines 63-67 ("Indeed . . . Earth")?
- (A) It challenges an age-old assumption.
 - (B) It engages in historical speculation.
 - (C) It introduces a novel hypothesis.
 - (D) It provokes a scientific controversy.
 - (E) It creates a sense of foreboding.

STOP

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

SECTION 7

Time — 25 minutes

20 Questions

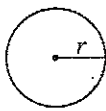
Turn to Section 7 (page 6) of your answer sheet to answer the questions in this section.

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

Notes

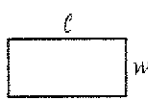
- The use of a calculator is permitted.
- All numbers used are real numbers.
- Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not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

Reference Information

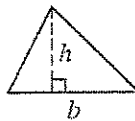


$$A = \pi r^2$$

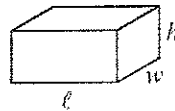
$$C = 2\pi r$$



$$A = \ell w$$



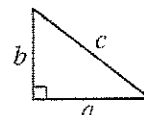
$$A = \frac{1}{2}bh$$



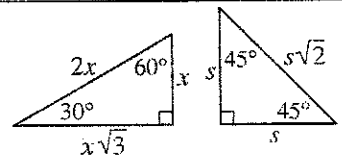
$$V = \ell wh$$



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



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



Special Right Triangles

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

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





- Sally's class has a reading list that consists of 5 novels and 2 biographies. Sally will select one novel and one biography from the reading list to complete an assignment. How many different selections of a novel and a biography are possible?
 - Three
 - Five
 - Seven
 - Ten
 - Twenty


- If $\sqrt{x-5} = 10$, then $x =$

- 75
- 95
- 105
- 125
- 225

GO ON TO THE NEXT PAGE

SALES OF COMPACT DISCS

Disc	Number Sold
Type A	
Type B	
Type C	
Type D	

Each  = 10,000 discs

3. Based on the pictogram above, how many more type *B* compact discs were sold than type *C* compact discs?

- (A) 4
(B) 40
(C) 400
(D) 4,000
(E) 40,000

4. The function f is defined by $f(x) = x^2 + c$, where c is a constant. What is $f(7)$ in terms of c ?

- (A) $49 + c$
(B) $49 + 7c$
(C) $7 + c^2$
(D) $49 + c^2$
(E) $(7 + c)^2$




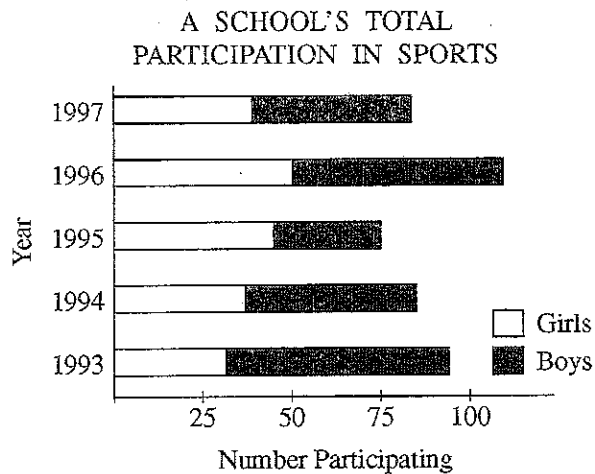
5. One of the 6 objects above will be chosen at random. What is the probability that the object chosen will be a shaded triangle?

- (A) $\frac{1}{6}$
(B) $\frac{1}{5}$
(C) $\frac{1}{4}$
(D) $\frac{1}{3}$
(E) $\frac{1}{2}$

6. In $\triangle ABC$, the measure of angle A is half the measure of angle B , and the measure of angle C is three times the measure of angle A . What is the measure of angle C ?

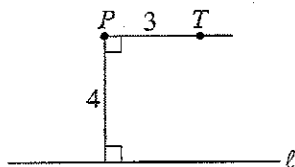
- (A) 30°
(B) 45°
(C) 60°
(D) 75°
(E) 90°

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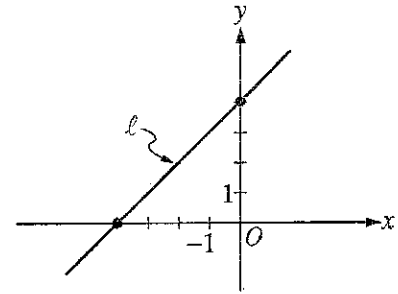
7. In the graph above, for which year were there more girls than boys participating in sports?

