SAT I: Reasoning Test

Saturday, May 1997

Section 1 1 1 1 1 1 1

For each question in this section, select the best answer from among the choices given and fill in the corresponding oval 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:

Medieval kingdoms did not become constitutional republics overnight; on the contrary, the change was ----.

(A) unpopular
(B) unexpected
(C) advantageous
(D) sufficient
(E) gradual

Ⓐ Ⓑ Ⓒ Ⓓ ●

1 Residents of the secluded island fear that ---- commercial development will ---- their quiet way of life.

(A) widespread .. reinforce
(B) waning .. harm
(C) diminishing .. reform
(D) encroaching .. disturb
(E) further .. aid

2 Nicknamed the "contact lens," the device installed on the Hubble telescope successfully ---- its flawed vision, the result of a faulty mirror.

(A) corrected   (B) displayed   (C) generated
    (D) scrutinized   (E) accentuated

3 Though it is often exclusively ---- Brazil, the Amazon jungle actually ---- parts of eight other South American countries.

(A) protected by .. threatens
(B) located in .. bypasses
(C) limited to .. touches
(D) surrounded by .. borders
(E) associated with .. covers

4 As an architect who rehabilitates older buildings, Roberta Washington objected to a city policy that resulted in the mass ---- of clearly ---- structures.

(A) demolition .. inconsequential
(B) renovation .. derelict
(C) razing .. salvageable
(D) protection .. venerable
(E) scouring .. grimy

5 Sandra Gilbert and Susan Gubar's recent book presents a ---- of detail, providing far more information than one can easily digest.

(A) modicum   (B) discrepancy
    (C) surfeit   (D) deficit
        (E) juxtaposition

6 On the verge of financial collapse, the museum was granted a ----, receiving a much-needed ---- of cash in the form of a government loan.

(A) reprieve .. infusion
(B) deferment .. inducement
(C) rebate .. advance
(D) hearing .. security
(E) procurement .. account

7 More ---- than her predecessor, Superintendent Reynolds would, many predicted, have a far less ---- term of office.

(A) phlegmatic .. apathetic
(B) conciliatory .. confrontational
(C) empathetic .. compassionate
(D) vigilant .. reputable
(E) penurious .. frugal

8 Rodolfo Gonzales was once described as ---- in body and mind because of the flexibility and grace apparent in both his boxing and his writing of poetry and plays.

(A) unyielding   (B) tremulous
    (C) emphatic   (D) lithe   (E) fickle

9 Galloping technological progress has made consumers ----: advances undreamed of a generation ago are so common that they seem humdrum.

(A) flabbergasted   (B) miffed   (C) jaded
    (D) wary   (E) embittered

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10 TUTOR : PUPIL ::
  (A) patron : client
  (B) coach : athlete
  (C) waiter : diner
  (D) driver : passenger
  (E) novelist : writer

11 DECORATE : PLAIN ::
  (A) create : talented
  (B) mend : repaired
  (C) cook : raw
  (D) sing : vocal
  (E) narrate : fictitious

12 PALLID : COLOR ::
  (A) vital : energy
  (B) parched : moisture
  (C) restrained : limit
  (D) measured : quantity
  (E) deliberate : intention

13 DRIFT : MOVE ::
  (A) sprint : run
  (B) boil : heat
  (C) ramble : walk
  (D) evade : elude
  (E) crawl : creep

14 CRASS : REFINEMENT ::
  (A) inefficient : time
  (B) prudent : discretion
  (C) clairvoyant : perception
  (D) inept : mistake
  (E) pretentious : modesty

15 PARIAH : OSTRACISM ::
  (A) idol : adulation
  (B) gourmand : food
  (C) scapegoat : symbol
  (D) collector : ownership
  (E) protagonist : narrative

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 16-20 are based on the following passage.

This passage, about animal perception, was adapted from an essay by a writer who trains animals.

Anyone who trains animals recognizes that human and animal perceptual capacities are different. For most humans, seeing is believing, although we do occasionally brood about whether we can
(5) believe our eyes. The other senses are largely ancillary; most of us do not know how we might go about either doubting or believing our noses. But for dogs, scenting is believing. A dog's nose is to ours as the wrinkled surface of our complex brain is
(10) to the surface of an egg. A dog who did comparative psychology might easily worry about our consciousness or lack thereof, just as we worry about the consciousness of a squid.

We who take sight for granted can draw pictures
(15) of scent, but we have no language for doing it the other way about, no way to represent something visually familiar by means of actual scent. Most humans cannot know, with their limited noses, what they can imagine about being deaf, blind,
(20) mute, or paralyzed. The sighted can, for example, speak of a blind person as "in the darkness," but there is no corollary expression for what it is that we are in relationship to scent. If we tried to coin words, we might come up with something like
(25) "scent-blind." But what would it mean? It couldn't have the sort of meaning that "color-blind" and "tone-deaf" do, because most of us have experienced what "tone" and "color" mean in those expressions, but we don't know what "scent" means in the
(30) expression "scent-blind." Scent for many of us can be only a theoretical, technical expression that we use because our grammar requires that we have a noun to go in the sentences we are prompted to utter about animals' tracking. We don't have a sense
(35) of scent. What we do have is a sense of smell — for Thanksgiving dinner and skunks and a number of things we call chemicals.

So if Fido and I are sitting on the terrace, admiring the view, we inhabit worlds with radically different
(40) principles of phenomenology. Say that the wind is to our backs. Our world lies all before us, within a 180 degree angle. The dog's — well, we don't know, do we?

He sees roughly the same things that I see but he
(45) *believes* the scents of the garden behind us. He marks the path of the black-and-white cat as she moves among the roses in search of the bits of chicken sandwich I let fall as I walked from the house to our picnic spot. I can show *that* Fido is
(50) alert to the kitty, but not *how,* for my picture-making modes of thought too easily supply falsifyingly literal representations of the cat and the garden and their modes of being hidden from or revealed to me.

16 The phrase "other senses are largely ancillary" (lines 5-6) is used by the author to suggest that

(A) only those events experienced directly can be appreciated by the senses
(B) for many human beings the sense of sight is the primary means of knowing about the world
(C) smell is in many respects a more powerful sense than sight
(D) people rely on at least one of their other senses in order to confirm what they see
(E) the perceptual capacity of an animal is a function of its ability to integrate all of its senses

17 The example in the last paragraph suggests that "principles of phenomenology" mentioned in line 40 can best be defined as

(A) memorable things that happen
(B) behaviors caused by certain kinds of perception
(C) ways and means of knowing about something
(D) rules one uses to determine the philosophical truth about a certain thing
(E) effect of a single individual's perception on what others believe

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

18. The missing phrase in the incomplete sentence "The dog's — well, we don't know, do we?" (lines 42-43) refers to

(A) color blindness
(B) depth perception
(C) perception of the world
(D) concern for our perceptions
(E) motivation for action

19. The author uses the distinction between *"that"* (line 49) and *"how"* (line 50) in order to suggest the difference between

(A) seeing and believing
(B) a cat's way and a dog's way of perceiving
(C) verifiable hypotheses and whimsical speculation
(D) awareness of presence and the nature of that awareness
(E) false representations and accurate representations

20. The example in the last paragraph is used to illustrate how

(A) a dog's perception differs from a human's
(B) human beings are not psychologically rooted in the natural world
(C) people fear nature but animals are part of it
(D) a dog's ways of seeing are superior to a cat's
(E) phenomenology is universal and constant

Questions 21-30 are based on the following passage.

First published in 1976, this passage discusses W. E. B. Du Bois and Marcus Garvey, two leaders of the Black American community in the 1910's and 1920's.

