

Scholastic Assessment Test: Reading, Writing and Language, Mathematics

Test Prep SAT-Test

Version Demo

Total Demo Questions: 92

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Topic Break Down

Topic	No. of Questions
Topic 1, Reading Test	394
Topic 2, Writing and Language Test	228
Topic 3, Math Test	304
Total	926

QUESTION NO: 1

This passage is adapted from John Bohannon, “Why You Shouldn’t Trust Internet Comments.” ©2013 by American Association for the Advancement of Science.

The “wisdom of crowds” has become a mantra of the Internet age. Need to choose a new vacuum cleaner? Check out the reviews on online merchant Amazon. But a new study suggests that such online scores don’t always reveal the best choice. A massive controlled experiment of Web users finds that such ratings are highly susceptible to irrational “herd behavior” – and that the herd can be manipulated.

Sometimes the crowd really is wiser than you. The classic examples are guessing the weight of a bull or the number of gumballs in a jar. Your guess is probably going to be far from the mark, whereas the average of many people’s choices is remarkably close to the true number.

But what happens when the goal is to judge something less tangible, such as the quality or worth of a product? According to one theory, the wisdom of the crowd still holds – measuring the aggregate of people’s opinions produces a stable, reliable value. Skeptics, however, argue that people’s opinions are easily swayed by those of others. So nudging a crowd early on by presenting contrary opinions – for example, exposing them to some very good or very bad attitudes – will steer the crowd in a different direction. To test which hypothesis is true, you would need to manipulate huge numbers of people, exposing them to false information and determining how it affects their opinions.

A team led by Sinan Aral, a network scientist at the Massachusetts Institute of Technology in Cambridge, did exactly that. Aral has been secretly working with a popular website that aggregates news stories. The website allows users to make comments about news stories and vote each other’s comments up or down. The vote tallies are visible as a number next to each comment, and the position of the comments is chronological. (Stories on the site get an average of about ten comments and about three votes per comment.) It’s a follow up to his experiment using people’s ratings of movies to measure how much individual people influence each other online (answer: a lot). This time, he wanted to know how much the crowd influences the individual, and whether it can be controlled from outside.

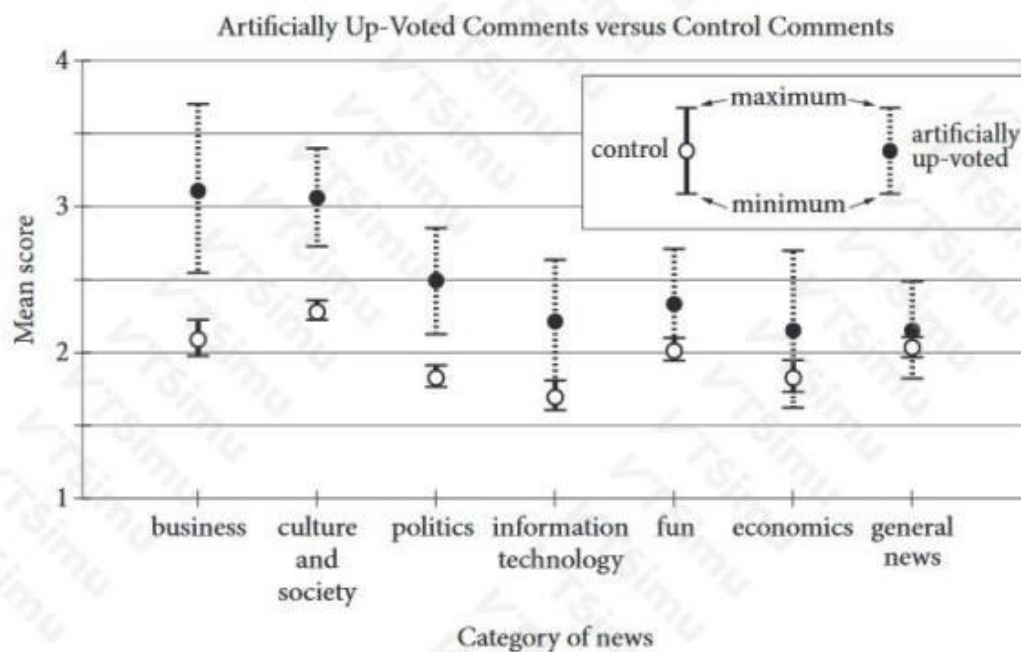
For five months, every comment submitted by a user randomly received an “up” vote (positive); a “down” vote (negative); or as a control, no vote at all. The team then observed how users rated those comments. The users generated more than 100,000 comments that were viewed more than 10 million times and rated more than 300,000 times by other users.

At least when it comes to comments on news sites, the crowd is more herdlike than wise. Comments that received fake positive votes from the researchers were 32% more likely to receive more positive votes compared with a control, the team reports. And those comments were no more likely than the control to be down voted by the next viewer to see them. By the end of the study, positively manipulated comments got an overall boost of about 25%. However, the same did not hold true for negative manipulation. The ratings of comments that got a fake down vote were usually negated by an up vote by the next user to see them.