(A) 1997
 (B) 1996
 (C) 1995
 (D) 1994
 (E) 1993



8. In the figure above, what is the distance from point T to line ℓ ?

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



9. When line ℓ above is translated vertically 3 units down, what is an equation of the resulting line?

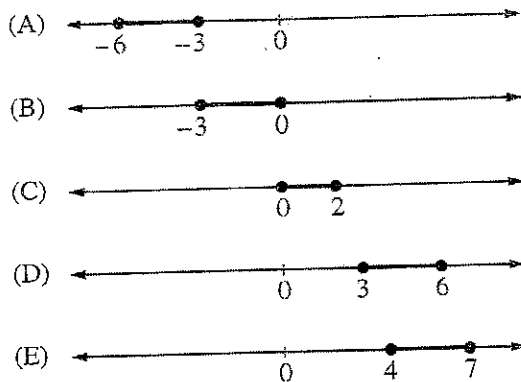
(A) $y = x + 1$
 (B) $y = x$
 (C) $y = x - 1$
 (D) $y = x - 4$
 (E) $y = x - 7$

10. There are 100 pieces of candy in a bag, 20 percent of which are wrapped. If a total of 70 percent of the pieces of candy in the bag are chocolate, what is the smallest number of wrapped chocolate pieces that could be in the bag?

(A) 0
 (B) 10
 (C) 20
 (D) 50
 (E) 70

GO ON TO THE NEXT PAGE

11. Which of the following graphs represents the set of all x values for which $-2 \leq x - 5 \leq 1$?

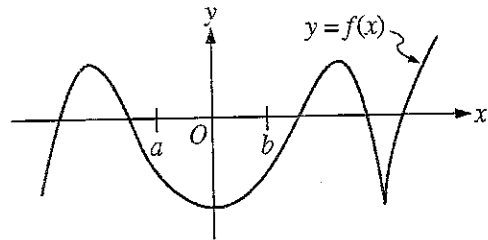


12. Points A and B lie on a circle whose center is O . If the length of arc \widehat{AB} is $\frac{1}{18}$ of the circumference of the circle, what is the measure of $\angle AOB$?

- (A) 20°
 (B) 30°
 (C) 40°
 (D) 50°
 (E) 60°

13. If x , y , and z are positive numbers and the sum of x and y is equal to the square of z , which of the following is equivalent to z ?

- (A) $\sqrt{x} + \sqrt{y}$
 (B) $\sqrt{x + y}$
 (C) $\sqrt{x^2 + y^2}$
 (D) $x^2 + y^2$
 (E) $(x + y)^2$



14. The figure above shows the graph of the function f . Based on the graph, which of the following could be true about the function over the entire interval $a < x < b$?

- (A) f is decreasing.
 (B) f is increasing.
 (C) f has one minimum point.
 (D) f has two x -intercepts.
 (E) f has two y -intercepts.

15. A container is $\frac{2}{3}$ full of water. If 5 gallons of the water were removed from the container, it would be $\frac{1}{2}$ full.

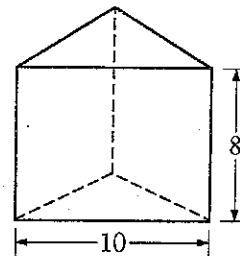
How many gallons of water does this container hold

when it is completely full?

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

16. For any real number r , which of the following must be greater than r ?

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



17. The volume of a triangular prism is equal to the area of its base times its height. What is the volume of the prism in the figure above, if its height is 8 and its base is an equilateral triangle with side of length 10?

- (A) $40\sqrt{3}$ (approximately 69.28)
(B) $200\sqrt{3}$ (approximately 346.41)
(C) 400
(D) $400\sqrt{3}$ (approximately 692.82)
(E) 800

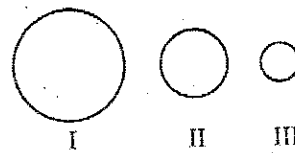
18. When the positive integer s is divided by 12, the remainder is 4. When the positive integer t is divided by 12, the remainder is 5. What is the remainder when the product st is divided by 6?