The concept of two warring souls within the body of the Black American was as meaningful for Du Bois at the end of his years as editor of *Crisis*, the official journal of the National Association for (5) the Advancement of Colored People (NAACP), as when he had first used the image at the start of the century. The tension between race pride and identification with the nation as a whole was nowhere more dramatic than in the most controversial edi- (10) torial ever printed in *Crisis*, "Close Ranks," which in July 1918 called on Black Americans to "forget our special grievances and close our ranks" with the White people "fighting for democracy" during the First World War. Bitterly criticized by Black people, (15) Du Bois barely modified his statement when, two months later, he set the priorities for his readers: "first your Country, then your Rights!" Perhaps the editor had written more than he intended in using the word "forget," for *Crisis* before and after the (20) editorial showed no diminution in its criticism of racism. But he distinguished between Allied and German ambitions, and declared that defeat of the former would be disastrous for that "United States of the World" to which he was most loyal. (25) Du Bois nevertheless saw danger in the negation of race pride, by those who did not recognize their own beauty as Black people, for example. The responsibility of *Crisis* was to arbitrate between those who advocated race pride and those who (30) denied any differences between the races. The focal point of the magazine's efforts in this respect came with the rise of Marcus Garvey, the gifted Jamaican leader whose "back-to-Africa" movement, as it was popularly called, was founded on the premise, (35) according to Du Bois, that "a black skin was in itself a sort of patent to nobility."
Garveyism, which flourished during the height of *Crisis'* influence and success, brought a formidable challenge to Du Bois. Garvey and his Universal (40) Negro Improvement Association (UNIA), with its hostility to the interracial ideal and its scheme to have Black Americans emigrate to Africa, threw *Crisis* and the NAACP on the defensive by invoking the specter of self-doubt as characteristic of its (45) Black members. Du Bois had first met Garvey on a visit to Jamaica in 1915, and *Crisis* announced Garvey's arrival in the United States the following year. Almost totally unknown in his new country, Garvey invited Du Bois to preside over his first (50) public lecture; then in 1920 he asked permission to submit Du Bois's name as a candidate in the election of a "leader" of Black America at an

international convention organized by the UNIA. Du Bois politely declined the former; "under no (55) circumstances" would he allow the latter. Du Bois saw with amazement Garvey's success in persuading thousands of Black Americans of the legitimacy of his back-to-Africa movement and in collecting funds for the purchase of ships for his Black Star (60) Line to transport people to Africa.
There were superficial similarities between Garvey's and Du Bois's commitment to race consciousness and economic empowerment; both men saw the world as comprising separate cultures, (65) each reflecting a distinct heritage and demanding freedom of expression. But Garvey's fixed belief in the idea of Black racial purity, his obsession with Africa as the solution to the problems of its scattered peoples, and his refusal to allow any (70) liberal idea to deflect his purpose differed greatly from Du Bois's ideals. Du Bois fantasized about Africa in at least one poem and wrote about the continent elsewhere, but he cultivated a scholar's knowledge of the land. He made the first of several (75) visits there in 1923 and lived in Africa for the last two years of his life (1961-1963). In a cryptic piece in *Crisis* in 1922, Du Bois was surely referring to Garvey when he ominously predicted the rise of a demagogue who would "come to lead, inflame, lie, (80) and steal" and when he commented that such a person would "gather large followings and then burst and disappear."

21 The primary purpose of the passage is to

(A) account for the rise of Black nationalism in the United States
(B) explain the charismatic appeal of two Black American leaders
(C) explain why Garvey refused to support Du Bois as a leader of Black America
(D) describe differences between the philosophies of Du Bois and Garvey
(E) describe Du Bois's quarrel and eventual reconciliation with Garvey

22 The image of "two warring souls" (line 1) refers to the struggle between

(A) democracy and dictatorship
(B) Du Bois's ideals and practical demands
(C) racial and national allegiances
(D) Du Bois's literary and political ambitions
(E) Allied and German goals

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23 It can be inferred that Du Bois's July 1918 editorial in *Crisis* was "Bitterly criticized" (line 14) because it seemed to

(A) devalue the specific concerns of Black Americans
(B) advocate military service for Black Americans
(C) support Garvey's back-to-Africa movement
(D) insist on racial rather than national priorities
(E) attack the official stance of the NAACP on race pride

24 As indicated in lines 17-24 ("Perhaps . . . loyal"), Du Bois advised Black Americans that

(A) they would be treated more equally in wartime than in peace
(B) racial harmony in the United States would improve after the war
(C) despite German military superiority, the Allies would win the war
(D) wartime provided economic opportunities for both Black and White Americans
(E) despite American racism, the effects of an Allied defeat would be even worse

25 That to which Du Bois was "most loyal" (line 24) is best described as

(A) the UNIA
(B) the NAACP
(C) *Crisis*
(D) global democracy
(E) a new African nation founded by Black Americans

26 According to Du Bois, "the premise" (line 34) underlying Garvey's movement was that

(A) racial issues are more significant than economic issues in the United States
(B) an entire group of people is inherently dignified and worthy
(C) many Black Americans are descended from African royalty
(D) education is more important than ethnicity in shaping a person's character
(E) loyalty to one's country takes precedence over all other matters in times of crisis

27 In line 36, "patent to" most nearly means

(A) copyright of
(B) safeguard of
(C) guarantee of
(D) hope for
(E) permission for

28 As described in lines 48-53, Garvey's actions suggest that he initially

(A) scorned Du Bois's advice
(B) doubted Du Bois's commitment
(C) envied Du Bois's fame
(D) admired Du Bois's writings
(E) appreciated Du Bois's influence

29 The information in lines 71-76 indicates that Du Bois

(A) valued Africa, but in a very different way than Garvey did
(B) lived in Africa, but finally returned to the United States to help Black Americans
(C) read about Africa, but benefited little from his visits there
(D) fantasized about escaping overseas from demagogues like Garvey
(E) supported radical solutions to racial problems in the United States

30 The passage implies that over time the relationship between Garvey and Du Bois changed from

(A) courteous to antagonistic
(B) professional to personal
(C) remote to close
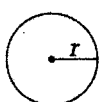(D) distrustful to ambivalent
(E) competitive to cooperative

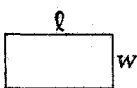| Time—30 Minutes 25 Questions	In this section solve each problem, using any available space on the page for scratchwork. Then decide which is the best of the choices given and fill in the corresponding oval on the answer sheet.

Notes:

1. The use of a calculator is permitted. All numbers used are real numbers.

2. 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.
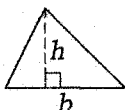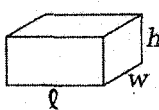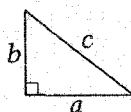

$A = \pi r^2$
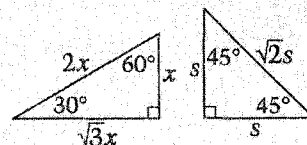$C = 2\pi r$

$A = \ell w$

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

$V = \ell w h$

$V = \pi r^2 h$

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

Special Right Triangles

The number of degrees of arc in a circle is 360.
The measure in degrees of a straight angle is 180.
The sum of the measures in degrees of the angles of a triangle is 180.

1 For which of the following values of k will the value of $3k - 1$ be greater than 10 ?

(A) 4
(B) 3
(C) 2
(D) 1
(E) 0

2 Which of the following numbers is between $\frac{1}{5}$ and $\frac{1}{4}$?

(A) 0.14
(B) 0.15
(C) 0.19
(D) 0.21
(E) 0.26

3 If $a \times k = a$ for all values of a, what is the value of k ?

(A) $-a$
(B) -1
(C) 0
(D) 1
(E) a

4 If $2x - 10 = 20$, then $x - 5 =$
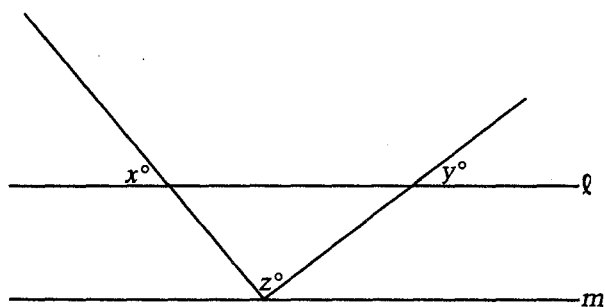
(A) 5
(B) 10
(C) 15
(D) 20
(E) 30

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Note: Figure not drawn to scale.

