



SECTION 2

Time — 25 minutes

23 Questions

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

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

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

Example:

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

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

Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

1. Before archaeological dating techniques were developed, determining the age of cave paintings was -----, but now scientists can be confident that their dating is -----.

- (A) precise . . correct
- (B) conjectural . . theoretical
- (C) erroneous . . distorted
- (D) speculative . . accurate
- (E) subjective . . complicated

2. Galileo's astronomical observations ----- Copernicus' theories, lending support to Copernicus' calculations indicating that the planets revolve around the Sun.
 - (A) isolated
 - (B) ignored
 - (C) strengthened
 - (D) undermined
 - (E) endured
3. Nineteenth-century abolitionists Sojourner Truth and Harriet Tubman were not -----; on the contrary, they were part of a Black female tradition founded on religious faith and commitment to human rights.
 - (A) persecuted
 - (B) atypical
 - (C) effective
 - (D) famous
 - (E) representative
4. Kabuki players once were Japan's cultural -----, introducing novel styles; today, however, they are ----- of tradition, preserving classical forms.
 - (A) catalysts . . critics
 - (B) pacesetters . . forerunners
 - (C) connoisseurs . . skeptics
 - (D) innovators . . curators
 - (E) stewards . . guardians
5. Even readers with only ----- knowledge of the history of comic books will appreciate the jokes in Minister Faust's satire of the genre, *From the Notebooks of Dr. Brain*.
 - (A) prescient
 - (B) inscrutable
 - (C) cursory
 - (D) fanatical
 - (E) irreverent

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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 6–7 are based on the following passage.

Many crossword puzzle devotees regard the wildly popular number game Sudoku with the disdain a jazz purist might have for a sellout pop star. For crossword constructors, Sudoku represents a robotic outsourcing of the puzzle trade. Sudoku requires no individual artistry, no exquisite handcrafting; the puzzles are simply cranked out by computers. One crossword enthusiast suspects the upstart competition has piqued many crossword fans. “People are only going to spend so much time a day on a puzzle, and it’s either going to be a number puzzle or a crossword, right?” he says. “A lot of crossword enthusiasts don’t want to hear that, but it’s the truth.”

6. The first sentence of the passage (“Many . . . star”) does which of the following?

(A) Uses a metaphor to describe a process
(B) Uses an analogy to characterize a reaction
(C) Uses an allusion to call to mind a work of art
(D) Uses deduction to draw a conclusion
(E) Uses exaggeration to challenge a claim

7. The “enthusiast” (line 7) suggests which of the following about Sudoku puzzles?

(A) They mystify most crossword puzzle fans.
(B) They require less skill to complete than do crossword puzzles.
(C) They decrease the audience for crossword puzzles.
(D) They appeal primarily to young crossword puzzle fans.
(E) They take less time to complete than do crossword puzzles.

Questions 8–9 are based on the following passage.

Around 320 B.C. the ancient Greek geographer Pytheas made a remarkable sea journey around the distant Atlantic fringe of northern Europe. Afterward, some of his contemporaries regarded him as a brilliant scientist; others, as an outright liar. Scholars who have more recently examined the evidence compare him to explorers like Captain Cook and Columbus. Few now doubt the truth of his claims to have journeyed to the very limits of the ancient European world, but how he traveled, where exactly he went, and what he saw are issues still as shrouded in mystery as the frightening North Atlantic shore was in the minds of his fellow Greeks.

8. The primary purpose of the passage is to

(A) describe the extent of ancient Greek knowledge of the geography of northern Europe
(B) discuss the views of ancient Greeks and modern scholars regarding Pytheas’ journey
(C) recount a key event that happened to Pytheas on his journey around ancient Europe
(D) summarize the evidence gathered by scholars that supports Pytheas’ claims
(E) present a brief biography of an important ancient mariner and geographer

9. The passage suggests that Pytheas’ accomplishments are best characterized as

(A) outdated and endearingly quaint
(B) mythical and highly engaging
(C) definitive but somewhat subjective
(D) influential but now widely discredited
(E) substantive but only partially understood



Questions 10–16 are based on the following passage.

This passage was adapted from a 2009 novella set in Egypt.

Ever since he was a child, he'd loved to draw—people's faces, trees, the cars in the streets. Everything his eyes saw was imprinted in detail on his young mind. Then the lines he made would run over the paper to reshape things into the way he wanted to see them. Every morning, he'd take his coloring pencils and a sketchbook and go to the municipal garden in Zaqqaziq, isolate himself on an empty seat, and draw. When he was twenty, he left Zaqqaziq, where he had been born, to live in a small room on the roof of an old house in the Bein el-Sarayat neighborhood of Cairo. Before two years had passed, he was drawing the main cartoon for three weekly magazines, and at age twenty-four he put on his first exhibition of oil paintings.

These beginnings were worthy, no doubt, of Ragheb, Bikar*, or any other great painter, but I'm not talking about any of them. These were the beginnings of Abd el-Ati, and who has heard of him? Abd el-Ati was my father, and, despite the exciting, promise-packed start, he ended up far from what was expected. Abd el-Ati did not shine and his great hopes as a painter were never realized. He changed nothing in the development of painting, as he had dreamed of doing, and thirty years after his move to Cairo, my father was still an obscure artist earning his living doing drawings for a magazine called *Life* that nobody read and getting by on other small jobs, such as giving private art lessons to the children of the rich. This was where Abd el-Ati was at 50, and I ask myself, why? Was he lacking in talent? For sure he had more than many painters who succeeded and became famous. Was it laziness and love of pleasure that did him in? On the contrary, my father led a dissolute life only during his last years. Before then, he used to produce prolifically and persistently and when I was little I'd often wake in the morning to find he hadn't slept but spent the entire night on a new painting. I loved him then. His eyes would be exhausted, his face drawn, and his laugh low and satisfied. He'd dry his hands quickly on his paint-spattered smock and bend down to kiss me and his good, coarse smell would take possession of me. Then he'd take me by the hand, pull me back a little, point to the painting on its easel, and ask me, pretending to be very grave, "What think you, my dear sir, of the work? Do you like it?"

My mother would protest laughingly and say, "You're asking Isam? What can the child know about painting?"

And my father would reply, picking me up in his arms and kissing me, "What do you mean? He will be a great artist. One day I'll tell you, 'I told you so!'"

If it wasn't laziness or lack of talent, then what was it? When I got older, I worked out the reason. What my father lacked was charisma—that halo that encircles great men and grants them influence over others.

* names of twentieth-century Egyptian painters

10. The narrator invokes the two names in lines 14–15 in order to

- (A) claim a lineage
- (B) offer criticism
- (C) poke fun at a tradition
- (D) establish a comparison
- (E) deflect an objection

11. In line 20, the narrator indicates that his father's hopes

- (A) were not clearly defined
- (B) did not serve as examples
- (C) did not come to fruition
- (D) were unrealistic
- (E) caused his father great anxiety

12. Lines 27–31 ("Was he . . . years") serve primarily to

- (A) posit hypotheses and assess their aptness
- (B) question motives and object to their implications
- (C) challenge beliefs and investigate their origins
- (D) examine theories and discuss their successors
- (E) suggest alternatives and imagine their effects

13. The narrator implies that "laziness and love of pleasure" (line 29)

- (A) was the primary cause of his father's downfall
- (B) had no substantial impact on his father's career
- (C) caused his father to be ostracized from family and friends
- (D) served his father's creative process in productive ways
- (E) helped his father to withstand stress in difficult times

14. In lines 31–38 ("Before . . . me"), the narrator expresses an attitude of

- (A) anxious concern
- (B) painful regret
- (C) affectionate appreciation
- (D) deep incomprehension
- (E) amused tolerance



15. The exchange in lines 42-46 (“My mother . . . so! ’ ”) primarily suggests that the narrator’s parents were

- (A) uninterested in art
- (B) inquisitive and skeptical
- (C) envious of their son’s talent
- (D) concerned about their son’s future
- (E) loving and affectionate

16. Lines 48-50 (“What my . . . others”) emphasize the importance of

- (A) artistic talent
- (B) personal attributes
- (C) economic resources
- (D) utopian ideals
- (E) individual dedication



Questions 17–23 are based on the following passages.

Passage 1 is adapted from a sketch by naturalist John Muir (1838–1914). *Passage 2* is adapted from a 2000 book by a newspaper columnist.

Passage 1

On the first of my long lonely excursions, botanizing in glorious freedom around the forests and swamps surrounding the Great Lakes, I discovered the rarest and most beautiful of the flowering plants—*Calypso borealis* (the Hider of the North). I had been fording streams more and more difficult to cross and wading bogs and swamps that seemed more and more extensive and more difficult to force one's way through. Entering one of these great tamarac and arbor-vitae swamps one morning, struggling through tangled drooping branches and over and under broad heaps of fallen trees, I began to fear that I would not be able to reach dry ground before dark and therefore would have to pass the night in the swamp, faint and hungry.

But when the sun was getting low and everything seemed most bewildering and discouraging, I found beautiful Calypso on the mossy bank of a stream, growing not in the ground but on a bed of yellow mosses in which its small white bulb had found a soft nest and from which its one leaf and one flower sprung. The flower was white and made the impression of the utmost simple purity like a snowflower. No other bloom was near it, for the bog a short distance below the surface was still frozen, and the water was ice cold. It seemed the most spiritual of all the flower people I had ever met. I sat down beside it and fairly cried for joy.

It seems wonderful that so frail and lowly a plant has such power over human hearts. This Calypso meeting happened some forty-five years ago, and it was more memorable and impressive than virtually any of my meetings with human beings.