- (A) 1
(B) 2
(C) 3
(D) 4
(E) 5

GO ON TO THE NEXT PAGE 

19. On a hike, Ian walked downhill $\frac{2}{5}$ of the time and uphill $\frac{3}{5}$ of the time. His downhill walking rate was 4 miles per hour, and his uphill walking rate was 2 miles per hour. The distance that Ian walked downhill was what fraction of the total distance that he walked?

- (A) $\frac{4}{7}$
(B) $\frac{3}{7}$
(C) $\frac{2}{5}$
(D) $\frac{2}{7}$
(E) $\frac{1}{5}$



Note: Figure not drawn to scale.

20. The sum of the areas of the 3 circles above is π . The radius of circle II is $\frac{1}{2}$ the radius of circle I, and the radius of circle III is $\frac{1}{3}$ the radius of circle I. What is the radius of circle I?

- (A) $\frac{6}{11}$
(B) $\frac{4}{7}$
(C) $\frac{6}{7}$
(D) $\frac{7}{6}$
(E) $\frac{9}{4}$

STOP

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



SECTION 8

Time — 20 minutes

18 Questions

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

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

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

Example:

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

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

(A) (B) (C) (D) ●

- Zoologists hope to learn whether minor variations in the migration routes of certain animals are intentional or merely -----.
(A) willful (B) legendary (C) accidental
(D) unbelievable (E) accomplished
- The country's ----- political freedom had been long and arduous, but eventually the ----- government was replaced by a true democracy.
(A) quest for . . egalitarian
(B) struggle for . . tyrannical
(C) demand for . . judicious
(D) rejection of . . strict
(E) depletion of . . disposable
- In winning the Man Booker Prize, novelist Kiran Desai ----- an honor that had ----- her mother, Anita Desai, who was a runner-up three times but never won.
(A) received . . distinguished
(B) achieved . . eluded
(C) avoided . . motivated
(D) coveted . . overwhelmed
(E) escaped . . evaded
- In the zany comedy series *I Love Lucy*, Lucille Ball's exaggerated, clumsy antics displayed the comedian's famous talent for -----.
(A) slapstick (B) celebration (C) modesty
(D) misery (E) tact
- What had begun as good-natured teasing quickly gave way to ----- as the lost hikers blamed one another for their predicament.
(A) supplications (B) recriminations
(C) musings (D) permutations
(E) salutations
- Although some critics maintain that his latest book can be situated in a ----- genre, it draws liberally on several different genres and so can rightly be termed -----.
(A) particular . . iconoclastic
(B) venerable . . anachronistic
(C) dominant . . derivative
(D) discrete . . articulate
(E) specific . . eclectic



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

Questions 7-18 are based on the following passage.

This passage was written in 1971 by a woman who is a professor of art history.

Line
5 The question "Why have there been no great women artists?" is simply the tip of an iceberg of misinterpretation and misconception; beneath lies a vast dark bulk of shaky ideas about the nature of art and the situations of its making, about the nature of human abilities in general and of human excellence in particular, and about the role that the social order plays in all of this. Basic to the question are many naïve, distorted assumptions about the making of art in general, as well as the making of great art. These
10 assumptions, conscious or unconscious, link together such male superstars as Michelangelo and van Gogh, Raphael and Pollock under the rubric of "Great," and the Great Artist is conceived of as one who has "Genius." Genius, in turn, is thought of as a mysterious power somehow
15 embedded in the person of the Great Artist.

The magical aura surrounding art and its creators has, of course, given birth to myths since the earliest times. The fairy tale of the discovery by an older artist or discerning patron of the Boy Wonder, usually in the guise of a lowly shepherd boy, has been a stock-in-trade of artistic mythology ever since the sixteenth-century biographer Vasari wrote that the young Giotto was discovered by the great Cimabue while the lad was guarding his flocks, drawing sheep on a stone. Cimabue, overcome with admiration for the realism of the drawing, immediately invited the humble youth to be his pupil. Through some mysterious coincidence, later artists were all discovered in similar pastoral circumstances. Even when the young Great Artist was not fortunate enough to come equipped with a flock of sheep,
20 his talent always seems to have manifested itself very early and independent of any external encouragement. So pronounced was the great Michelangelo's talent, reports Vasari, that when his master absented himself momentarily and the young art student took the opportunity to draw "scaffolding, trestles, pots of paint, brushes and the apprentices at their tasks," he did it so skillfully that upon his return the master exclaimed: "This boy
35 knows more than I do."