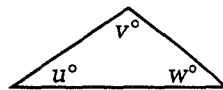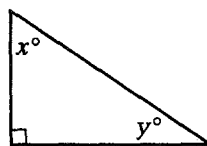**5** In the figure above, $\ell \parallel m$. If $x = 80$ and $y = 70$, what is the value of z ?

(A) 30
(B) 60
(C) 75
(D) 90
(E) 150

6 If t represents an odd integer, which of the following expressions represents an even integer?

(A) $t + 2$
(B) $2t - 1$
(C) $3t - 2$
(D) $3t + 2$
(E) $5t + 1$

7 If there is no waste, how many square yards of carpeting is needed to cover a rectangular floor that is 12 feet by 18 feet? (1 yard = 3 feet)

(A) 8
(B) 16
(C) 24
(D) 30
(E) 216

8 In the triangles above, what is the average (arithmetic mean) of u, v, w, x, and y ?

(A) 21
(B) 45
(C) 50
(D) 52
(E) 54

9 On a map, $\frac{1}{4}$ inch represents 16 feet. If a driveway is 40 feet long, what is its length, in inches, on the map?

(A) $\frac{3}{8}$

(B) $\frac{5}{8}$

(C) $\frac{3}{4}$

(D) $2\frac{1}{2}$

(E) 10

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10 If $m^x \cdot m^7 = m^{28}$ and $(m^5)^y = m^{15}$, what is the value of $x + y$?

(A) 7
(B) 12
(C) 14
(D) 24
(E) 31

11 A complete cycle of a traffic light takes 80 seconds. During each cycle, the light is green for 40 seconds, amber for 10 seconds, and red for 30 seconds. When a randomly chosen car arrives at the traffic light, what is the probability that the light will <u>not</u> be red?

(A) $\frac{7}{8}$

(B) $\frac{5}{8}$

(C) $\frac{4}{8}$

(D) $\frac{3}{8}$

(E) $\frac{1}{8}$

12 If n is a positive number, which of the following is equal to $8n$?

(A) $\sqrt{64n}$

(B) $\sqrt{8n^2}$

(C) $\sqrt{16n^2}$

(D) $2\sqrt{4n}$

(E) $4\sqrt{4n^2}$

13 If the volume of a cube is 8, what is the shortest distance from the center of the cube to the base of the cube?
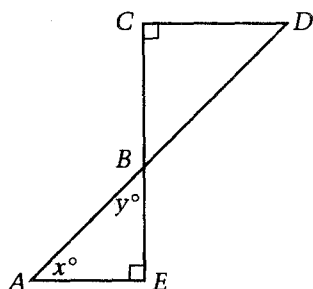
(A) 1

(B) 2

(C) 4

(D) $\sqrt{2}$

(E) $2\sqrt{2}$

14 When a positive integer n is divided by 5, the remainder is 4. Which of the following expressions will yield a remainder of 2 when it is divided by 5 ?

(A) $n + 1$
(B) $n + 2$
(C) $n + 3$
(D) $n + 4$
(E) $n + 5$

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15 How many three-digit numbers have the hundreds digit equal to 3 and the units digit equal to 4 ?

(A) 10
(B) 19
(C) 20
(D) 190
(E) 200

Note: Figure not drawn to scale.

16 In the figure above, AE and CD are each perpendicular to CE. If $x = y$, the length of AB is 4, and the length of BD is 8, what is the length of CE ?

(A) $3\sqrt{2}$ (approximately 4.24)

(B) $6\sqrt{2}$ (approximately 8.49)

(C) $8\sqrt{2}$ (approximately 11.31)

(D) $10\sqrt{2}$ (approximately 14.14)

(E) $12\sqrt{2}$ (approximately 16.97)

RATINGS OF CAR ENGINE OIL

Rating	Relative Speed of Flow
10W	Half as fast as 5W oil
15W	Half as fast as 10W oil
20W	Half as fast as 15W oil

17 According to the table above, car engine oil with a rating of 5W flows how many times as fast as car engine oil with a rating of 20W?

(A) 2
(B) 4
(C) 8
(D) 16
(E) 32
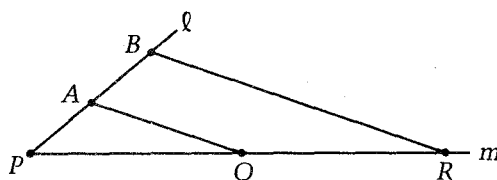
Note: Figure not drawn to scale.

18 In the figure above, points P, A, and B are equally spaced on line ℓ and points P, Q, and R are equally spaced on line m. If $PB = 4$, $PR = 6$, and $AQ = 4$, what is the perimeter of quadrilateral $QABR$?

(A) 13
(B) 14
(C) 15
(D) 16
(E) 17

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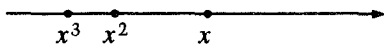
19 If x, x^2, and x^3 lie on a number line in the order shown above, which of the following could be the value of x ?

(A) -2

(B) $-\dfrac{1}{2}$

(C) $\dfrac{3}{4}$

(D) 1

(E) $\dfrac{3}{2}$

Questions 20-21 refer to the following definitions for integers n greater than 1.

$$\triangle{n} = n^2 + n$$
$$\boxed{n} = n^2 - n$$

20 $\triangle{5} - \boxed{4} =$

(A) 0
(B) 8
(C) 10
(D) 18
(E) 32

---

21 If m is an integer greater than 1, then $\boxed{m+1}=$

(A) $\triangle{m}$

(B) $\triangle{m} + 1$

(C) $\triangle{m} - 1$

(D) $\boxed{m} + 1$

(E) $\boxed{m} - 1$

HOME SALES
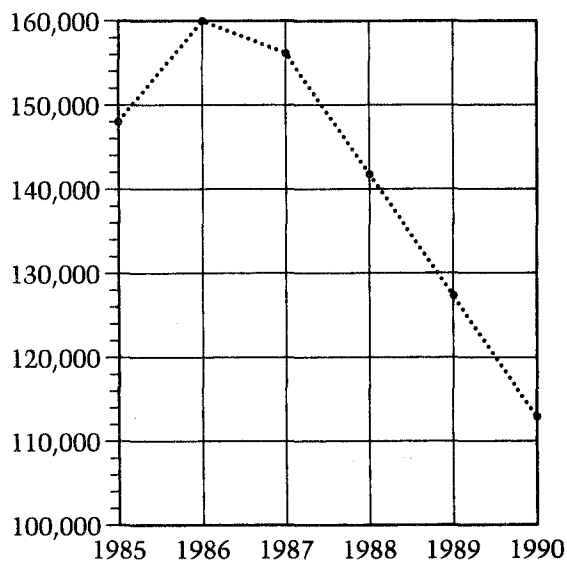
22 According to the graph above, which of the following is the closest approximation to the decrease per year in the number of homes sold between 1987 and 1990 ?

(A) 7,000
(B) 11,500
(C) 14,000
(D) 17,500
(E) 42,000

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23 In rectangle $ABCD$, point E is the midpoint of side BC. If the area of quadrilateral $ABED$ is $\frac{2}{3}$, what is the area of rectangle $ABCD$?