How long I sat beside Calypso I don't know. Hunger and weariness vanished, and only after the sun was low in the west I plashed on through the swamp, strong and exhilarated as if never more to feel any mortal care.

Passage 2

I'm sitting on a rock in the Big Blackfoot River in western Montana. The sun is glistening off the water, and the grasses on the banks are ablaze in their fall glory. The air is crisp and silent, and I'm utterly alone but for the hawk gliding by above and the trout lurking in the water below. This is the spot where Norman Maclean set his

novel *A River Runs Through It*, and I'm sitting here waiting for one of those perfect moments when time stops and I feel myself achieving a mystical communion with nature.

45 But nothing's happening. I've been hanging around this magnificent setting for 30 minutes and I haven't had one moment of elevated consciousness. The ageless rhythms of creation are happening all around me. The crisp air whispers. The branches sway. If John Muir were here, he'd

50 probably be in rapture, writhing on the ground in ecstasy over the beauty of some nearby twig. But as for me, not a thing. It's October, and it occurs to me that maybe it's too late in the season for transcendence.

“Eventually, all things merge into one, and a river runs 55 through it,” Maclean writes. When I read that back in my living room a few months ago, it seemed so profound. Now I can't figure out what the heck it means. The only things merging into one are my fingers into a block of frozen flesh. And instead of making me profound, this solitude is

60 just giving me the creeps. There probably isn't another human being within ten miles of here. When I think of the calamities that could befall a person out here, I realize that there are advantages to seeking inner peace at spots close to a pay phone and an emergency rescue squad. Every twig

65 snap begins to sound like the first hint of an onrushing grizzly. I look at my watch and realize that I had better start feeling serene oneness with the natural world pretty soon. I've got dinner reservations back in Missoula at six.

17. Which statement best describes the relationship between the two passages?

- (A) The author of Passage 2 ignores the desire to preserve nature that is expressed in Passage 1.
- (B) The author of Passage 2 purports to be looking for the type of experience described in Passage 1.
- (C) The author of Passage 2 achieves the same closeness to nature described in Passage 1.
- (D) The author of Passage 2 disputes the truthfulness of the account presented in Passage 1.
- (E) The author of Passage 2 pursues to an absurd conclusion the theory advanced in Passage 1.

18. The first paragraph of Passage 1 primarily emphasizes which aspect of the “forests and swamps surrounding the Great Lakes” (lines 2–3) ?

- (A) The beauty of the vistas
- (B) The uniqueness of the plant life
- (C) The arduousness of the terrain
- (D) The remoteness of the location
- (E) The complexity of the ecosystem



19. In the context of Passage 1, the author’s use of the phrase “flower people” (lines 24–25) is best understood to be
- (A) a sign of his depth of feeling for certain botanical specimens
 - (B) an expression of his concern about the welfare of all living organisms
 - (C) an acknowledgment that nature can only be interpreted through a human framework
 - (D) an indication of the ambivalence he feels about human beings
 - (E) an attempt to project human motivations onto certain plant species
20. The author of Passage 1 refers to his “meetings with human beings” (line 31) primarily to
- (A) emphasize the singularity of an experience
 - (B) stress the persistence of a problem
 - (C) indicate the origins of an attitude
 - (D) underscore the futility of a goal
 - (E) highlight the routine nature of an incident
21. The first two paragraphs of Passage 2 (lines 36–53) are marked by a shift in attitude from
- (A) denial to acceptance
 - (B) confusion to clarity
 - (C) complacency to irritation
 - (D) gratitude to resentment
 - (E) anticipation to disappointment

22. The statement in lines 57–59 (“The only . . . flesh”) is best understood as
- (A) a use of understatement to describe a situation
 - (B) a shift from a serious tone to a humorous one
 - (C) a foreshadowing of one of the dangers described later in the paragraph
 - (D) a play on a phrase that appears earlier in the paragraph
 - (E) an allusion to a common misreading of an expression
23. Each passage takes the form of
- (A) a hypothetical scenario
 - (B) a fond recollection
 - (C) an extended personal anecdote
 - (D) a thesis followed by evidence
 - (E) a problem followed by a solution



SECTION 3

Time — 25 minutes

35 Questions

Turn to Section 3 (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.

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. Preceded by various types of monetary tokens, the first true Chinese coins, produced in the sixth century B.C.E.

- (A) coins,
- (B) coins, they were
- (C) coins and were
- (D) coins were
- (E) coins to be

2. In 2009 scientists at the University of California, Los Angeles, made an incredibly small incandescent lightbulb; what is contained within it is a carbon filament only 100 atoms wide.
- (A) lightbulb; what is contained within it is
 - (B) lightbulb that contains
 - (C) lightbulb, contained in it is
 - (D) lightbulb, it does contain
 - (E) lightbulb, it contains
3. Alaska has 3 million lakes, over 3,000 rivers, and more coastline than in the entire continental United States.
- (A) than in
 - (B) than are in
 - (C) than
 - (D) as does
 - (E) as compared to
4. The fire pole was invented in 1878 after a captain of Chicago Engine Company 21 seeing a firefighter in a hayloft grab a long pole and slide down it to a horse-drawn cart below.
- (A) seeing a firefighter in a hayloft grab a long pole
 - (B) has seen a firefighter in a hayloft grab a long pole
 - (C) saw a firefighter in a hayloft grab a long pole
 - (D) saw a long pole in a hayloft grabbed by a firefighter
 - (E) had seen a firefighter in a hayloft grabbing a long pole



5. Actions to eliminate or at least reducing air pollution have recently been intensified.
- (A) reducing air pollution have
(B) reducing air pollution has
(C) reduce air pollution having
(D) reduce air pollution have
(E) reduce air pollution has
6. In his book on the practice of medicine, the author describes the difficulties that arise in eliciting patients' stories, to interpret them, and making diagnoses.
- (A) arise in eliciting patients' stories, to interpret them, and making
(B) arise in eliciting patients' stories, interpreting them, and making
(C) raise when eliciting patients' stories, interpreting them, and making
(D) have arisen in eliciting patients' stories, to interpret them, and make
(E) had raised when he elicited patients' stories, interpreted them, and made
7. Recognizing how much space is wasted in packing containers, the square tomato and a special machine to harvest it were developed by University of California researchers.
- (A) the square tomato and a special machine to harvest it were developed by University of California researchers
(B) the square tomato and a special machine to harvest it was developed by University of California researchers
(C) University of California researchers developed the square tomato and a special machine to harvest it
(D) University of California researchers, who developed the square tomato and a special machine to harvest it
(E) development of the square tomato and a special machine to harvest it was by University of California researchers
8. Now that the demand for biofuels are encouraging farmers to grow more corn, scientists are concerned about how the creation of new corn farms will affect the Earth's wetlands.
- (A) are encouraging
(B) has encouraged
(C) have encouraged
(D) had encouraged
(E) encouraged
9. Kihansi spray toads are born fully formed but very tiny, each small enough to sit on the head of a pin.
- (A) each
(B) each is
(C) each of them is
(D) each of them are
(E) they are each
10. Guidance counselors generally advise that, when applying for a job or scholarship, do not forget to submit a personalized cover letter along with your résumé.
- (A) do not forget
(B) not to forget
(C) not forgetting
(D) you not forget
(E) your not forgetting
11. Most dolphins can recognize their own reflections in mirrors, a recent study suggests that those raised in isolation cannot.
- (A) a recent study suggests
(B) however, a recent study suggests
(C) although a study recently suggesting
(D) yet a study recently suggests
(E) but a recent study suggests



The following sentences test your ability to recognize grammar and usage errors. Each sentence contains either a single error or no error at all. No sentence contains more than one error. The error, if there is one, is underlined and lettered. If the sentence contains an error, select the one underlined part that must be changed to make the sentence correct. If the sentence is correct, select choice E. In choosing answers, follow the requirements of standard written English.

EXAMPLE:

The other delegates and him immediately

A B C

accepted the resolution drafted by the

D

neutral states. No error

E

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

12. Many students in the class were surprised to learn

A B

that the saxophone is invented by Adolphe Sax, a

C

Belgian, who also invented the saxhorn. No error

D E

13. The Fuller Building, better known as the

A

Flatiron Building, became one of the tallest

B C

buildings in New York City upon its completion in

D

1902. No error

E

14. In her play *Letters from Cuba*, Maria Irene Fornes quoted extensive from letters she received from her brother over a thirty-year correspondence. No error

D

E

15. In a typical power plant that uses fossil fuel, only

A

one-third of the energy in the fuel is turned into

B

usable electricity, while two-thirds were released

C

D

as waste heat. No error

E

16. As solving the problem of dolphins being caught

A

in commercial fishing nets, a fishing-gear company

has invented a net that it hopes dolphins can sense

C

with sonar and avoid. No error

D

E

17. Several new books celebrate the economic and

personal benefits of storytelling; supposedly,

A

one can achieve not only fame and fortune

B

and even happiness by telling stories. No error

C

D

E



18. Although we arrived at the skating rink together,
A B

Mariah stayed two hours longer than I did because
C

she needed to rehearse a new routine. No error
D E

19. Hydrogen, the more abundant of all the chemical
A

elements in the universe, is found on Earth chiefly as
B C

a component of water molecules. No error
D E

20. To create a pen name, Theodor Seuss Geisel
A

used his middle name and, because his father

had always wanted him to become a doctor,
B C

added the title "Dr." No error
D E

21. In the book, dancers from various backgrounds talk
A

about their very different paths to success as
B C

a performer in ballet and modern dance productions,
D

Broadway shows, and music videos. No error
E

22. The mayor was concerned that unless
A

averting a strike, many of the city's
B
essential services would be suspended,
C

perhaps for several days. No error
D E

23. Sean would never have advised Melissa to drive
A B

home on the expressway if he had known how
C D

much traffic there was going to be. No error
E

24. The White Mountains of New Hampshire lack the

dramatic scale of the Alps or the Rockies yet, up
A B

close, presents some of the most rugged mountain
C D

scenery in the world. No error
E

25. The candidates gave his or her view about how
A

best to address climate change, revealing significant
B C

differences in how well they understood the scientific
D

issues involved. No error
E



26. A porcupine's loosely attached quills easily break
A B

away from the porcupine and become embedded in
the bodies of any animal that is foolish enough to
C D
attack such a well-defended creature. No error
E