“Our experiment does not reveal the psychology behind people’s decisions,” Aral says, “but an intuitive explanation is that people are more skeptical of negative social influence. They’re more willing to go along with positive opinions from other people.”

Duncan Watts, a network scientist at Microsoft Research in New York City, agrees with that conclusion. “[But] one question is whether the positive [herding] bias is specific to this site” or true in general, Watts says. He points out that the category of the news items in the experiment had a strong effect on how much people could be manipulated. “I would have thought that ‘business’ is pretty similar to ‘economics,’ yet they find a much stronger effect (almost 50% stronger) for the former than the latter. What explains this difference? If we’re going to apply these findings in the real world, we’ll need to know the answers.”

Will companies be able to boost their products by manipulating online ratings on a massive scale? “That is easier said than done,” Watts says. If people detect – or learn – that comments on a website are being manipulated, the herd may spook and leave entirely.



Mean score: mean of scores for the comments in each category, with the score for each comment being determined by the number of positive votes from website users minus the number of negative votes

Adapted from Lev Muchnik, Sinan Aral, and Sean J. Taylor, "Social Influence Bias: A Randomized Experiment." ©2013 by American Association for the Advancement of Science.

According to the figure, which category of news showed the smallest difference in mean score between artificially up voted comments and control comments?

- A. Culture and society
- B. Information technology
- C. Fun
- D. General news

ANSWER: D

Explanation:

General news is correct because its two plotted mean scores are closest together in the figure. To answer this type of graph-reading question, compare the vertical distance between the control-comment value and the artificially up-voted-comment value for each named category, rather than looking for the category with the lowest or highest score overall. In the General news category, both values lie just above a mean score of 2, with only a very small separation between them. This indicates that artificially adding an up vote produced the smallest observed change in the mean score for comments in that category. The conclusion depends directly on the visual relationship of the two data points or bars for the same category and does not require calculating a percentage change. This use of graphical evidence aligns with the SAT Suite's emphasis on interpreting quantitative information presented in tables, graphs, and charts in relation to a passage. See the College Board's [Reading and Writing test overview](#) and its [official digital SAT sample questions](#).

QUESTION NO: 2

This passage is adapted from Thor Hanson, *Feathers*. ©2011 by Thor Hanson. Scientists have long debated how the ancestors of birds evolved the ability to fly. The ground-up theory assumes they were fleet-footed ground dwellers that captured prey by leaping and flapping their upper limbs. The tree-down theory assumes they were tree climbers that leapt and glided among branches.

At field sites around the world, Ken Dial saw a pattern in how young pheasants, quail, tinamous, and other ground birds ran along behind their parents. "They jumped up like popcorn," he said, describing how they would flap their half-formed wings

and take short hops into the air. So when a group of graduate students challenged him to come up with new data on the age old ground-up-tree-down debate, he designed a project to see what clues might lie in how baby game birds learned to fly.

Ken settled on the Chukar Partridge as a model species, but he might not have made his discovery without a key piece of advice from the local rancher in Montana who was supplying him with birds. When the cowboy stopped by to see how things were going, Ken showed him his nice, tidy laboratory setup and explained how the birds' first hops and flights would be measured. The rancher was incredulous. "He took one look and said, in pretty colorful language, 'What are those birds doing on the ground? They hate to be on the ground! Give them something to climb on!' " At first it seemed unnatural – ground birds don't like the ground? But as he thought about it Ken realized that all the species he'd watched in the wild preferred to rest on ledges, low branches, or other elevated perches where they were safe from predators. They really only used the ground for feeding and traveling. So he brought in some hay bales for the Chukars to perch on and then left his son in charge of feeding and data collection while he went away on a short work trip.

Barely a teenager at the time, young Terry Dial was visibly upset when his father got back. "I asked him how it went," Ken recalled, "and he said, 'Terrible! The birds are cheating!' " Instead of flying up to their perches, the baby Chukars were using their legs. Time and again Terry had watched them run right up the side of a hay bale, flapping all the while. Ken dashed out to see for himself, and that was the "aha" moment. "The birds were using their wings and legs cooperatively," he told me, and that single observation opened up a world of possibilities.

Working together with Terry (who has since gone on to study animal locomotion), Ken came up with a series of ingenious experiments, filming the birds as they raced up textured ramps tilted at increasing angles. As the incline increased, the partridges began to flap, but they angled their wings differently from birds in flight. They aimed their flapping down and backward, using the force not for lift but to keep their feet firmly pressed against the ramp. "It's like the spoiler on the back of a race car," he explained, which is a very apt analogy. In Formula One racing, spoilers are the big aerodynamic fins that push the cars downward as they speed along, increasing traction and handling. The birds were doing the very same thing with their wings to help them scramble up otherwise impossible slopes.

Ken called the technique WAIR, for wing assisted incline running, and went on to document it in a wide range of species. It not only allowed young birds to climb vertical surfaces within the first few weeks of life but also gave adults an energy efficient alternative to flying. In the Chukar experiments, adults regularly used WAIR to ascend ramps steeper than 90 degrees, essentially running up the wall and onto the ceiling.