Even when based on fact, these myths about the early manifestations of genius are misleading. It is no doubt true, for example, that the young Picasso passed all the examinations for entrance to the Barcelona, and later to the Madrid, Academy of Art at the age of fifteen in but a single day, a feat of such difficulty that most candidates
45 required a month of preparation. But one would like to study in greater detail the role played by Pablo Picasso's

art-professor father. What if Picasso had been born a girl? Would his father have paid as much attention or stimulated as much ambition for achievement in a little Pablita? What is stressed in all these stories is the apparently miraculous, nondetermined, and asocial nature of artistic achievement. Yet as soon as one leaves behind the world of fairy tale and, instead, casts a dispassionate eye on the actual situations in which important art production has existed, one
55 finds that the very questions which are fruitful or relevant shape up rather differently. One would like to ask, for instance, from what social classes artists were more likely to come at different periods of history. Or what proportion of painters and sculptors came from families in which their fathers or close relatives were painters and sculptors or engaged in related professions?

As far as the relationship of artistic occupation and social class is concerned, an interesting paradigm for the question "Why have there been no great women artists?" might well be provided by trying to answer the question
65 "Why have there been no great artists from the aristocracy?" While the aristocracy has always provided the lion's share of the patronage and the audience for art—as the aristocracy of wealth does even in our more democratic days—it has contributed little beyond amateurish efforts to the creation of art itself, despite the fact that aristocrats (like many women) have had more than their share of educational advantages, plenty of leisure and, like women, were often encouraged to dabble in the arts.
75 Could it be that the little golden nugget—genius—is missing from the aristocratic makeup in the same way that it is from the feminine psyche? Or rather, is it not that the kinds of demands and expectations placed before both aristocrats and women—the amount of time necessarily devoted to social functions, the very kinds of activities demanded—
80 simply made total devotion to professional art production out of the question, indeed unthinkable, both for upper-class males and for women generally, rather than its being a question of genius and talent?

7. In the first paragraph, the author addresses the question referred to in the first sentence by

- (A) celebrating the gift of true genius
- (B) offering examples of great women artists
- (C) challenging assumptions about greatness
- (D) criticizing great artists for their naïveté
- (E) daring readers to submit to the power of great art



8. In the first sentence, the metaphor of the iceberg refers to the
- rigidity of social systems
 - mysterious origin of genius
 - cold reception given to women artists
 - uncharted realms of the mind
 - mass of received ideas about art
9. Which of the following best describes the author's characterization of Vasari's biography of Giotto in lines 17-26 ("The fairy tale . . . pupil")?
- A disingenuous tale designed to educate
 - A creative fabrication intended as entertainment
 - A biographical sketch based on fond reminiscence
 - An idealized narrative with many stereotypical details
 - A factual account that was confirmed by research
10. Which of the following is part of the "stock-in-trade" mentioned in line 20?
- The artist grew up in rustic circumstances.
 - The artist refused the attention of a teacher.
 - The artist was not appreciated until it was too late.
 - The artist was humble at first but later became conceited.
 - The artist scorned the work of his or her peers.
11. The author's tone in lines 26-28 ("Through some . . . circumstances") could best be described as
- puzzled
 - inquisitive
 - nostalgic
 - accusatory
 - wry
12. The author uses the phrase "equipped with a flock of sheep" (line 29) to
- satirize the conditions of rural life
 - downplay the importance of artistic instruction
 - evoke the pleasures of a bygone age
 - jeer at Cimabue's discovery
 - mock conventional biographies of artists
13. The master's remark about Michelangelo (lines 37-38) is most analogous to which element in the story about Giotto?
- Giotto's humility
 - Giotto's artistry
 - Cimabue's discovery of Giotto
 - Cimabue's admiration for Giotto
 - Cimabue's invitation to Giotto
14. The author criticizes stories about the "early manifestations of genius" (lines 39-40) because they
- ignore girls' achievements
 - contradict established facts
 - fail to consider the artist's social context
 - emphasize insignificant events
 - disparage late-blooming artists
15. The questions in lines 47-49 are meant to imply that
- parents often help their children prepare for the future
 - parental encouragement may depend upon the child's gender
 - girls aspire to the same achievements as boys do
 - ambitious children undertake challenging projects
 - fathers play a greater role in education than mothers
16. It can be inferred from the final paragraph (lines 62-84) that the author considers the making of great art to be a
- rare luxury
 - decadent activity
 - democratic ideal
 - full-time endeavor
 - poorly paid profession