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

(B) $\frac{3}{4}$

(C) $\frac{8}{9}$

(D) 1

(E) $\frac{8}{3}$

25 The price of ground coffee beans is d dollars for 8 ounces and each ounce makes c cups of brewed coffee. In terms of c and d, what is the dollar cost of the ground coffee beans required to make 1 cup of brewed coffee?

(A) $\frac{d}{8c}$

(B) $\frac{cd}{8}$

(C) $\frac{8c}{d}$

(D) $\frac{8d}{c}$

(E) $8cd$

24 In a set of eleven different numbers, which of the following CANNOT affect the value of the median?

(A) Doubling each number
(B) Increasing each number by 10
(C) Increasing the smallest number only
(D) Decreasing the largest number only
(E) Increasing the largest number only

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. **STOP**

Time—30 Minutes
35 Questions

For each question in this section, select the best answer from among the choices given and fill in the corresponding oval 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:

Medieval kingdoms did not become constitutional republics overnight; on the contrary, the change was ----.

(A) unpopular
(B) unexpected
(C) advantageous
(D) sufficient
(E) gradual

Ⓐ Ⓑ Ⓒ Ⓓ ●

1 They use language not to explain but to ----; each statement is like a reflection in a warped mirror.

(A) preserve   (B) distort   (C) enlighten
  (D) negate   (E) destroy

2 Many writers associated with the Harlem Renaissance were not originally from Harlem; drawn by the artistic community it provided, they ---- the place as home.

(A) neglected   (B) adopted   (C) avoided
  (D) criticized   (E) encountered

3 Francis learned that by ---- his anger and resentment, and so avoiding ----, he could overcome opponents more successfully than could those who openly defied their adversaries.

(A) expressing.. hostility
(B) suppressing.. conflict
(C) stifling.. temperance
(D) disguising.. deceit
(E) rousing.. wrath

4 Colonial South Carolina was characterized by cultural ----: Europeans, Africans, and Native Americans each absorbed some customs of the other groups.

(A) tension   (B) conservatism
  (C) integrity   (D) convergence
   (E) eradication

5 Ellen Swallow Richards, a ---- environmental preservation in the United States, campaigned during the nineteenth century to ---- responsible practices in the discipline that has come to be known as ecology.

(A) foil for.. expose
(B) pioneer of.. implement
(C) resource on.. squelch
(D) mitigator of.. promote
(E) critic of.. exploit

6 Sleep actually occurs ----, though one may receive clues signaling its ---- for several minutes before one falls asleep.

(A) gradually.. abruptness
(B) erratically.. solace
(C) temporarily.. length
(D) inevitably.. approach
(E) instantaneously.. onset

7 Laila performed her tasks at the office with ----, completing all her projects in record time.

(A) alacrity   (B) conformity
  (C) deliberation   (D) recrimination
   (E) exasperation

8 Anna Freud's impact on psychoanalysis was ----, coming not from one brilliant discovery but from a lifetime of first-rate work.

(A) tangential   (B) premature
  (C) exorbitant   (D) indiscernible
   (E) cumulative

9 The treasurer was intimidated by the ---- demeanor of the auditors who neither spoke nor smiled when they arrived.

(A) amiable   (B) ethical   (C) glacial
  (D) taunting   (E) nondescript

10 Critics say that the autobiographical work *Brothers and Keepers* by John Edgar Wideman is surprising in that it celebrates and yet ---- his own role in the life of his brother.

(A) censures   (B) exacerbates   (C) explores
  (D) duplicates   (E) delineates

GO ON TO THE NEXT PAGE

455

Each question below consists of a related pair of words or phrases, followed by five pairs of words or phrases labeled A through E. Select the pair that best expresses a relationship similar to that expressed in the original pair.

Example:
CRUMB : BREAD ::
(A) ounce : unit
(B) splinter : wood
(C) water : bucket
(D) twine : rope
(E) cream : butter   Ⓐ ● Ⓒ Ⓓ Ⓔ

11 AUDIENCE : THEATER ::
(A) crew : ship
(B) scholars : library
(C) group : society
(D) spectators : arena
(E) actors : stage

12 QUART : VOLUME ::
(A) day : night
(B) mile : distance
(C) decade : century
(D) friction : heat
(E) part : whole

13 CARTOGRAPHER : MAPS ::
(A) architect : blueprints
(B) bibliographer : books
(C) curator : artworks
(D) traveler : countries
(E) surveyor : instruments

14 ABRASIVE : SKIN ::
(A) flammable : fire
(B) resilient : shock
(C) soluble : water
(D) corrosive : iron
(E) responsive : stimulus

15 CANAL : WATERWAY ::
(A) skyline : city
(B) bank : stream
(C) hub : wheel
(D) dam : river
(E) reservoir : lake

16 THRONG : PEOPLE ::
(A) game : players
(B) picnic : woods
(C) swarm : insects
(D) cat : kittens
(E) vase : flowers

17 FOOLHARDY : RECKLESSNESS ::
(A) defiant : complacency
(B) serene : tranquillity
(C) precious : worthlessness
(D) sociable : antagonism
(E) lucky : persistence

18 EMEND : FAULTY ::
(A) recruit : competent
(B) fracture : separable
(C) renovate : habitable
(D) purify : contaminated
(E) reproduce : copied

19 NEIGHBOR : PROXIMITY ::
(A) supervisor : obedience
(B) comrade : victory
(C) adversary : opposition
(D) traitor : loyalty
(E) teammate : competitiveness

20 HECKLER : DISCONCERT ::
(A) outcast : exclude
(B) firebrand : soothe
(C) performer : applaud
(D) monarch : depose
(E) lobbyist : persuade

21 VEER : COURSE ::
(A) swerve : obstacle
(B) blaze : paint
(C) bar : door
(D) emigrate : travel
(E) digress : subject

22 REVELER : MERRYMAKING ::
(A) hedonist : restraint
(B) demagogue : emotion
(C) anarchist : authority
(D) disputant : argument
(E) litigant : settlement

23 MALINGER : WORK ::
(A) escape : flight
(B) accuse : crime
(C) hide : discovery
(D) shun : ridicule
(E) guess : answer

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Questions 24-35 are based on the following passages.

The California museum built by oil billionaire J. Paul Getty (1892-1976) to house his world-class art collection opened in 1974. Passage 1 describes some early reactions to the Getty Museum. Passage 2 is excerpted from Getty's autobiography.

Passage 1

It sits atop a wooded hillside overlooking the Pacific in Malibu, California. Critics have contemptuously compared it to Disneyland. "A plastic
Line paradise in kitsch city," grumped one. "It outstrips
(5) any existing monument to expensive, aggressive bad taste, cultural pretension, and self-aggrandizement."

The building that houses the controversial new J. Paul Getty Museum is a re-creation of the Villa dei Papyri in Herculaneum, near Pompeii, which was
(10) destroyed by the eruption of Vesuvius in A.D. 79. Visitors and critics alike usually wind up being favorably impressed by the Getty collection, which specializes in classical antiquities. But it is the design of the building rather than the art itself that
(15) has ignited the most heated art controversy of the 1970's.

Criticism of the museum design is of two types. One school of thought holds that the museum building itself is not sufficiently neutral, that a
(20) museum ought not to be, of itself, a work of art, competing with the collection displayed therein. The other school of thought holds that while it is permissible for a museum to be a work of art, the Getty building fails miserably as art because it is
(25) neither tastefully conceived nor accurately reproduced. "It is a faithful replica of nothing that ever existed," wrote architecture critic John Pastier, "re-created by inappropriate technologies and frequently lacking in basic architectural design judg-
(30) ment. The details are all based on known Roman examples from various places, but they have been combined and executed in a manner that often negates their nature and purpose or creates an incongruous appearance."
(35) Among the specific criticisms offered by Pastier and others dissatisfied with the museum-as-replica is that many interior walls and whole parts of the floor plan of the original villa have been shifted, and an entire wing of the original villa has been omitted.
(40) Perhaps the most devastating single criticism of the authenticity of the museum design has been that excavation of the original villa site has been so incomplete that there is insufficient knowledge available even to attempt a legitimate re-creation.
(45) "No one knows about its precise style and details, how many floors it had, or exactly how tall it was," wrote Pastier. The Getty Museum, he seemed to imply, is merely an exercise in guesswork.