27. We found that the author's extensive use of facts and
A

figures were persuasive, though the book as a whole
B C
was quite dull. No error
D E

28. Under pressure of her constituents, the governor
A

has asked that a number of tax reform measures
B C

be passed during the current legislative session.
D

No error
E

29. Thanks to their prudent fiscal policies and abundant
A B

mineral resources, Botswana has what may be the
C

most successful national economy in Africa. 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) If people were asked to name their favorite works of art, they would probably list paintings, sculptures, musical compositions, or whatever. (2) In other words, they thought of art that they had experienced visually or aurally. (3) Most works of art are, after all, intended to be seen or heard. (4) One possibility is to experience art through the sense of taste, even though food is not usually exhibited on museum walls and cannot make an appearance on a concert stage. (5) Why not include taste?

(6) According to Albert Einstein, mystery is "the source of all true art." (7) Flavors can certainly be mysterious.

(8) Mystery, however, does not just happen by accident; it takes both imagination and scientific knowledge to turn food into an artistic experience. (9) For instance, chefs who practice the art of molecular gastronomy know chemistry thoroughly. (10) The chefs use it to create restaurant food with unusual flavors and textures. (11) One such cook serves entire meals composed only of transparent foam; diners describe this foam as bursting with intense, unexpected flavors. (12) It is the intensity and unpredictability of this experience that gives diners a sense of mystery.

(13) Perhaps the idea of foam food seems ridiculous.



30. In context, which of the following would best replace the underlined part of sentence 1 (reproduced below) ?

If people were asked to name their favorite works of art, they would probably list paintings, sculptures, musical compositions, or whatever.

- (A) your list of paintings, sculptures, musical compositions, and so on would be different from everyone else's
- (B) paintings, sculptures, or musical compositions are what I would list
- (C) they would probably list paintings, sculptures, or musical compositions
- (D) they would probably list whatever is exotic and mysterious
- (E) they might want to know whether something else could be included

31. In context, which of the following would most improve sentence 2 (reproduced below) ?

In other words, they thought of art that they had experienced visually or aurally.

- (A) Change "In other words" to "Similarly".
- (B) Change "thought of" to "would think of".
- (C) Change "art that" to "those that".
- (D) Delete "that they had experienced".
- (E) Change "visually or aurally" to "with one's eyes or ears".

32. In context, which of the following is the best way to revise the underlined portion of sentence 4 (reproduced below) ?

One possibility is to experience art through the sense of taste, even though food is not usually exhibited on museum walls and cannot make an appearance on a concert stage.

- (A) Some possibilities are
- (B) Others say it is possible
- (C) Still, it may be possible
- (D) For one, it may be a possibility
- (E) Therefore, it may be possible

33. Paragraph 2 (sentences 6-7) would be most improved by adding which of the following?

- (A) An explanation of how food with mysterious flavors and textures becomes an artistic experience.
- (B) An argument showing that something is not artistic if it is not mysterious.
- (C) An extended description of one work of art that Albert Einstein found mysterious.
- (D) A comparison of society's differing attitudes toward talented chefs and talented artists.
- (E) A summary of what scientists have learned about the chemical causes of flavor and how these chemicals affect the sense of taste.

34. In context, which of the following is the best way to revise and combine sentences 9 and 10 (reproduced below) at the underlined words?

For instance, chefs who practice the art of molecular gastronomy know chemistry thoroughly. The chefs use it to create restaurant food with unusual flavors and textures.

- (A) might know chemistry thoroughly, and they use chemistry
- (B) who knew chemistry thoroughly were able to use it
- (C) happen to have a thorough knowledge of chemistry and use it
- (D) use a thorough knowledge of chemistry
- (E) therefore use them

35. In context, which is best to place after sentence 13 (reproduced below) ?

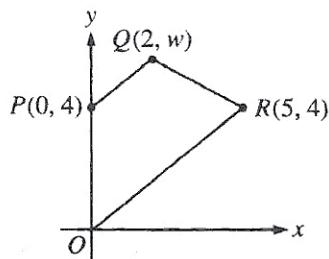
Perhaps the idea of foam food seems ridiculous.

- (A) It does, nonetheless, invite people to expand their notions of both food and art.
- (B) Some people, however, find eating foam food a mysterious experience.
- (C) On the other hand, it is delicious, as anyone who tried it would admit.
- (D) After all, a work of art should be viewed or heard, not tasted.
- (E) Einstein was right.



7. If $-3 \leq x \leq 2$, what is the smallest possible value of $2|x - 3| + 1$?

- (A) 0
- (B) 1
- (C) 3
- (D) 7
- (E) 13



8. In the xy -plane above, side \overline{PQ} of the quadrilateral is parallel to side \overline{OR} . What is the value of w ?

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



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.

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

Write answer →
in boxes.

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

Fraction
line

Answer: 2.5

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

Decimal
point

Answer: 201

Either position is correct.

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

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

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 $\frac{7}{2}$. (If is gridded, it will be

interpreted as $\frac{31}{2}$, not $3\frac{1}{2}$.)

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

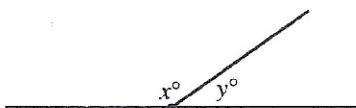
Acceptable ways to grid $\frac{2}{3}$ are:

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

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

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

9. There are 11 marbles in a bag: 2 green, 4 red, and 5 blue. What is the probability that a marble chosen at random from the bag will be blue?
10. If $4x + 2y = 8$, what is the value of $2x + y$?



Note: Figure not drawn to scale.

11. In the figure above, $30 < y < 40$. What is one possible value of x ?

12. A school hired 8 buses to take 420 students on a class trip. Each large bus cost \$400 and took 60 students on the trip, and each small bus cost \$250 and took 40 students on the trip. What was the total cost, in dollars, to hire the 8 buses? (Disregard the \$ sign when gridding your answer.)

13. In $\triangle ABC$, the measure of $\angle BAC$ is 32° and $AB = BC$. If the measure of $\angle ABC$ is x° , what is the value of x ?

14. In the xy -plane, (a, b) is the point of intersection of the lines $y = 9x$ and $y = 3x + 6$. What is the value of $a + b$?

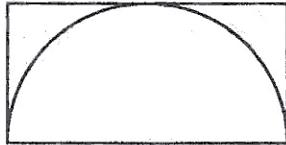


15. Equal amounts of cake batter are poured into two empty pans of different sizes so that one pan is $\frac{1}{3}$ full and the other is $\frac{1}{4}$ full. If all the batter is poured from the pan with larger volume into the smaller pan, what fraction of the smaller pan is then filled?

17. The number 6 has four different positive factors: 1, 2, 3, and 6. What is one possible two-digit integer that has exactly three different positive factors?

$$m = \frac{x}{3}$$

18. In the equation above, m and x are positive integers. If $x + m > 200$, what is the least possible value of m ?



16. A semicircle is inscribed in a rectangle, as shown above. The area of the semicircle is 8π . What is the area of the rectangle?



SECTION 5

Time — 25 minutes

25 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.

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

Example:

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

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

Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

1. General Custer was known for ----- a ----- appearance: at the Battle of Gettysburg, for example, he wore a self-designed black-velvet uniform, embroidered with gaudy gold-lace coils.
 - (A) promoting . . subtle
 - (B) cultivating . . flashy
 - (C) fostering . . sloppy
 - (D) adopting . . plain
 - (E) avoiding . . showy
2. In an attempt to ----- why Hawaii's fish population has been declining, scientists have ----- numerous species by counting fish and tracking their movements.
 - (A) debate . . eliminated
 - (B) quantify . . rescued
 - (C) predict . . dissected
 - (D) fathom . . monitored
 - (E) explain . . unleashed
3. Seurat's circus paintings evoke an appropriately ----- atmosphere: acrobats somersault, clowns grin, and dancers balance on prancing horses.
 - (A) cavalier
 - (B) timorous
 - (C) garrulous
 - (D) portentous
 - (E) carnivalesque

4. Maxine Hong Kingston's novel *Tripmaster Monkey* challenges the image of artists on lonely and ----- quests for aesthetic achievement, portraying instead artists whose creative goals incorporate ----- concerns.
 - (A) individual . . communal
 - (B) obsessive . . insular
 - (C) munificent . . magnanimous
 - (D) egotistical . . narcissistic
 - (E) preliminary . . superficial
5. John was usually -----, but upon winning the school election by a landslide, he let out whoops of triumphant delight.
 - (A) punctual
 - (B) attentive
 - (C) thrifty
 - (D) impassive
 - (E) benevolent
6. Not even the author's litany of lifeless facts about nineteenth-century New Orleans could succeed in ----- the aura of vitality characteristic of that time and place.
 - (A) diminishing
 - (B) capturing
 - (C) expounding
 - (D) conveying
 - (E) rejuvenating
7. Because bacteria are -----, we ignore their -----; without the benefit of a microscope, we forget that they are everywhere.
 - (A) featureless . . voracity
 - (B) indiscernible . . ubiquity
 - (C) benign . . virulence
 - (D) invisible . . uniqueness
 - (E) pliable . . adaptability
8. Sienna was exceptionally -----: ever attentive to detail, she was ----- in her observance of formalities.
 - (A) imperious . . perfunctory
 - (B) punctilious . . stringent
 - (C) acrimonious . . scrupulous
 - (D) meticulous . . slovenly
 - (E) ingenuous . . canonical



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

Questions 9-12 are based on the following passages.