17. The comparison between the “aristocratic makeup” (line 76) and the “feminine psyche” (line 77) is used to suggest that
- (A) women and aristocrats share certain traits that make them sensitive to art
 - (B) genius is a rare and valuable quality that needs to be cultivated if it is to manifest itself
 - (C) only those who are sensitive to feelings and emotions will be able to create great works of art
 - (D) both aristocrats and women lack the financial incentive to pursue artistic careers
 - (E) the quality that determines success in artistic endeavors is not something inherent in a specific group of individuals
18. Which of the following best expresses the main idea of the passage?
- (A) Art historians have failed to acknowledge the achievements of women artists.
 - (B) By defining great art in terms of the productions of male artists, art historians have misinterpreted the history of art.
 - (C) A total devotion to artistic production is the defining characteristic of great women artists.
 - (D) Common myths about art have obscured the social influences on artistic genius.
 - (E) The “Great Artist” myth has discouraged many aspiring women artists.

STOP

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



SECTION 9

Time — 20 minutes

16 Questions

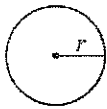
Turn to Section 9 (page 7) of your answer sheet to answer the questions in this section.

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

Notes

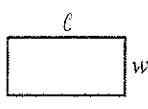
- The use of a calculator is permitted.
- All numbers used are real numbers.
- Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not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

Reference Information



$$A = \pi r^2$$

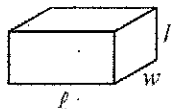
$$C = 2\pi r$$



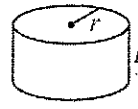
$$A = \ell w$$



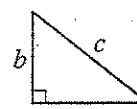
$$A = \frac{1}{2}bh$$



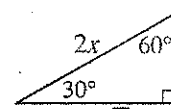
$$V = \ell wh$$



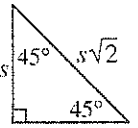
$$V = \pi r^2 h$$



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



Special Right Triangles

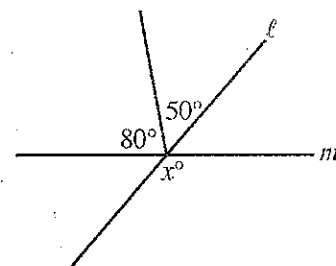


The number of degrees of arc in a circle is 360.

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

1. At Paulie's Pizza Parlor, it costs \$8.00 for a plain cheese pizza, plus \$0.50 for each topping. If the function $C(n)$ represents the cost, in dollars, of a cheese pizza with n toppings, which of the following is true?

- (A) $C(n) = 8.00 + 0.50$
 (B) $C(n) = 8.00 + 0.50n$
 (C) $C(n) = 8.00n + 0.50$
 (D) $n = 8.00 + 0.50C(n)$
 (E) $n = 8.00C(n) + 0.50$



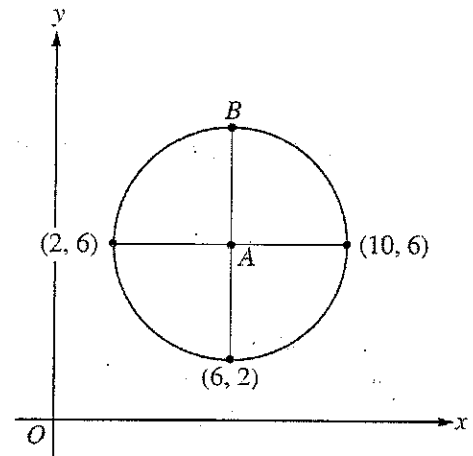
2. In the figure above, lines ℓ and m intersect as shown. What is the value of x ?