Passage 2

Since I personally would be footing the bills for
(50) the new museum, the final question was put to me: Expand the existing facilities or construct an entirely new building? I listened to all the pros and cons. "Draw up plans for an entirely new building," I told the trustees. I made one reservation. "I refuse
(55) to pay for one of those concrete-bunker-type structures that are the fad among museum architects — nor for some tinted-glass-and-stainless-steel monstrosity." To my delight, the trustees beamed. They, too, wanted the museum building itself to be unique
(60) and a work of art.

The flouting of conventional wisdom and refusal to conform carry with them many risks. This is nowhere more true than in the Art World, certain quarters of which tend to be very much doctrinaire
(65) and elitist. However, I had calculated the risks — and, I say this with an admitted degree of arrogance, I disregarded them. Thus, I was neither shaken nor surprised when some of the early returns showed that certain critics sniffed at the new museum. The
(70) building did not follow the arbitrary criteria for "museum construction." There were those who thought it should have been more conventional — that is, I suppose, that it should have been built to look like some of the museum structures whose archi-
(75) tecture can be best described as "Penitentiary Modern." In any event, for the first two months or so, the J. Paul Getty Museum building was called "controversial" in many Art World (or should I say Artsy-Craftsy?) quarters.
(80) I have a fortunate capacity to remain unruffled. I also have had more than sufficient experience in many areas of life to know that the shrillest critics are not necessarily the most authoritative (and seldom the most objective). Beyond this, the very
(85) shrillness of their cries and howls very quickly exhausts their wind.

457

24 In line 3, "plastic" most nearly means

(A) pliable
(B) artificial
(C) impermanent
(D) innovative
(E) inexpensive

25 The critics mentioned in the first paragraph of Passage 1 most probably consider the comparison of the museum to Disneyland appropriate because they believe that both places

(A) have aroused controversy in the press
(B) were built in picturesque areas
(C) celebrate imagination and innovation
(D) are garish and inauthentic in design
(E) were very expensive to maintain

26 In lines 26-34, Pastier's basic objection to the museum's design is that

(A) its separate parts do not create a coherent whole
(B) it is modeled on a building not worthy of imitation
(C) it does not sufficiently accommodate the needs of modern museum patrons
(D) its architectural style clashes with the styles of the artworks it houses
(E) it is not harmoniously integrated into the landscape that surrounds it

27 Lines 35-48 suggest that the excavation at the site of the Villa dei Papyri had revealed the original structure's

(A) domestic fixtures
(B) architectural embellishments
(C) shell, but not the location of its interior walls
(D) age, but neither its layout nor its purpose
(E) floor plan, but neither its height nor its details

28 Passage 1 indicates that Pastier and like-minded critics have arrived at some of their objections to the Getty Museum by

(A) evaluating the artworks it houses
(B) comparing it to other museums that house antiquities
(C) considering the Roman building on which it is modeled
(D) investigating the sources of Getty's personal fortune
(E) analyzing the character of J. Paul Getty

29 Getty indicates that the trustees "beamed" (line 58) because they were

(A) amused by Getty's cantankerousness
(B) accustomed to Getty's impulsiveness
(C) in accord with Getty's preferences
(D) pleased by Getty's unexpectedly generous donation
(E) impressed with Getty's financial acumen

30 When Getty mentions the "flouting of conventional wisdom" (line 61), he is referring to his opinions about the

(A) design of the museum building
(B) location of the museum
(C) museum's arrangement of displays
(D) financing of the museum
(E) floor plan of the museum building

GO ON TO THE NEXT PAGE

31 As indicated in Passage 2, Getty considered his choice of museum design an act of

(A) courageous defiance
(B) pointed satire
(C) spiteful mischief
(D) reluctant compromise
(E) justified indignation

32 On the basis of the information in Passage 2, which statement most accurately describes Getty's reaction to the art controversy mentioned in lines 13-16 ?

(A) He tabled plans to expand the museum's facilities.
(B) He felt that his intentions had been misunderstood by critics.
(C) He took the complaints seriously enough to consider redesigning the museum.
(D) He had anticipated the response and decided to ignore it.
(E) He engaged the most vehement of the critics in public debate.

33 Which aspect of the Getty Museum building seems to matter a great deal in Passage 1, but not in Passage 2?

(A) Its potential for future expansion
(B) Its convenience for visitors
(C) Its questionable authenticity
(D) Its unusual appearance
(E) Its practicality

34 Which statement best expresses an idea shared by one group of critics in Passage 1 and the trustees in Passage 2 ?

(A) A museum ought to concentrate on collecting artworks from only one historical period.
(B) Museums can be considered successful only if they attract a large enough segment of the population.
(C) The design of a building in which works of art are shown should resemble the style of those artworks.
(D) It is appropriate for a museum building to be a work of art in its own right.
(E) Museums that collect contemporary art experience fewer difficulties than those that collect classical art.

35 The final paragraph of Passage 2 suggests that Getty would predict which of the following about the critics referred to in Passage 1 ?

(A) Unless they offer more constructive advice, they will lose the chance to contribute.
(B) Unless they start to conform more closely to public opinion, they will lose their audience.
(C) Since they are widely read, they will continue to have an impact on museum attendance.
(D) Since they are taken seriously by the art world, they will continue to influence museum design.
(E) Although they are very loud, their influence will be short-lived.

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. **STOP**

| Time—30 Minutes 25 Questions	This section contains two types of questions. You have 30 minutes to complete both types. You may use any available space for scratchwork.

Notes:

1. The use of a calculator is permitted. All numbers used are real numbers.

2. 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.
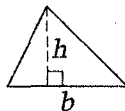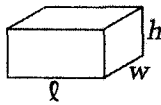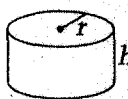
Reference Information
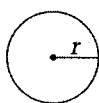
$A = \pi r^2$ $A = \ell w$ $A = \frac{1}{2}bh$ $V = \ell wh$ $V = \pi r^2 h$ $c^2 = a^2 + b^2$ Special Right Triangles
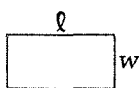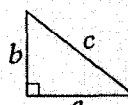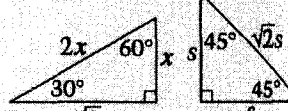
$C = 2\pi r$

The number of degrees of arc in a circle is 360.
The measure in degrees of a straight angle is 180.
The sum of the measures in degrees of the angles of a triangle is 180.

Directions for Quantitative Comparison Questions

Questions 1-15 each consist of two quantities in boxes, one in Column A and one in Column B. You are to compare the two quantities and on the answer sheet fill in oval

  A if the quantity in Column A is greater;
  B if the quantity in Column B is greater;
  C if the two quantities are equal;
  D if the relationship cannot be determined from the information given.

AN E RESPONSE WILL NOT BE SCORED.

Notes:

1. In some questions, information is given about one or both of the quantities to be compared. In such cases, the given information is centered above the two columns and is not boxed.
2. In a given question, a symbol that appears in both columns represents the same thing in Column A as it does in Column B.
3. Letters such as x, n, and k stand for real numbers.

EXAMPLES

	Column A	Column B	Answers
E1	5^2	20	● Ⓑ Ⓒ Ⓓ Ⓔ
E2	x	30	Ⓐ Ⓑ ● Ⓓ Ⓔ
E3	$r + 1$	$s - 1$	Ⓐ Ⓑ Ⓒ ● Ⓔ

(E2) $150° \diagup x°$

(E3) r and s are integers.