Passage 1

Morning people, cheerfully referred to as early birds, set the attitudinal tone of the entire culture. They've decided that morning is the best time of the day, and that night owls (people who are not naturally bright eyed and bushy tailed at the very crack of dawn) are in some way lazy and unfocused. In my view, morning is not the best time of day, of course, but it isn't inherently better than any other time. Getting up early does not necessarily mean you're more productive or a better member of society. I tried living on my husband's schedule, and all I did was sleep through my most productive hours.

Passage 2

A physiological factor that may underlie our early bird and night owl behaviors is the circadian rhythm of body temperature. Both early birds and night owls experience a body temperature high and low every 24 hours. However, early birds achieve their peak temperature earlier in the day than night owls do. Given that we are active and alert when our body temperature is highest, one can understand why early birds are more alert and active early in the day, while night owls do not become entirely alert and active until later.

9. The parenthetical statement in lines 4-5 primarily serves to
 - (A) offer an observation
 - (B) suggest an alternative
 - (C) underscore a preference
 - (D) dismiss a concern
 - (E) define a term
10. How would the author of Passage 1 most likely react to the statement in lines 18-22, Passage 2 ("Given . . . later")?
 - (A) By feeling embarrassed, because the statement proves that she misinterpreted the facts
 - (B) By feeling vindicated, because the statement gives a scientific rationale for her point of view
 - (C) With optimism, because the statement offers a practical approach for changing her situation
 - (D) With frustration, because the data provided in the statement is inconclusive
 - (E) With uncertainty, because the statement contradicts the findings that she cites
11. Compared with the tone of Passage 2, the tone of Passage 1 is more
 - (A) defensive
 - (B) incredulous
 - (C) pensive
 - (D) jealous
 - (E) apologetic
12. Which statement best describes the relationship between the two passages?
 - (A) Passage 2 questions the accuracy of the facts presented in Passage 1.
 - (B) Passage 2 highlights the consequences of the phenomenon discussed in Passage 1.
 - (C) Passage 2 offers a potential solution for the problem identified in Passage 1.
 - (D) Passage 2 supplies a possible explanation for the behaviors discussed in Passage 1.
 - (E) Passage 2 voices agreement with the sentiment expressed in Passage 1.



Questions 13–25 are based on the following passage.

The following passage is from an essay examining the work of Dorothea Lange and other photographers employed by the Farm Security Administration (FSA), a government agency created to assist farmers during the Great Depression.

The photographers' assignment was to document the need for FSA programs, and Lange enthusiastically accepted the task. Such was her admiration for FDR and the New Deal¹ that she had no problem with serving up to the government what it ordered. At first, she dutifully "documented" migratory workers' camps, alternatively mired in mud or layered with dust; she pictured filthy water supplies and children covered with flies. But she soon drew upon her area of greatest mastery: always a portrait photographer, Lange turned toward the poor the same eye she had previously directed toward the rich. She made portraits of farmworkers within the same visual conventions she used in her studio, but the change in subject matter made them, at that time, unconventional, startling, gripping. Other FSA photographers were influenced by her, and a new style was being pioneered by the most unexpected of style makers, the federal government. And she was comfortable with her job description: to bring rural Dépression conditions to public attention and to do it in a manner that showed its victims as citizens, worthy of help and able to make use of it.

That job description raises the question, what is documentary photography? The term was new in the 1930s, and even the concept was familiar only within a small network of social reformers. European modern photographers began to speak of photographic "documents" as early as 1910, defining their work against the romantic, fuzzy photography called "pictorialist" that then prevailed. In the United States, Jacob Riis and Lewis Hine pioneered a photography that showed the wretched conditions of poor and working-class people in order to gather support for progressive social reform. American documentary was never neutral or apolitical, but an exhortation to action. At the same time, some photographers promoted a mystique that documentary photography was merely an "objective" recording of "reality." Walker Evans, Lange's colleague at the FSA, considered it "a stark record . . . [of] actuality untouched. . ." A *document* was supposed to be disinterested, as if it were possible for human beings to make images without point of view. Lange frequently contradicted herself regarding the documentary. Carping with her friend photographer Minor White, she wrote, "I object to this misconception and am surprised that you too repeat it. Documentary photographers are not social workers. Social reform is not the object of documentary photography. It may be a consequence because it can reveal

situations and can be concerned with *change*. Its power lies in the evidence it presents not in the photographer's conclusion for he is a witness to the situation not a

50 propagandist or an advertiser. A documentary photography has a responsibility of keeping the record and to keep it superbly well." But Lange also acknowledged being a propagandist: "Everything is propaganda for what you believe in, actually, isn't it? . . . I don't see that it could be otherwise. The harder and the more deeply you believe in anything, the more in a sense you're a propagandist. Conviction, propaganda, faith. I don't know, I never have been able to come to the conclusion that that's a bad word."

55 The tension in documentary photography between

60 telling the "objective" truth and arguing a point of view continues when you consider photographic technique. Professional photographers don't "take" pictures but make them. Every camera adjustment—speed, aperture, filter, frame, depth of focus, angle of vision, etc.—shapes the 65 outcome, as do the myriad manipulations made in the darkroom in developing and printing.

65 The only resolution of this tension must be approximate. Some forms of manipulation, as when Soviet publishers removed Trotsky from earlier pictures in which he had

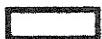
70 stood next to Lenin, produce direct lies.² But we should never treat a photograph as something free of human perspective—nor would that be desirable. Lange's photographic work was saturated with conviction.

¹ The New Deal was a set of policies and programs introduced by President Franklin Delano Roosevelt (FDR) to promote economic recovery and social reform during the 1930s.

² Leon Trotsky aided Vladimir Lenin during the Russian Revolution but fell out of favor with the subsequent government.

13. The primary purpose of the passage is to

- (A) explain the motivations that led artists to create politically charged work
- (B) explore the significance of a technical development in photography
- (C) challenge the appropriateness of government involvement in the arts
- (D) reflect on a photographic genre by discussing one of its practitioners
- (E) defend a photographic practice by locating it within a historical context



14. Lines 1-5 (“The photographers’ . . . ordered”) indicate that Lange’s decision to work for the FSA was

- (A) emotionally difficult
- (B) politically motivated
- (C) socially unacceptable
- (D) financially risky
- (E) intellectually dishonest

15. As described in lines 8-11 (“But she . . . rich”), Lange’s shift to portrait photography in the camps is most analogous to

- (A) a therapist who goes back to school to learn about new developments in her field
- (B) a musician who plays two instruments equally well
- (C) a movie reviewer who employs her signature style when she begins reviewing novels
- (D) a celebrated athlete who retires, then returns to the sport
- (E) a popular horror film director who starts to illustrate children’s books

16. In line 22, “raises” most nearly means

- (A) elevates
- (B) cultivates
- (C) wagers
- (D) promotes
- (E) provokes

17. The passage suggests that Jacob Riis and Lewis Hine (line 29) would most likely view the “job description” (lines 18-19) with

- (A) approval
- (B) surprise
- (C) regret
- (D) skepticism
- (E) annoyance

18. The author of the passage would most likely describe the position advanced by Walker Evans (line 36) as

- (A) intuitive
- (B) unprecedented
- (C) inspiring
- (D) insignificant
- (E) untenable

19. The author of the passage views the “record” mentioned in line 37 as inherently

- (A) reactionary
- (B) unimpeachable
- (C) reproducible
- (D) subjective
- (E) formulaic

20. In line 45, “object” most nearly means

- (A) entity
- (B) purpose
- (C) recipient
- (D) essence
- (E) obstacle

21. In lines 53-56 (“Everything . . . propagandist”), Lange suggests that people with deeply held beliefs

- (A) are rarely aware of them
- (B) must work to control them
- (C) will inevitably express them
- (D) cannot articulate reasons for them
- (E) react aggressively to challenges to them

22. The quotation marks in line 60 are used to

- (A) report direct speech
- (B) highlight technical terminology
- (C) indicate antiquated usage
- (D) assert authority
- (E) express skepticism

23. The primary function of the list in lines 63-64 is to provide

- (A) evidence of unacceptable modifications made to photographs
- (B) instances of photographic techniques used by employees of the FSA
- (C) suggestions offered to professional photographers based on Lange’s approach
- (D) examples of the things that can influence the ultimate photographic image
- (E) references to photographic methods that are essential to interpreting Lange’s images



24. The author's attitude toward "Some forms of manipulation" (line 68) can best be described as

- (A) disapproval
- (B) forbearance
- (C) ambivalence
- (D) sympathy
- (E) appreciation

25. Lines 70-73 ("But we . . . conviction") imply that interpretations of Lange's photographs should

- (A) take her beliefs into account
- (B) regard her politics as suspect
- (C) analyze her works' historical context
- (D) identify her artistic precursors
- (E) evaluate her technical skills



SECTION 6

Time — 25 minutes

35 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.

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. Famous for entering the University of Chicago when he was only thirteen, mathematician J. Ernest Wilkins, Jr., having earned his PhD by the age of nineteen.