- (A) 100
 (B) 110
 (C) 120
 (D) 130
 (E) 140

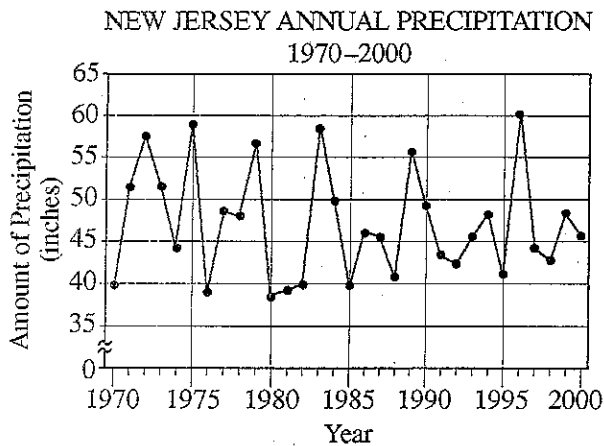
GO ON TO THE NEXT PAGE



3. S , T , and U are digits such that $0 < S < T < U$.
Which of the following 3-digit numbers is greatest?
- (A) STU
(B) SUT
(C) TSU
(D) TUS
(E) UTS



5. In the xy -plane above, point A is the center of the circle. The two diameters shown are perpendicular to each other. What are the coordinates of point B ?
- (A) $(6, 8)$
(B) $(6, 10)$
(C) $(6, 12)$
(D) $(8, 6)$
(E) $(8, 8)$



4. The line graph above shows the annual precipitation in New Jersey from 1970 to 2000. For which of the following periods did the annual precipitation continually increase?
- (A) 1970–1973
(B) 1976–1979
(C) 1980–1983
(D) 1989–1992
(E) 1991–1994



$$(x + 6)^2 = 0$$

6. How many different values of x satisfy the equation above?

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


k	$f(k)$
2	1
4	3
6	5
8	7
10	9

7. The function f is defined by the table above. For what value of k does $f(k) = 2k - 7$?

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

8. In a certain election, 60 percent of those who voted were females. If 8,000 males voted, what was the total number of people who voted in the election?

- (A) 12,800
- (B) 14,000
- (C) 18,600
- (D) 20,000
- (E) 21,000

GO ON TO THE NEXT PAGE 

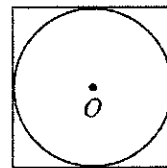


9. A triangle has sides of lengths x , y , and z . Which of the following relationships among x , y , and z CANNOT be true?

- (A) $x < z - y$
 (B) $x < z + y$
 (C) $y < x + z$
 (D) $z < y + x$
 (E) $z > y - x$

10. If $6.93 \times 10^{a-1}$ is an integer between 600,000 and 700,000 and a is an integer, what is the value of a ?

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



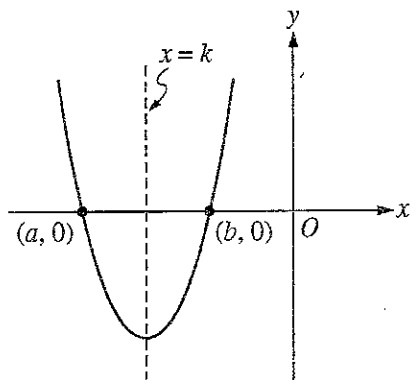
11. In the figure above, a circle with center O is inscribed in a square of area 49 square centimeters. What is the circumference of the circle, in centimeters?

- (A) 28
 (B) 3.5π
 (C) 7π
 (D) 14π
 (E) $49\pi^2$



12. The expression $\sqrt{\frac{1}{x}}$, where $x > 0$, can also be represented as which of the following?

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



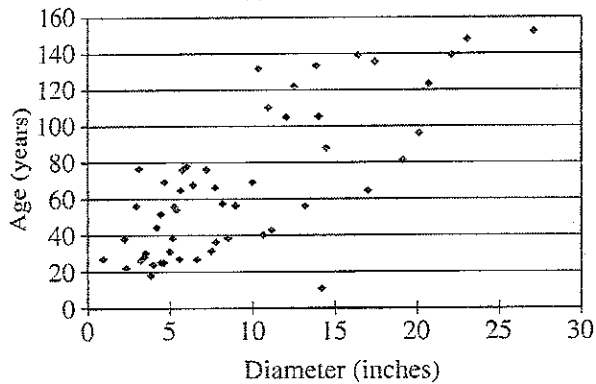
13. The figure above shows a parabola with x -intercepts $(a, 0)$ and $(b, 0)$ and line of symmetry $x = k$. What is b in terms of a and k ?