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SUMMARY DIRECTIONS FOR COMPARISON QUESTIONS

Answer: A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

Column A	Column B

An entire 5-pound bag of sugar is to be divided equally among 3 students in a home economics class.

1

The number of pounds of sugar each of these students will receive	$1\frac{1}{2}$

$x > 0$

2

$\left(\sqrt{x}\right)^2$	$\sqrt{x^2}$

n is an integer greater than 1.

3

$\dfrac{1}{n} - \dfrac{1}{2}$	$\dfrac{1}{2}$
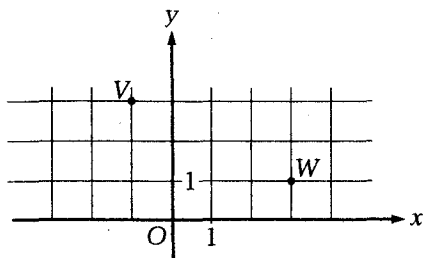
4

The y-coordinate of point V	The x-coordinate of point W

Column A	Column B

5

The increase in the area of circle A when its radius is increased by 1 inch	The increase in the area of circle B when its radius is increased by 1 inch

$2x + 15 = 4x - 1$

6

$2x$	14

Tina and Jules both collect stamps. The number of stamps in Tina's collection is 3 less than 5 times the number in Jules's collection.

7

The number of stamps in Tina's collection	The number of stamps in Jules's collection

t is 2 times r.

r is $\dfrac{1}{2}$ of p.

8

t	p

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Column A	**Column B**

$$0.6 < x < 1.0$$
$$-0.6 < y < 1.0$$

9 | x | y |

A bucket presently contains 20 liters of water and is $\frac{1}{4}$ full.

10 The number of <u>additional</u> liters of water necessary to fill the bucket to capacity | 60
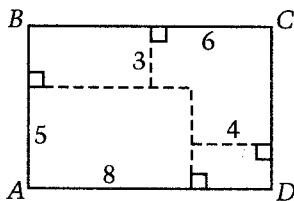
11 The sum of the lengths of the dotted line segments | Half the perimeter of rectangle $ABCD$

$$4 < x < y < 5$$

12 25% of x | 20% of y

Column A	**Column B**

$$m > 0$$

13 $\dfrac{m + m}{m}$ | m

14 The sum of three different prime numbers if each number is less than 10 | The sum of three different positive even integers if each integer is less than 10
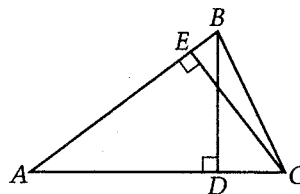
$$AC > AB$$

15 BD | CE

Directions for Student-Produced Response Questions

Each of the remaining 10 questions requires you to solve the problem and enter your answer by marking the ovals in the special grid, as shown in the examples below.

Answer: $\frac{7}{12}$ or 7/12   Answer: 2.5

Answer: 201
Either position is correct.

Write answer → in boxes.

← Fraction line

← Decimal point

Grid in → result.

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

- Mark no more than one oval in any column.
- Because the answer sheet will be machine-scored, **you will receive credit only if the ovals 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 ovals 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 $2\frac{1}{2}$ must be gridded as 2.5 or 5/2. (If $2\boxed{1/2}$ is gridded, it will be interpreted as $\frac{21}{2}$, not $2\frac{1}{2}$.)

- **Decimal Accuracy:** If you obtain a decimal answer, **enter the most accurate value the grid will accommodate.** For example, if you obtain an answer such as 0.6666 . . . , you should record the result as .666 or .667. **Less accurate values such as .66 or .67 are not acceptable.**

Acceptable ways to grid $\frac{2}{3}$ = .6666 . . .

---

16 If $\frac{10}{a} = \frac{b}{12}$, what is the value of ab ?

150, 30, 6, . . .

17 In the sequence above, each term after the 1st term is $\frac{1}{5}$ of the term preceding it. What is the 5th term of this sequence?

GO ON TO THE NEXT PAGE ▷

18 Five points, A, B, C, D, and E, lie on a line, not necessarily in that order. Segment AB has a length of 24. Point C is the midpoint of AB, and point D is the midpoint of segment AC. If the distance between D and E is 5, what is one possible distance between A and E ?

19 What is the greatest of 5 consecutive integers if the sum of these integers equals 185 ?

20 A salesman's monthly gross pay consists of $1,200 plus 20 percent of the dollar amount of his sales. If his gross pay for one month was $2,500, what was the dollar amount of his sales for that month? (Disregard the $ sign when gridding your answer.)
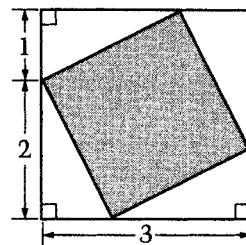
21 In the figure above, what is the area of the shaded square?

GO ON TO THE NEXT PAGE
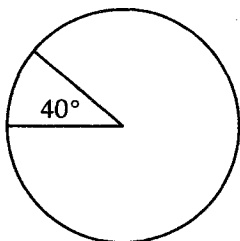
22 Naomi makes silver jewelry. For one style of earrings, she cuts wedges from a silver disk, as shown in the figure above. Each wedge makes a 40° angle at the center of the disk. If the weight of each uncut disk is a uniformly distributed 2.5 grams, how many grams does each wedge weigh?

23 If $x^2 - y^2 = 10$ and $x + y = 5$, what is the value of $x - y$?

24 For all positive integers j and k, let $j \boxed{R} k$ be defined as the whole number remainder when j is divided by k. If $13 \boxed{R} k = 2$, what is the value of k ?

25 The average (arithmetic mean) of the test scores of a class of p students is 70, and the average of the test scores of a class of n students is 92. When the scores of both classes are combined, the average score is 86. What is the value of $\frac{p}{n}$?

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. **STOP**

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**Time — 15 Minutes
13 Questions**

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

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

Questions 1-13 are based on the following passage.

In this passage from a novel, the narrator has been reading letters of his grandmother, Susan Ward, and is reflecting on the meaning of certain events in her life. In about 1880, Susan Ward was a young woman — a writer and a mother — whose husband Oliver was working as a mining engineer in Leadville, in the West. Here, the narrator imagines Susan Ward as she spends the winter with her family in Milton, New York, before rejoining her husband in the spring.

From the parental burrow, Leadville seemed so far away it was only half real. Unwrapping her apple-cheeked son after a sleigh ride down the lane,
Line she had difficulty in believing that she had ever
(5) lived anywhere but here in Milton.
She felt how the placid industry of her days matched the placid industry of all the days that had passed over that farm through six generations. Present and past were less continuous than synon-
(10) ymous. She did not have to come at her grandparents through a time machine. Her own life and that of the grandfather she was writing about showed her similar figures in an identical landscape. At the milldam where she had learned to skate she pulled
(15) her little boy on his sled, and they watched a weasel snow-white for winter flirt his black-tipped tail in and out of the mill's timbers. She might have been watching with her grandfather's eyes.
Watching a wintry sky die out beyond black
(20) elms, she could not make her mind restore the sight of the western mountains at sunset from her cabin door, or the cabin itself, or Oliver, or their friends. Who were those glittering people intent on raiding the continent for money or for scientific knowledge?
(25) What illusion was it that she bridged between this world and that? She paused sometimes, cleaning the room she had always called Grandma's Room, and thought with astonishment of the memory of Oliver's great revolver lying on the dresser when he,
(30) already a thoroughgoing Westerner, had come to the house to court her.
The town of Milton was dim and gentle, molded by gentle lives, the current of change as slow through it as the seep of water through a bog. More
(35) than once she thought how wrong those women in San Francisco had been, convinced that their old homes did not welcome them on their return. Last