- (A) having earned his PhD by the age of nineteen
- (B) earned his PhD by the age of nineteen
- (C) earning his PhD by the age of nineteen
- (D) by the age of nineteen earning his PhD
- (E) he earned his PhD by the age of nineteen

2. Maria Tallchief and her sister Marjorie, who began dancing when they were both a child, performed with some of the greatest ballet companies in the United States and Europe.

- (A) a child, performed
- (B) a child, and performed
- (C) a child, had performed
- (D) children, and performing
- (E) children, performed

3. Established by the United States Congress in 1872, Yellowstone National Park, which possesses the world's greatest concentration of geothermal features, were designated a World Heritage site in 1978.

- (A) were designated
- (B) was designated
- (C) they designated it
- (D) designating it to be
- (E) have been designated

4. A powerful advocate of gender equality and free health services, Luisa Diogo was appointed prime minister of Mozambique in 2004.

- (A) Diogo was appointed
- (B) Diogo she was appointed
- (C) Diogo, who was appointed
- (D) Diogo, by being appointed
- (E) Diogo, appointed



5. After working for a government intelligence agency during World War II, Julia Child became a highly accomplished cook, in which her specialty was French cuisine.

- (A) cook, in which her specialty was
- (B) cook, her specialty was
- (C) cook, specializing in
- (D) cook, where she specialized at
- (E) cook who specializes on

6. Because they were designed in a neo-Gothic style to evoke medieval architecture, London's Houses of Parliament may appear much older than they actually are.

- (A) London's Houses of Parliament may appear
- (B) London's Houses of Parliament, which may have appeared
- (C) it is why London's Houses of Parliament may appear
- (D) therefore London's Houses of Parliament may appear
- (E) for this reason London's Houses of Parliament may have appeared

7. Eighteenth-century botanist Carl Linnaeus showed that bananas could be grown in Europe if farmers will simulate Asia's monsoon climate by letting the soil dry out and then flooding it with water.

- (A) will simulate
- (B) had simulated
- (C) simulated
- (D) who simulate
- (E) simulating

8. Since moving to Belgium in 2008, French and Flemish are the only languages Teresa has spoken.

- (A) French and Flemish are the only languages Teresa has spoken
- (B) French and Flemish have been the only languages Teresa speaks
- (C) the only languages Teresa speaks are French and Flemish
- (D) Teresa has spoken only French and Flemish
- (E) Teresa spoke only French and Flemish

9. One of the best-loved Mexican comic actors of the twentieth century was Mario Moreno Reyes, who performed under the stage name Cantinflas, he starred in several English-language films.

- (A) who performed under the stage name Cantinflas, he starred
- (B) who performed under the stage name Cantinflas and starring
- (C) who, performing under the stage name Cantinflas, starred
- (D) he performed under the stage name Cantinflas and starred
- (E) he performed under the stage name Cantinflas, starring

10. In 1529 Thomas More agreed to become Lord Chancellor of England not only because he wanted political power, but he also thought he could use the office to protect the Catholic Church.

- (A) power, but he also thought
- (B) power, he also thought
- (C) power but also thinking
- (D) power but also because of thinking
- (E) power but also because he thought

11. The poems in Sylvia Plath's *The Colossus* seem somewhat staid when compared with the intensity of the poems in her later collection entitled *Ariel*.

- (A) staid when compared with the intensity of the poems
- (B) staid when compared with the intense poems
- (C) staid, comparing the intense poems
- (D) staid, comparing them with the intensity of the poems
- (E) staid, compared with the intensity of the poems



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. After a long career performing with the rock band
 A B

Queen, guitarist Brian May resumed his studies in

astrophysics, completing the doctoral dissertation
 C

that he has begun some 30 years earlier. No error
 D E

13. Scientists are able to learn much about past climates
 A B

by analyzing the hydrogen and oxygen in cores drilled
 C

from layers of snow and ice that there has accumulated
 D

over time. No error
 E

14. When being interviewed for a job, you should
 A

emphasize what you can do for the employer
 B

rather than what can the employer do for you.
 C D

No error
 E

15. Of the seven wonders of the ancient world, only
 A

the 481-foot-tall Great Pyramid of Giza, which

when completed was the world's tallest structure,
 B

remain standing. No error
 C D E

16. In 1808 representatives of a Liverpool museum
 A

approached William Swainson and requested that
 B

he published a pamphlet on collecting and preserving
 C D

zoological specimens. No error
 E

17. While the legend of John Henry emphasizes
 A

the struggle of workers to adapt to mechanization,

it also teaches us the importance of respecting
 B

all challenges that come your way. No error
 C D E



18. The tour guide warned us to lower our head
A

when entering the old castle, since the
B C

old doorway was very low. No error
D E

19. Thomas Pynchon reportedly agreed to allow his
A
 novel *Gravity's Rainbow* to be adapted as an opera
B

on the condition that the music be written for a single
C D
 instrument: the banjo. No error
E

20. Had I known this restaurant would be so busy, I
A B
might of called ahead to make reservations or chosen
C D
 a different place to have dinner. No error
E

21. After gaining renown as a skillfully and dedicated
A B
 nurse during the Crimean War, Florence Nightingale
Founded a nursing school and authored influential
C
 books advocating hospital reform. No error
D E

22. Wanting to assign neither too much nor too
A B

little power to the nation's leader, the framers
C

of the United States Constitution debated with
D

how long a president should remain in office.

No error
E

23. Few substances have had as great an impact on the
A B

modern construction industry like Geobond, a
C

fireproof building material invented by sculptor
D

Patricia Billings. No error
E

24. Wendy Law-Yone's novels, which explore the
A

displacement and upheaval experienced by people
B

whose countries have been colonized, draw on
C D

the author's own life in Southeast Asia. No error
E

25. Many women in ancient Rome took great pride in
A B

their elaborate hairstyles, maintaining it with hairpins,
C

curling irons, and hair dye. No error
D E



26. Ants communicate by producing chemical
A

substances called pheromones, each of which
B

convey a particular kind of information to the
C D

rest of the colony. No error
E

27. Although it can be painful, most insect stings
A

cause no serious harm, except to those few people
B C

who suffer allergic reactions. No error
D E

28. That a major art magazine would devote an entire
A B

issue to Hassan's sculptures is evidence of the
C

considerable interest that his work has generated.
D

No error
E

29. In Elizabethan society, both men and women were
A

prohibited to wear clothing that was considered
B C

too extravagant for their social ranks. 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) Imagine that you are traveling through the United States and that you have to reset your watch in every town you visit. (2) That is exactly what they did in the late nineteenth century. (3) Until 1883, there were no uniform time standards in the United States. (4) Each city or town set its own time. (5) When it was midnight in New York City, it was 11:47 in Washington, D.C., and 11:55 in Philadelphia. (6) The conflicting time standards created mass confusion for train passengers. (7) Also, they made it virtually impossible for railroad employees to coordinate schedules.

(8) To address these problems, in 1869 educator Charles F. Dowd formulated the idea of standardizing time zones.

(9) He proposed establishing four time zones across the United States, very much like the zones we use today.

(10) Within each time zone, all localities keep the same time. (11) Initially, Dowd's idea met with surprisingly heated objections.

(12) People thought it arrogant to tinker with something as elemental as time. (13) Others thought the notion of a uniform time system would threaten local autonomy.

(14) November 18, 1883, was set for the plan's implementation. (15) As noon approached on that day, people everywhere began gathering by town halls and courthouses to watch the clocks change. (16) People within each of the four time zones synchronized their timepieces. (17) In one moment, the many different time standards that had caused so much confusion were reduced to four simple standards. (18) Dowd's ingenuity had changed the concept of time across an entire continent. (19) Benjamin Franklin suggested something like daylight saving time way back in 1784 when he was the ambassador to France.



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

That is exactly what they did in the late nineteenth century.

- (A) (as it is now)
- (B) what towns did
- (C) what travelers had to do
- (D) how they did it
- (E) how you traveled

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

The conflicting time standards created mass confusion for train passengers. Also, they made it virtually impossible for railroad employees to coordinate schedules.

- (A) Apart from creating mass confusion for train passengers, the conflicting time standards made it
- (B) Although the conflicting time standards created mass confusion for train passengers, they made it
- (C) However, these conflicting time standards created so much mass confusion for train passengers that it became
- (D) There were also conflicting time standards, which created mass confusion for train passengers and made it
- (E) Instead, the conflicting time standards created mass confusion for train passengers, making it

32. In context, which is the best version of the underlined portion of sentence 10 (reproduced below) ?

Within each time zone, all localities keep the same time.

- (A) (as it is now)
- (B) would keep
- (C) have kept
- (D) were keeping
- (E) kept

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

People thought it arrogant to tinker with something as elemental as time.

- (A) (As it is now)
- (B) Some people
- (C) Such people
- (D) The people
- (E) These people

34. In context, which of the following is the best way to deal with sentence 19 (reproduced below) ?

Benjamin Franklin suggested something like daylight saving time way back in 1784 when he was the ambassador to France.

- (A) Leave it as it is.
- (B) Insert “Similarly,” at the beginning.
- (C) Change “like” to “similar to”.
- (D) Replace “way back in 1784” with “nearly 100 years earlier”.
- (E) Delete it from the passage.

35. Where in the passage would the following sentence best be placed?

Despite these objections, an association of railroad officials adopted a version of Dowd’s plan to standardize timekeeping.

- (A) Immediately before sentence 3
- (B) Immediately before sentence 9
- (C) Immediately before sentence 12
- (D) Immediately before sentence 14
- (E) Immediately before sentence 17

SECTION 7
Time — 25 minutes
20 Questions

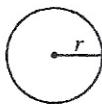
Turn to Section 7 (page 6) of your answer sheet to answer the questions in this section.