- (A) $a - 2k$
 (B) $\frac{a - k}{2}$
 (C) $\frac{a + k}{2}$
 (D) $k - a$
 (E) $2k - a$

14. If $x < y$ and $r < s$, which of the following must be true?

- I. $x + r < y + s$
 II. $x - r < y - s$
 III. $xr < ys$

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

DIAMETER AND AGE OF TREES
IN THE PARK

15. The scatterplot above shows the diameter x , in inches, and the age y , in years, of more than 40 trees in a certain park. Which of the following best describes the trend line of the scatterplot?

- (A) $y = 2x + 20$
 (B) $y = 5x + 20$
 (C) $y = 10x + 20$
 (D) $y = 4x$
 (E) $y = 12x$

16. The edges of a rectangular solid have lengths $2x$, $3x$, and $5x$. What is the total surface area of the solid?

- (A) $30x$
 (B) $30x^2$
 (C) $60x^2$
 (D) $62x^2$
 (E) $30x^3$

STOP

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



SECTION 10

Time — 10 minutes

14 Questions

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

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

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

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

EXAMPLE:

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

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

A B C D E

1. In the article, it focused on the potential health benefits of chocolate.
 - (A) In the article, it focused on the potential health benefits of chocolate.
 - (B) In the article, its focus was the potential health benefits of chocolate.
 - (C) The article focused on the potential health benefits of chocolate.
 - (D) The focus of the article was on the potential health benefits of chocolate, and what they might be.
 - (E) Chocolate's potential health benefits was what the focus of the article was.
2. The National Film Registry established by Congress in 1988 in an effort to protect the artistic integrity of motion pictures.
 - (A) established
 - (B) having been established
 - (C) was established
 - (D) that was established
 - (E) whose establishment
3. An agricultural innovator, George Washington Carver aided the economy of the late nineteenth-century South, developed hundreds of uses for crops such as the peanut and sweet potato.
 - (A) South, developed
 - (B) South; his developing
 - (C) South, which he developed
 - (D) South by developing
 - (E) South, he developed
4. Disturbed by a sudden noise, a covey of shrilling, fluttering quail rose from the plain, flew for a short distance, and then they dropped back to the ground.
 - (A) distance, and then they dropped
 - (B) distance, and then dropped
 - (C) distance to then drop
 - (D) distance; then it drops
 - (E) distance; it was then that it dropped



5. In order to save money and offer competitive ticket prices, meals are no longer being served on many airlines, even on long flights.
- (A) meals are no longer being served on many airlines, even on long flights
 (B) meals that are no longer being served by many airlines, even on long flights
 (C) even on long flights, meals are not served any longer by many airlines
 (D) many airlines, even on long flights, no longer serving meals
 (E) many airlines are no longer serving meals, even on long flights
6. Gustave Eiffel is famous not only for building the Eiffel Tower but also for designing the internal structure of the Statue of Liberty.
- (A) building the Eiffel Tower but also for designing
 (B) building the Eiffel Tower but also that he designed
 (C) building the Eiffel Tower, he also designed
 (D) having built the Eiffel Tower and also for designing
 (E) having built the Eiffel Tower and also designed
7. Throughout the history of science there have been periods where revolutionary thinkers questioned traditional assumptions and outdated theories.
- (A) where revolutionary thinkers questioned
 (B) with revolutionary thinkers questioning
 (C) when revolutionary thinkers questioned
 (D) when questioning by revolutionary thinkers was of
 (E) of when revolutionary thinkers questioned
8. By the end of 1945, Alice, thirty years old but already an expert in the field of family dynamics, had begun writing her memoirs.
- (A) an expert in the field of family dynamics, had begun writing
 (B) being an expert in the field of family dynamics, she began writing
 (C) as an expert in the field of family dynamics, began to write
 (D) because she was an expert in the field of family dynamics she had begun to write
 (E) she was an expert in the field of family dynamics, began writing
9. His research has little value; if you review any of his studies, you will find its documentation inadequate; their conclusions unsupported.
- (A) inadequate, their conclusions
 (B) inadequate and that their conclusions are
 (C) inadequate and its conclusions
 (D) is inadequate and its conclusions to be
 (E) to be inadequate, its conclusions are
10. While for some people work is pure drudgery, to be endured only because it produces income, but for others a daily source of personal satisfaction.
- (A) but for others
 (B) but for others it is
 (C) and for others is
 (D) for others it is
 (E) for others