year when Oliver's professional future was uncer-
tain, she would have agreed. Now, with the future
(40) assured in the form of Oliver's appointment as manager of the Adelaide mine in Leadville, the comfortable past asserted itself unchanged. Need for her husband, like worry over him, was tuned low. Absorbed in her child and in the writing of her
(45) book, she was sunk in her affection for home. Even the signs of mutability that sometimes jolted her — the whiteness of her mother's hair, the worn patience of her sister's face, the morose silences of her brother-in-law, now so long and black that the
(50) women worried about him in low voices — could not more than briefly interrupt the deep security and peace.
I wonder if ever again Americans can have that experience of returning to a home place so intimately
(55) known, profoundly felt, deeply loved, and absolutely submitted to? It is not quite true that you can't go home again. But it gets less likely. We have had too many divorces, we have consumed too much trans-portation, we have lived too shallowly in too many
(60) places. I doubt that anyone of my son's generation could comprehend the home feelings of someone like Susan Ward. Despite her unwillingness to live separately from her husband, she could probably have stayed on indefinitely in Milton, visited only
(65) occasionally by an asteroid husband. Or she would have picked up the old home and remade it in a new place. What she resisted was being a woman with no real home.
When frontier historians theorize about the
(70) uprooted, the lawless, the purseless, and the socially cut-off who emigrated to the West, they are not talking about people like my grandmother. So much that was cherished and loved, women like her had to give up; and the more they gave it up, the more
(75) they carried it helplessly with them. It was a process like ionization: what was subtracted from one pole was added to the other. For that sort of pioneer, the West was not a new country being created, but an old one being reproduced; in that sense our pioneer
(80) women were always more realistic than our pioneer men. The moderns, carrying little baggage of the cultural kind, not even living in traditional air, but breathing into their space helmets a scientific mixture of synthetic gases (and polluted at that) are
(85) the true pioneers. Their circuitry seems to include

no domestic sentiment, they have had their empathy removed, their computers hum no ghostly feedback of Home, Sweet Home. How marvelously free they are! How unutterably deprived!

1 In line 1, the phrase "parental burrow" suggests

(A) a lack of luxurious accommodations
(B) an atmosphere of peaceful security
(C) the work required to sustain a home
(D) a lack of interest and stimulation
(E) the loss of privacy

2 It can be inferred that Ward "did not have to come at her grandparents through a time machine" (lines 10-11) because

(A) her parents had frequently told her stories of them
(B) she was deeply immersed in the history and literature of the period of their lives
(C) her life in Milton closely resembled theirs
(D) as a writer she could intuitively sense their lives
(E) she possessed written accounts of their lives

3 The reference to the grandfather's eyes in line 18 indicates that Ward

(A) longed to see nature as her ancestors did
(B) was unable to come to terms with her own life
(C) felt that her grandfather would approve of her life choices
(D) was seeing something her grandfather himself might well have seen
(E) longed to let her grandfather know what she was experiencing

4 The reference to a bog in line 34 serves to convey a sense of the

(A) natural setting of the town of Milton
(B) way in which Milton's residents earned their livelihoods
(C) deliberate pace of life in Milton
(D) confinement that Ward first felt in Milton
(E) vague foreboding that permeated Milton

5 Ward came to feel differently from "those women in San Francisco" (lines 35-36) because

(A) the rigors of life in the West made life in the East seem more pleasant
(B) the problems in her sister's life made her more content with the situation in her own life
(C) she had more free time as her son began to grow out of infancy
(D) her own career as a writer had become more important to her
(E) she was free to enjoy her surroundings now that she was confident about her husband's professional future

6 The word "sunk" in line 45 conveys the degree to which Ward

(A) is depressed about being separated from her husband
(B) is concerned about her son's social development
(C) feels powerless to help her sister's troubled marriage
(D) allows herself to be filled with a particular emotion
(E) lets down her defenses to free her creativity

7 The "feelings" referred to in line 61 might best be defined as

(A) an unwillingness to travel far
(B) the importance of property to self-esteem
(C) the emotional presence of one's ancestors
(D) deep knowledge and love of a place
(E) a yearning to recapture childhood

8 The narrator refers to "frontier historians" (line 69) primarily in order to

(A) add the weight of their authority to his assertion
(B) show his respect for their research
(C) suggest that instinct must be supplemented by formal training
(D) introduce a viewpoint he contradicts
(E) illustrate the nature of his own education

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9 The narrator characterizes the migration by people like his grandmother as chiefly a process of

(A) recreating a domestic haven
(B) developing new skills for physical survival
(C) shedding now-irrelevant concerns over status
(D) instilling a love of place in the young
(E) preserving the beauty of unspoiled nature

10 The reference to "little baggage" in line 81 serves to suggest which of the following about the narrator's view of modern people?

(A) They are not burdened by physical possessions.
(B) They are not affected by the values of the past.
(C) They are not interested in artistic tradition.
(D) They are not bearing their portion of responsibility.
(E) They are not respectful of the opinions of others.

11 In lines 85-89, the narrator describes members of the modern generation as the "true pioneers" because they

(A) have worthier motivations for breaking new ground
(B) build on the achievements of earlier generations
(C) have superior technology and training
(D) live in a violent and uncertain world
(E) regard life as no previous generation has done

12 The narrator apparently believes which of the following about the idea of home held by the new pioneers?

(A) They long to achieve their own sense of place.
(B) They scoff at the earlier generation's sense of place.
(C) They are free from hypocritical rhetoric about home.
(D) They are unable to experience the earlier generation's attachment to home.
(E) They are as deeply attuned to home as the earlier generation but in a distinctly different way.

13 What parallel between the narrator and Susan Ward does the passage reveal?

(A) Both openly resent the signs of change around them.
(B) Both have lived in many parts of the country.
(C) Both are writing about the life of a grandparent.
(D) Both feel alienated from their spouses.
(E) Both prefer solitude to company.

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. STOP

Time—15 Minutes
10 Questions

In this section solve each problem, using any available space on the page for scratchwork. Then decide which is the best of the choices given and fill in the corresponding oval on the answer sheet.

Notes:

1. The use of a calculator is permitted. All numbers used are real numbers.

2. 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.

$A = \pi r^2$
$C = 2\pi r$

$A = \ell w$

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

$V = \ell w h$

$V = \pi r^2 h$

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

Special Right Triangles

The number of degrees of arc in a circle is 360.
The measure in degrees of a straight angle is 180.
The sum of the measures in degrees of the angles of a triangle is 180.

1 In a certain game, points are assigned to every word. Each q, x, and z in a word is worth 5 points, and all other letters are worth 1 point each. What is the sum of the points assigned to the word "exquisite"?

(A) 21
(B) 17
(C) 16
(D) 13
(E) 9

2 If $\frac{p}{r} = \frac{5}{2}$ and $\frac{r}{s} = \frac{2}{3}$, then $\frac{p}{s} =$

(A) $\frac{4}{15}$

(B) $\frac{2}{5}$

(C) $\frac{3}{5}$

(D) $\frac{5}{3}$
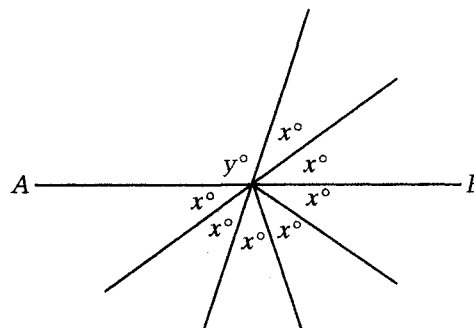
(E) $\frac{15}{4}$

3 In the figure above, if AB is a line, what is the value of y ?

(A) 108
(B) 114
(C) 117
(D) 120
(E) 135

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4 The scenic route to Mia's office is 5 kilometers longer than the direct route. When she goes by the scenic route and returns by the direct route, the round trip is 35 kilometers. How many kilometers is the direct route?