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

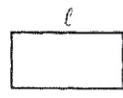
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is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

Reference Information

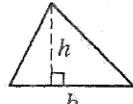


$$A = \pi r^2$$

$$C = 2\pi r$$



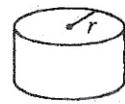
$$A = lw$$



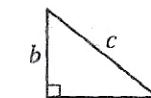
$$A = \frac{1}{2}bh$$



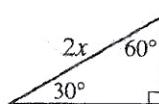
$$V = lwh$$



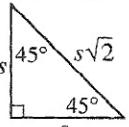
$$V = \pi r^2 h$$



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



$$30^\circ \quad 60^\circ \quad 90^\circ$$



$$45^\circ \quad 45^\circ \quad 90^\circ$$

Special Right Triangles

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

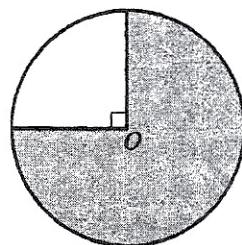
The sum of the measures in degrees of the angles of a triangle is 180.

- When the decimal 0.00023 is written as 2.3×10^x , what is the value of x ?
 - 1
 - 2
 - 3
 - 4
 - 5
- A jar contains 200 coins, of which 50 are nickels. If Michele removes 30 coins, of which 12 are nickels, how many coins remain in the jar that are not nickels?
 - 92
 - 108
 - 132
 - 138
 - 168

3. For all numbers a and b , let $a \square b$ be defined by

$a \square b = b^2 - 2ab$. What is the value of $3 \square 5$?

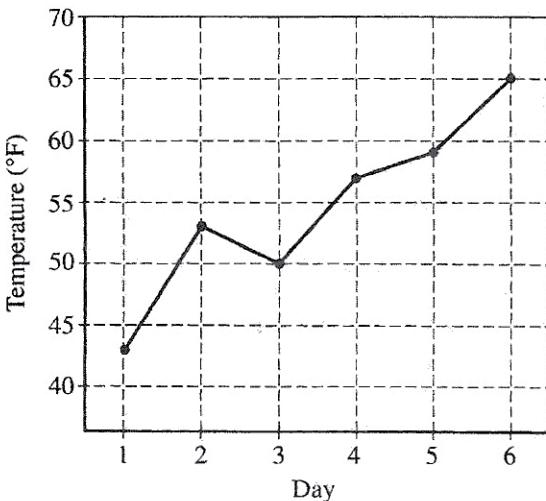
- (A) -30
- (B) -24
- (C) -21
- (D) -20
- (E) -5



5. In the circle above with center O , the area of the shaded region is 90. What is the area of the entire circular region?

- (A) 30
- (B) 60
- (C) 100
- (D) 120
- (E) 145

DAILY LOW TEMPERATURES IN CITY Z



4. The line graph above shows the daily low temperatures in City Z for six consecutive days. The increase in the daily low temperature was greatest from which day to the next?

- (A) Day 1 to day 2
- (B) Day 2 to day 3
- (C) Day 3 to day 4
- (D) Day 4 to day 5
- (E) Day 5 to day 6

6. The cost of grapes is directly proportional to the number of pounds purchased. If 2 pounds of grapes cost \$2.48, how many pounds of grapes can be purchased for \$12.40?

- (A) 5
- (B) 10
- (C) 12
- (D) 15
- (E) 20

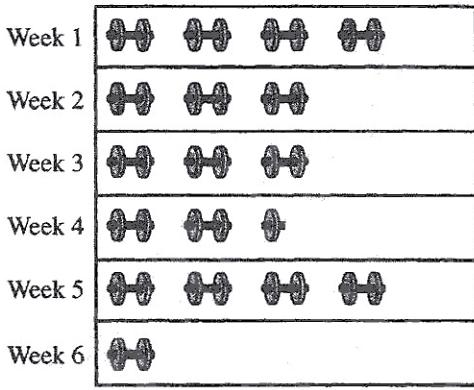
7. In right triangle XYZ , the hypotenuse has length 17 and one leg has length 8. What is the length of the other leg?

(A) 15
(B) 14
(C) 13
(D) 12
(E) 11

9. In the xy -plane, the endpoints of a diameter of a circle have coordinates $(-6, 4)$ and $(0, 4)$. What are the coordinates of the center of the circle?

(A) $(-6, 0)$
(B) $(-6, 2)$
(C) $(-3, 0)$
(D) $(-3, 2)$
(E) $(-3, 4)$

HOURS OF EXERCISE EACH WEEK

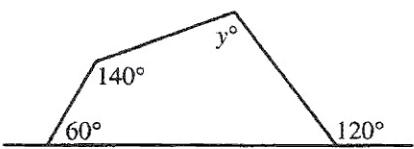


= 2 hours = 1 hour

8. The pictogram above shows the number of hours Xavier exercised each week for six weeks. The total number of hours Xavier exercised in which of the following two-week periods accounts for $\frac{2}{5}$ of the total number of hours he exercised in the six weeks?
- Xavier exercised each week for six weeks. The total number of hours Xavier exercised in which of the following two-week periods accounts for $\frac{2}{5}$ of the total number of hours he exercised in the six weeks?
- (A) Weeks 1 and 2
(B) Weeks 2 and 3
(C) Weeks 3 and 4
(D) Weeks 4 and 5
(E) Weeks 5 and 6

10. The function g is defined by $g(n) = n - n^2$ for all positive integers n . If $x = g(5)$ and $y = g(7)$, what is the value of $x - y$?

(A) -62
(B) -24
(C) -6
(D) 12
(E) 22



11. In the figure above, what is the value of y ?

(A) 90
(B) 100
(C) 120
(D) 140
(E) 160

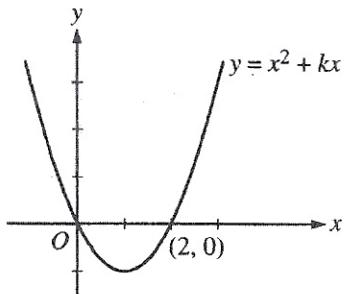
The sum of any two prime numbers
is an even integer.

12. Which of the following pairs of integers can be used as a counterexample to show that the statement above is false?

(A) 1 and 12
(B) 2 and 13
(C) 2 and 21
(D) 3 and 24
(E) 5 and 29

13. If $a^3 \cdot b^3 = (ab)^x$ for $a > 1$ and $b > 1$, what is the value of x ?

(A) 3
(B) 4
(C) 6
(D) 8
(E) 9



14. The graph of $y = x^2 + kx$, where k is a constant, is shown above. What is the value of k ?

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

15. If $\frac{a+1}{b+1} = \frac{1}{3}$ and $\frac{a}{b+1} = \frac{1}{4}$, what is the value of $\frac{a}{b}$?

(A) $\frac{1}{5}$

(B) $\frac{1}{4}$

(C) $\frac{3}{11}$

(D) $\frac{1}{3}$

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

16. If x is a positive integer and the units digit (ones digit) of x is the same as the units digit of x^2 , then the units digit of x could be any one of the following EXCEPT
- (A) 0
(B) 1
(C) 5
(D) 6
(E) 9

17. Mark has x ties, only one of which is red. Mark has y shirts, only one of which is green. Any tie can be worn with any shirt, except that the red tie and the green shirt cannot be worn together. In terms of x and y , how many different tie and shirt combinations can Mark wear?

(A) $x + y - 1$

(B) $xy - 1$

(C) $(x - 1)(y - 1)$

(D) $(x - 1)y$

(E) $x(y - 1)$

18. The median of 9 different positive integers is 10. What is the smallest possible value of the sum of the other 8 integers?

(A) 50

(B) 54

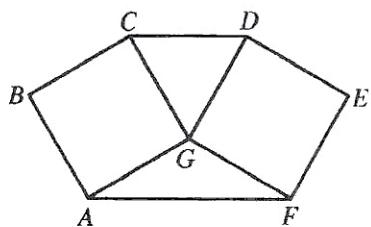
(C) 60

(D) 66

(E) 80

19. In a certain truck, there are 6 times as many crates as there are barrels. If the weight of each barrel is 9 times the weight of each crate and the total weight of the barrels is 1,200 kilograms, what is the total combined weight, in kilograms, of all the crates and barrels in the truck?

(A) 1,500
(B) 1,800
(C) 2,000
(D) 2,400
(E) 3,000



20. In the figure above, $ABCG$ and $DEFG$ are squares and $\triangle CDG$ is equilateral. If the lengths of the sides of the squares and the equilateral triangle are each 6, what is the length of \overline{AF} ?

(A) 12
(B) $6\sqrt{2}$
(C) $12\sqrt{2}$
(D) $6\sqrt{3}$
(E) $12\sqrt{3}$



SECTION 8

Time — 20 minutes

19 Questions

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

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

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

Example:

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

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

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

1. Nineteenth-century cowboy Nat Love claimed that his autobiography recorded events plainly and accurately, but like many other cowboy -----, Love's book includes some ----- details.

- (A) novels . . factual
- (B) songs . . invented
- (C) plays . . historical
- (D) tales . . exaggerated
- (E) memoirs . . straightforward

2. The argument that certain agricultural pesticides are killing honeybees is -----, its flaws being obvious under close examination.