11. Ancient Greek and Roman literature is rich with folklore and popular beliefs, many elements of them have counterparts in modern legends.
- (A) elements of them have counterparts in
 (B) elements of which have counterparts in
 (C) elements that have counterparts for
 (D) of their elements have counterparts with
 (E) of its elements had counterparts in
12. The hummingbird may appear to be a delicate creature, but its body is proportionately more muscular than any bird.
- (A) more muscular than any bird
 (B) more muscular than the other birds
 (C) more muscular than that of any other bird
 (D) the most muscular compared to that of other birds
 (E) the most muscular of any other bird
13. Chimpanzees in western Africa's Tai forest crack nuts by placing them on tree roots and striking them with stones, a learned behavior probably unique to chimpanzees in that area.
- (A) probably unique to
 (B) probably unique about
 (C) probably it is unique to
 (D) that is probably unique with
 (E) having probably been unique to
14. The investigator asked my brother and I did either of us notice a white van parked in front of the house that morning.
- (A) I did either of us notice
 (B) I have either of us noticed
 (C) I whether either of us noticed
 (D) me whether either of us had noticed
 (E) me did either of us notice

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 AESV, BWSV, CFSV

Critical Reading

Section 2			Section 6			Section 8											
COR. DIFF.	ANS.	LEV.	COR. DIFF.	ANS.	LEV.	COR. DIFF.	ANS.	LEV.									
1.	C	2	14.	C	1	1.	B	2	13.	A	3	1.	C	1	10.	A	3
2.	C	3	15.	B	2	2.	D	3	14.	D	3	2.	B	2	11.	E	5
3.	D	3	16.	E	3	3.	A	3	15.	B	3	3.	B	2	12.	E	5
4.	A	3	17.	D	1	4.	C	5	16.	D	3	4.	A	3	13.	D	4
5.	B	4	18.	D	3	5.	B	5	17.	A	3	5.	B	3	14.	C	4
6.	E	4	19.	A	3	6.	C	1	18.	A	3	6.	E	3	15.	B	2
7.	D	5	20.	A	3	7.	E	4	19.	C	3	7.	C	2	16.	D	4
8.	A	5	21.	A	1	8.	C	1	20.	C	3	8.	E	4	17.	E	4
9.	C	4	22.	E	2	9.	B	2	21.	E	4	9.	D	4	18.	D	4
10.	B	2	23.	C	2	10.	D	3	22.	B	4						
11.	A	4	24.	B	3	11.	E	1	23.	B	3						
12.	E	5	25.	E	2	12.	E	3	24.	B	4						
13.	D	1															

Number correct	Number correct	Number correct
Number incorrect	Number incorrect	Number incorrect

Mathematics

Section 4			Section 7			Section 9											
Multiple-Choice Questions		COR. DIFF.	Student-Produced Response Questions		DIFF. LEV.	COR. DIFF.	ANS.	LEV.	COR. DIFF.	ANS.	LEV.	COR. DIFF.	ANS.	LEV.			
1.	C	1	9.	21	1	1.	D	1	11.	D	3	1.	B	1	9.	A	3
2.	C	2	10.	3/2, 1.5	2	2.	C	1	12.	A	3	2.	D	1	10.	E	3
3.	B	2	11.	1800	2	3.	E	1	13.	B	3	3.	E	1	11.	C	3
4.	B	2	12.	36	2	4.	A	1	14.	C	3	4.	C	2	12.	B	3
5.	D	2	13.	20.5, 41/2	3	5.	A	2	15.	E	3	5.	B	1	13.	E	4
6.	E	4	14.	9	4	6.	E	2	16.	D	3	6.	B	3	14.	A	5
7.	C	3	15.	196	4	7.	C	1	17.	B	5	7.	C	2	15.	B	4
8.	A	4	16.	15/2, 7.5	4	8.	B	3	18.	B	4	8.	D	3	16.	D	5
			17.	666	5	9.	A	3	19.	A	4						
			18.	4 < x < 5	4	10.	A	3	20.	C	5						

Number correct	Number correct (9-18)	Number correct
Number incorrect	Number incorrect	Number incorrect

Writing Multiple-Choice

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

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).