(A) 5

(B) $12\frac{1}{2}$

(C) 15

(D) 20

(E) $22\frac{1}{2}$

5 A certain scale for weighing food registers only weights above 6 pounds. A person who wanted to know the weight of 1 package each of chicken, beef, and turkey weighed every possible pair of these packages and got the following results.

> The chicken and the beef weighed 7 pounds.
> The chicken and the turkey weighed 8 pounds.
> The beef and the turkey weighed 9 pounds.

What is the weight of the package of turkey?

(A) 2 pounds
(B) 3 pounds
(C) 4 pounds
(D) 5 pounds
(E) 6 pounds
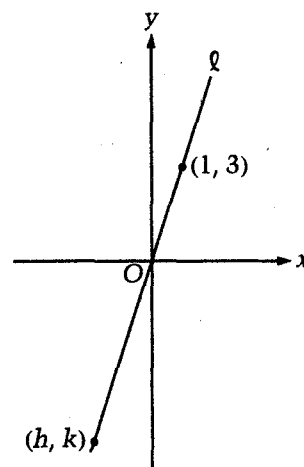
6 In the figure above, line ℓ passes through the origin. What is the value of $\frac{k}{h}$?

(A) 3

(B) 2

(C) $\frac{3}{2}$

(D) $-\frac{3}{2}$

(E) -3

GO ON TO THE NEXT PAGE

7 The integer 33 is to be expressed as a sum of n consecutive positive integers. The value of n could be which of the following?

   I. 2
  II. 3
 III. 6

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

8 Points P, Q, R, S, T, and U are all different points lying in the same plane. Points P, Q, and U lie on the same line. The line through points P and Q is perpendicular to the line through points R and S. The line through points R and S is perpendicular to the line through points T and U. Which of the following sets contains points that must lie on the same line?

(A) $\{P, Q, R\}$
(B) $\{Q, R, S\}$
(C) $\{Q, R, T\}$
(D) $\{Q, T, U\}$
(E) $\{R, T, U\}$

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9 If $y = \dfrac{5x^3}{z}$, what happens to the value of y when both x and z are doubled?

(A) y is not changed.
(B) y is halved.
(C) y is doubled.
(D) y is tripled.
(E) y is multiplied by 4.

10 A store charges $28 for a certain type of sweater. This price is 40 percent more than the amount it costs the store to buy one of these sweaters. At an end-of-season sale, store employees can purchase any remaining sweaters at 30 percent off the store's cost. How much would it cost an employee to purchase a sweater of this type at this sale?

(A) $8.40
(B) $14.00
(C) $19.60
(D) $20.00
(E) $25.20

SAT 1: Reasoning Test Answer Key
Saturday, May 1997

VERBAL

Section 1
Five-choice Questions

No.	COR. ANS.	DIFF. LEV.
1.	D	1
2.	A	1
3.	E	3
4.	C	3
5.	C	3
6.	A	5
7.	B	5
8.	D	5
9.	C	5
10.	B	1
11.	C	1
12.	B	3
13.	C	5
14.	E	4
15.	A	4
16.	B	3
17.	C	3
18.	C	1
19.	D	3
20.	A	3
21.	D	3
22.	C	2
23.	A	3
24.	E	3
25.	D	3
26.	B	4
27.	C	3
28.	E	3
29.	A	3
30.	A	3

_____
no. correct

_____
no. incorrect

Section 3
Five-choice Questions

No.	COR. ANS.	DIFF. LEV.
1.	B	3
2.	B	1
3.	B	2
4.	D	2
5.	B	3
6.	E	3
7.	A	3
8.	E	2
9.	C	5
10.	A	5
11.	D	1
12.	B	2
13.	A	1
14.	D	3
15.	E	3
16.	C	3
17.	B	3
18.	D	3
19.	C	3
20.	E	4
21.	E	4
22.	D	4
23.	C	5
24.	B	1
25.	D	3
26.	A	3
27.	E	3
28.	C	3
29.	C	2
30.	A	2
31.	A	3
32.	D	3
33.	C	3
34.	D	3
35.	E	3

_____
no. correct

_____
no. incorrect

Section 6
Five-choice Questions

No.	COR. ANS.	DIFF. LEV.
1.	B	3
2.	C	3
3.	D	2
4.	C	3
5.	E	3
6.	D	3
7.	D	2
8.	D	3
9.	A	4
10.	B	3
11.	E	4
12.	D	3
13.	C	5

_____
no. correct

_____
no. incorrect

MATHEMATICAL

Section 2
Five-choice Questions

No.	COR. ANS.	DIFF. LEV.
1.	A	1
2.	D	1
3.	D	1
4.	B	1
5.	A	1
6.	E	2
7.	C	2
8.	E	3
9.	B	3
10.	D	3
11.	B	2
12.	E	3
13.	A	4
14.	C	3
15.	A	3
16.	B	4
17.	C	4
18.	E	4
19.	C	3
20.	D	3
21.	A	5
22.	C	3
23.	C	5
24.	E	5
25.	A	5

_____
no. correct

_____
no. incorrect

Section 4
Four-choice Questions

No.	COR. ANS.	DIFF. LEV.
1.	A	2
2.	C	2
3.	B	2
4.	C	2
5.	D	2
6.	A	3
7.	A	3
8.	C	3
9.	D	3
10.	C	3
11.	C	3
12.	A	4
13.	D	4
14.	D	4
15.	B	5

_____
no. correct

_____
no. incorrect

Section 7
Five-choice Questions

No.	COR. ANS.	DIFF. LEV.
1.	B	1
2.	D	1
3.	A	2
4.	C	2
5.	D	3
6.	A	3
7.	E	4
8.	D	4
9.	E	4
10.	B	5

_____
no. correct

_____
no. incorrect

Section 4
Student-Produced Response Questions

No.	COR. ANS.	DIFF. LEV.
16.	120	1
17.	6/25 or .24	2
18.	1 or 11	2
19.	39	2
20.	6500	3
21.	5	3
22.	5/18, .277 or .278	3
23.	2	4
24.	11	4
25.	3/8 or .375	5

_____
no. correct
(16-25)

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

Score Conversion Table
SAT 1: Reasoning Test
Saturday, May 1997
Recentered Scale

Raw Score	Verbal Scaled Score	Math Scaled Score	Raw Score	Verbal Scaled Score	Math Scaled Score
78	800		36	500	570
77	800		35	500	560
76	800		34	490	550
75	780		33	490	540
74	770		32	480	540
73	750		31	480	530
72	740		30	470	520
71	730		29	470	520
70	720		28	460	510
69	710		27	450	500
68	700		26	450	500
67	690		25	440	490
66	680		24	440	490
65	670		23	430	480
64	660		22	430	470
63	660		21	420	470
62	650		20	410	460
61	640		19	410	450
60	630	800	18	400	450
59	630	800	17	390	440
58	620	780	16	390	440
57	610	760	15	380	430
56	610	740	14	370	420
55	600	730	13	360	420
54	600	720	12	360	410
53	590	710	11	350	400
52	580	690	10	340	390
51	580	690	9	330	390
50	570	680	8	320	380
49	570	670	7	310	370
48	560	660	6	300	360
47	560	650	5	290	350
46	550	640	4	270	340
45	550	630	3	260	330
44	540	630	2	250	310
43	540	620	1	230	300
42	530	610	0	220	280
41	530	600	-1	200	260
40	520	590	-2	200	240
39	520	590	-3	200	210
38	510	580	-4	200	200
37	510	570	and below		

This table is for use only with this test.