- (A) misunderstood (B) unique (C) emphatic
- (D) influential (E) flimsy

3. Even in the face of disaster, Arthur remained calm and even-tempered: his ----- was admired by all.
- (A) tenacity (B) negligence (C) disgruntlement
 - (D) ambivalence (E) equanimity
4. The book's treatment of Native American dance is fittingly -----, considering the complex and ----- nature of the dances themselves.
- (A) dexterous . . regimented
 - (B) esoteric . . pragmatic
 - (C) multifaceted . . manifold
 - (D) charitable . . altruistic
 - (E) sedate . . supple
5. Andrew's response to the allegations was both ----- and -----, little more than vague verbiage intended to soothe, not clarify.
- (A) pungent . . innocuous
 - (B) acerbic . . disingenuous
 - (C) inchoate . . unequivocal
 - (D) lugubrious . . insolent
 - (E) nebulous . . palliative
6. Studies suggest that deep relaxation, if practiced regularly, can strengthen the immune system and produce a host of other equally ----- physiological changes.
- (A) salutary (B) transient (C) gratuitous
 - (D) deleterious (E) extemporaneous



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 7–19 are based on the following passage.

This passage has been adapted from a 2004 book that examines the functions of the brain.

One fall morning when I was six, I hurried through an orchard with three schoolmates. We were late for first grade, and there were going to be silhouette drawings none of us wanted to miss. I remember the shiny plaid dress that Susan Green wore, her matching hair ribbon, and a petticoat that rustled as she moved. Ripening apples spiced the air with scent. High in the branches, dark plums huddled like bats. Susan dragged my arm because I'd slowed to stare at the plums, her eyes following mine, and when she demanded to know what I was looking at, I told her. Suddenly she let go of my arm and all three girls recoiled. The possibility of bats didn't frighten them. I frightened them. I looked at plums and saw bats. The alarm on their faces became an indelible memory, one colored by shame, and fused with a nearly levitating sense of wonder.

That vignette holds the kernel of many truths about memory. To remember, the brain does four things superbly: recognizes patterns, interprets them, records their source, and retrieves them. In the orchard, I saw apples, smelled their corklike sweetness, heard the warble of children, held unforeseen feelings. At the time, brain receptors combined all the stimuli fast, busily interpreting what an orchard meant, the unique scent of apples, the similar architecture of plums and huddled bats, and noting the whereabouts as a walk to school, while emotions piled up.

Now, half a lifetime later, only shards of that orchard memory float into my ken—light swerving off a satin skirt, clouds caged in the branches of a tree, the hug of an elastic waistband on corduroy pants I wore under my dress, the scratchy whispers of Susan's starched petticoat. But I can forcibly capture others. Not the other girls' names, nor the cadence of their voices. Lots of details have faded through the normal vanishing and crumbling known as "graceful degradation." Like an old photograph, my recall of that day has lost some of its color and clarity with passing years.

Memories nest in elaborate thickets of association. If I concentrate hard and insinuate myself back into that moment, into that body, peering out behind curly bangs, I can feel the swing of my ponytail, and my body flushed with wonder the way a sugar cube absorbs water. My memory caroms off another association. The sort of sugar cubes a stable-hand placed onto my trembling palm one summer, and a horse gummed off gently with velvety lips

that tickled. If I'd been bitten by that horse, the event

45 would have burrowed deep into my memory and advised my reflexes as well as my conscious mind. Indeed, pain and memory are closely linked. Pain is like a bad memory that won't fade, which makes good survival sense. It's not enough to identify danger; an organism also has to 50 remember its features. Under general anesthesia, one may not be aware of pain, but the nervous system remembers it well. Some researchers have been administering "preemptive analgesia," pain medicine beforehand, not just during or after an operation. Hoping to keep chronic pain 55 memories from forming in the first place, they block the nerve pathways leading from the injury site to the spinal cord. Thus far, it's working well in some operations.

Back to the orchard. The long string of facts about apples, horses, orchards, and such involves semantic 60 memory. Remembering that specific morning and those girls—on a day when the plums caught my eye, the clouds seemed caged by the branches, and I felt both shame and wonder—involves episodic memory. Combine the two and you get declarative memory, a declaration of events easy to 65 slap a word on, the explicit truths. Somehow, all these ways of remembering combine and we feel singular. Add enough pieces to the mosaic and an individual finds shape. We take for granted these dazzling skills, and the most treasured gift of all, being able to time-travel and explore the lost 70 kingdoms of yesterday. We may be the only animals with this rich form of episodic memory, in which we can revive our past, play it back like a film we stop to look at, enter imaginatively, and revise as we grow older.

7. The passage is primarily concerned with

- (A) revisiting a childhood world of fantasy
- (B) exploring multiple facets of human memory
- (C) describing the link between pain and memory
- (D) reconstructing a life-changing episode
- (E) presenting research on brain functioning

8. As a child, the author reacted to the event described in the first paragraph (lines 1–15) with

- (A) fascination and fear
- (B) humiliation and despair
- (C) embarrassment and awe
- (D) hostility and defensiveness
- (E) relief and acceptance



9. In lines 2-4 (“We were . . . miss”), the author characterizes the children as
- (A) somber
(B) unruly
(C) eager
(D) defiant
(E) diligent
10. In line 8, “dragged” most nearly means
- (A) delayed
(B) pulled
(C) hung
(D) swept
(E) prolonged
11. The sentence in lines 16-17 (“That vignette . . . memory”) is best described as
- (A) a refutation
(B) a qualification
(C) a claim
(D) an understatement
(E) an interpretation
12. In lines 21-25 (“At the . . . up”), the author provides
- (A) a hypothesis regarding the importance of childhood memories
(B) a description of the actual truth behind a misinterpreted event
(C) a detailed critique of a prevalent scientific argument
(D) an elaboration of the process underlying memory
(E) a suggestion regarding a productive avenue for future research
13. The author uses the descriptions in lines 27-30 (“light . . . petticoat”) in making the point that her memories of the past are
- (A) illuminating
(B) symbolic
(C) amusing
(D) inconsistent
(E) incomplete
14. In line 33, “normal” most nearly means
- (A) natural
(B) methodical
(C) widespread
(D) current
(E) unvarying
15. The author refers to a “photograph” (line 34) to make a point about
- (A) cherished memories
(B) fading recollections
(C) technological advances
(D) historical achievement
(E) artistic creativity
16. The phrase in line 58 (“Back to the orchard”) serves primarily to
- (A) dismiss a potential objection to an argument
(B) announce the results of a prior investigation
(C) call for a reassessment of an outdated idea
(D) introduce a comic digression from a complex analysis
(E) return the discussion to a previous topic
17. In lines 60-63 (“Remembering . . . memory”), the author discusses specific details in order to
- (A) illustrate a particular scientific concept
(B) help recover a childhood memory
(C) celebrate the wonder of youthful experience
(D) offer an alternative approach to a problem
(E) defend an initial reaction to an event



18. In using the word “singular” (line 66), the author emphasizes the way that

- (A) pleasure and pain are intermingled when we recall the past
- (B) disparate elements are perceived as a unity
- (C) each of our memories is unique and unconnected with others
- (D) the impact of the past on the present remains mysterious
- (E) memories transcend our ability to express them in words

19. In lines 71-73 (“we can . . . older”), the author makes the point that remembering, as a process, is

- (A) widespread and definitive
- (B) pleasant and soothing
- (C) difficult and exhausting
- (D) automatic and repetitive
- (E) creative and dynamic



SECTION 9

Time — 20 minutes

16 Questions

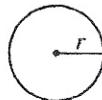
Turn to Section 9 (page 7) of your answer sheet to answer the questions in this section.

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

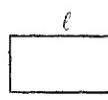
1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is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

Reference Information

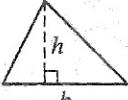


$$A = \pi r^2$$

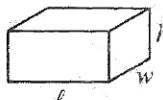
$$C = 2\pi r$$



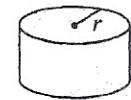
$$A = \ell w$$



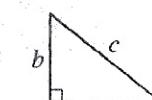
$$A = \frac{1}{2}bh$$



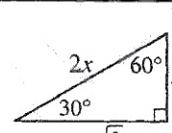
$$V = \ell wh$$



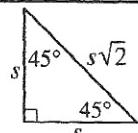
$$V = \pi r^2 h$$



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



Special Right Triangles



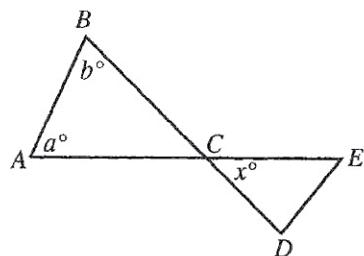
The number of degrees of arc in a circle is 360.

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

$$4 < 5x < 15$$

1. Which of the following is a value of x that satisfies the conditions above?

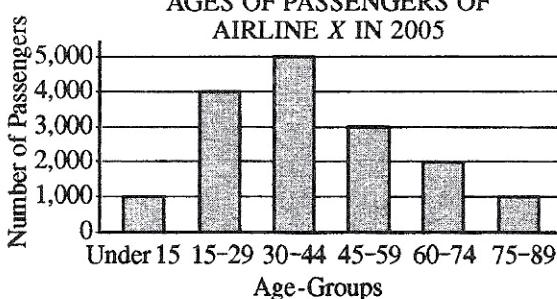
- (A) 0
 (B) 2
 (C) 3
 (D) 4
 (E) 5



Note: Figure not drawn to scale.

2. In the figure above, if $x = 45$, what is the value of $a + b$?

- (A) 35
 (B) 45
 (C) 90
 (D) 135
 (E) 150



3. According to the graph above, how many passengers of Airline X in 2005 were from 15 to 59 years old, inclusive?

(A) 3,000
(B) 4,000
(C) 5,000
(D) 9,000
(E) 12,000

4. Points M , N , and P lie on a line in that order.

The length of segment \overline{MN} is 4, and the length of segment \overline{NP} is twice the length of segment \overline{MN} .

What is the length of segment \overline{MP} ?

(A) 2
(B) 6
(C) 8
(D) 10
(E) 12

32,785

5. If the number above were to be multiplied by 10, what would be the digit in the tens place of the result?

(A) 0
(B) 2
(C) 5
(D) 7
(E) 8



6. The first term of a sequence is 3, and each term after the first term is obtained by subtracting 4 from the previous term. What is the sum of the second and eighth terms of the sequence?

(A) -26
(B) -25
(C) -22
(D) -1
(E) 24

7. Which of the following expressions is equivalent to $2(x - 3) - (x - 2)$?

(A) $2(x - 3 - x - 2)$
(B) $2x - 3 - x - 2$
(C) $2x - 3 - x + 2$
(D) $2x - 6 - x - 2$
(E) $2x - 6 - x + 2$

List A	List B
12	4
5	13
3	7
11	10
6	8
1	6

8. In the table above, how much greater is the range of list A than the range of list B?

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

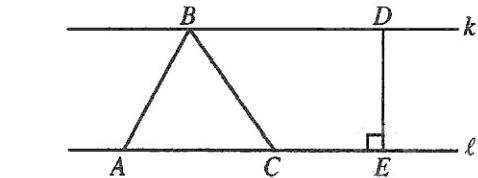


9. A rectangular block has dimensions 4 inches by 4 inches by 1 inch. What is the maximum number of blocks of this size that can fit in a rectangular box that has inside dimensions 8 inches by 8 inches by 3 inches?

(A) 2
(B) 3
(C) 8
(D) 10
(E) 12

10. The positive integer n is squared, and the result is cubed. Which of the following must represent the final result?

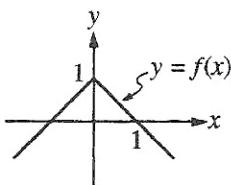
(A) $\sqrt[3]{n^2}$
(B) $\sqrt{n^3}$
(C) n^5
(D) n^6
(E) n^8



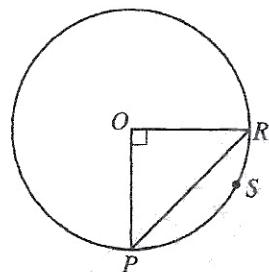
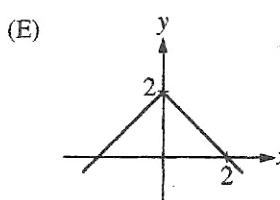
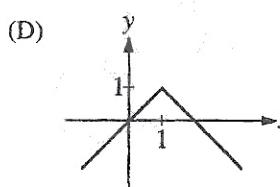
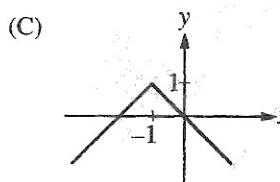
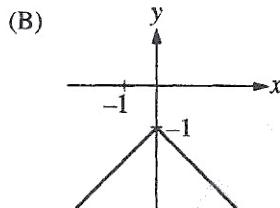
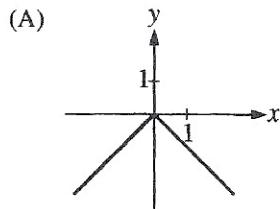
Note: Figure not drawn to scale.

11. In the figure above, $k \parallel l$, the area of $\triangle ABC$ is 30 square inches, and the length of segment \overline{AC} is 12 inches. What is the length, in inches, of segment \overline{DE} ?

(A) 2.5
(B) 4
(C) 5
(D) 8.5
(E) 18



12. The graph of the function f is shown in the xy -plane above. Which of the following is the graph of $y = f(x) - 1$?



13. In the figure above, the circle has center O and radius 4. What is the length of arc \widehat{PSR} ?

- (A) 2π
 (B) 4π
 (C) 8π
 (D) 12π
 (E) 16π

14. In a survey, managers were asked to list their concerns about their company. Of the managers surveyed, 60 percent listed “retaining qualified people” and 48 percent listed “keeping pace with competitors.” If 22 percent of the managers surveyed listed both of these concerns, what percent listed just one of the two concerns?

- (A) 14%
 (B) 26%
 (C) 38%
 (D) 64%
 (E) 86%



15. If $9t^2 - r^2 = 17$ for positive integers t and r , what is the value of $t + r$?

(A) 8
(B) 11
(C) 13
(D) 14
(E) 15

16. For an experiment, a liquid is kept in cold storage at a temperature of 20 degrees Fahrenheit ($^{\circ}\text{F}$). The liquid is removed from cold storage and is warmed at a constant rate of 3°F per hour. Which of the following represents the temperature of the liquid, in degrees Celsius ($^{\circ}\text{C}$), t hours after it has been removed from cold storage?

(Note: $^{\circ}\text{C} = \frac{5}{9}(^{\circ}\text{F} - 32)$.)

- (A) $\frac{5}{3}t - \frac{20}{3}$
(B) $\frac{5}{3}t - \frac{188}{9}$
(C) $\frac{5}{9}t + \frac{20}{3}$
(D) $\frac{27}{5}t + 68$
(E) $3t + 20$



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) ● (C) (D) (E)

1. Members who borrow books from the club's library
are urged to return it within a two-week period.

- (A) are urged to return it
- (B) are urged to return them
- (C) are urged that they return it
- (D) is urged that they be returned
- (E) is urged to return them

2. After receiving critical acclaim for his abstract paintings, Philip Guston surprised and alarmed the art world in 1970 with an exhibition of stark and cartoonlike figurative paintings.
- (A) receiving
 - (B) him receiving
 - (C) he receives
 - (D) he is receiving
 - (E) he has received
3. Scientists have been studying whether organically grown vegetables are more nutritious than growing them using chemical fertilizers and pesticides.
- (A) growing them using
 - (B) to grow them using
 - (C) those grown with
 - (D) using
 - (E) with
4. In *Thomas and Beulah*, a collection of connected poems, Rita Dove tells a story that is loosely based on the lives of her grandparents.
- (A) Rita Dove tells a story
 - (B) Rita Dove, who tells a story
 - (C) Rita Dove's story
 - (D) the story Rita Dove tells
 - (E) the story told by Rita Dove



5. Although in much of the world the wedding ring is worn on the left hand, but some cultural traditions require that they be worn on the right hand.
- (A) but some cultural traditions require that they be worn
(B) but some cultural traditions require wearing it
(C) but they are required by some cultural traditions to be worn
(D) some cultural traditions require that it be worn
(E) some cultural traditions require wearing them
6. M. F. K. Fisher, one of the finest American writers of the twentieth century, wrote extensively about food and cooking and in doing so, a new genre was created by her.
- (A) in doing so, a new genre was created by her
(B) a new genre was created by her in doing so
(C) in doing so created a new genre
(D) creating a new genre in doing so
(E) a new genre being created by her doing so
7. Feeding mainly on the leaves and bark of the eucalyptus, leaves from other trees are sometimes eaten by the koala.
- (A) leaves from other trees are sometimes eaten by the koala
(B) leaves from other trees are what the koala sometimes eats
(C) other trees' leaves are sometimes eaten by the koala
(D) the koala sometimes eats leaves from other trees
(E) but the koala sometimes eats leaves from other trees
8. In the mid-twentieth century, collaborators Elizabeth Lee Hazen and Rachel Fuller Brown developed an antifungal drug that is used not only to treat illnesses but also to restore artwork damaged by mold.
- (A) to restore artwork damaged by mold
(B) for restoring artwork if mold damages them
(C) restoring artwork that mold damages
(D) it restores artwork that mold damaged
(E) the restoration of artwork damaged by mold
9. In the Netherlands, a man found more than 100 ancient Celtic coins that were in a cornfield using a metal detector.
- (A) In the Netherlands, a man found more than 100 ancient Celtic coins that were in a cornfield using a metal detector.
(B) Using a metal detector, more than 100 ancient Celtic coins were found by a man in a cornfield in the Netherlands.
(C) A metal detector in the Netherlands was used to find more than 100 ancient Celtic coins in a cornfield by a man.
(D) A man in the Netherlands used a metal detector he found more than 100 ancient Celtic coins in a cornfield.
(E) A man using a metal detector found more than 100 ancient Celtic coins in a cornfield in the Netherlands.
10. More than 30 years since writing it, Carson McCullers' autobiography, *Illumination and Night Glare*, was finally published in 1999.
- (A) since writing it
(B) since it was written
(C) since she wrote it
(D) after writing it
(E) after it was written
11. Elephants drink by first drawing water into their trunks, then squirt it into their mouths.
- (A) trunks, then squirt it
(B) trunks, which they then squirt
(C) trunks and then squirting it
(D) trunks and then squirt it
(E) trunks and then to squirt it
12. Mughal architecture, which blends Indian, Islamic, and Persian styles, are exemplified in the Taj Mahal.
- (A) are exemplified in
(B) are exemplified by
(C) are being exemplified in
(D) is exemplified by
(E) it exemplifies



13. Because fifteenth-century explorers could for the first time accurately calculate latitude and thus determine a ship's position on the open sea, it allowed explorers to venture far beyond coastal waters.
- (A) it allowed explorers to venture
(B) it allowed them to venture
(C) it allowed exploration and venturing
(D) therefore they could venture
(E) they could venture
14. Startled by the canoe's approach, the ducks suddenly took flight, their wings flapped wildly as they struggled to lift themselves above the surface of the lake.
- (A) flight, their wings flapped
(B) flight, their wings flapping
(C) flight, they flapped their wings
(D) flight; flapping their wings
(E) flight; flapped their wings