In an evolutionary context, WAIR takes on surprising explanatory powers. With one fell swoop, the Dials came up with a viable origin for the flapping flight stroke of birds (something gliding animals don't do and thus a shortcoming of the tree-down theory) and an aerodynamic function for half-formed wings (one of the main drawbacks to the ground-up hypothesis).

Which choice best reflects the overall sequence of events in the passage?

- A. An experiment is proposed but proves unworkable; a less ambitious experiment is attempted, and it yields data that give rise to a new set of questions.
- B. A new discovery leads to reconsideration of a theory; a classic study is adapted, and the results are summarized.
- C. An anomaly is observed and simulated experimentally; the results are compared with previous findings, and a novel hypothesis is proposed.
- D. An unexpected finding arises during the early phase of a study; the study is modified in response to this finding, and the results are interpreted and evaluated.

ANSWER: D

Explanation:

The passage's events follow the sequence described by "An unexpected finding arises during the early phase of a study; the study is modified in response to this finding, and the results are interpreted and evaluated." Ken Dial initially designs a study of how young Chukar Partridges make their first hops and flights. Once the rancher points out that the birds prefer elevated places, Dial changes the setup by adding hay bales. That modification leads to the unexpected observation that the young birds run up the bales while flapping rather than simply flying to the perch. Dial recognizes that their wings and legs are operating cooperatively, prompting him and Terry Dial to conduct further, more controlled ramp experiments. Those experiments establish how WAIR works: the birds direct their wing force down and backward to increase the force pressing their feet against the climbing surface. The passage then interprets this result in functional and evolutionary terms, explaining both its value for climbing and its relevance to competing accounts of how flight may have evolved. This is a question about tracking a passage's structure and chronology, a Reading skill assessed on the SAT. The College Board describes SAT Reading and Writing questions as requiring students to analyze informational texts and draw conclusions from textual evidence. See the [College Board's SAT Reading and Writing overview](#) and its [Digital SAT Test Specifications](#).

QUESTION NO: 3

The main purpose of this story is to appeal to the reader's interest in a subject which has been the theme of some of the greatest writers, living and dead – but which has never been, and can never be, exhausted, because it is a subject eternally interesting to all mankind. Here is one more book that depicts the struggle of a human creature, under those opposing influences of Good and Evil, which we have all felt, which we have all known.

It has been my aim to make the character of “Magdalen,” which personifies this struggle, a pathetic character even in its perversity and its error; and I have tried hard to attain this result by the least obtrusive and the least artificial of all means – by a resolute adherence throughout to the truth as it is in Nature. This design was no easy one to accomplish; and it has been a great encouragement to me (during the publication of my story in its periodical form) to know, on the authority of many readers, that the object which I had proposed to myself, I might, in some degree, consider as an object achieved.

Round the central figure in the narrative other characters will be found grouped, in sharp contrast – contrast, for the most part, in which I have endeavored to make the element of humor mainly predominant. I have sought to impart this relief to the more serious passages in the book, not only because I believe myself to be justified in doing so by the laws of Art – but because experience has taught me (what the experience of my readers will doubtless confirm) that there is no such moral phenomenon as unmixed tragedy to be found in the world around us. Look where we may, the dark threads and the light cross each other perpetually in the texture of human life.

What does the author likely mean when he writes, “truth as it is in Nature” in 2nd paragraph?

- A. Natural things do not always appear as they seem.
- B. Nature changes often as does the character in the story.
- C. No matter what, Magdalen will be truthful.
- D. The struggle of Good and Evil as embodied by Nature is truth.
- E. Good and Evil are presented through Magdalen in her Natural characterization.
- F. Magdalen is portrayed truthfully and realistically, in accordance with human nature.

ANSWER: F

Explanation:

“Magdalen is portrayed truthfully and realistically, in accordance with human nature.” is correct because the author identifies this as the “least obtrusive” and “least artificial” way to make Magdalen sympathetic despite her “perversity” and mistakes. In this context, “Nature” means real human nature and the observable realities of life, not the physical outdoors or a symbolic force that embodies Good and Evil. The author wants Magdalen’s feelings, choices, flaws, and inner conflict to seem psychologically credible. By adhering to truth as it appears in actual human experience, he can present her as a complex person whose errors do not erase the reader’s pity for her. The final paragraph reinforces this realistic artistic goal: life is not “unmixed tragedy,” because dark and light elements continually intersect in human life. Thus, the phrase points to a natural, lifelike representation of character and moral struggle rather than an exaggerated or artificial portrayal. This kind of interpretation relies on using the surrounding sentences to determine how a phrase functions in context, a central SAT Reading skill. The passage appears in Wilkie Collins’s preface to *No Name*; see the text at [Project Gutenberg](#) and SAT Reading guidance from the [College Board](#).

QUESTION NO: 4

Cups of Lemonade Sold

Day	Hours Spent	Cups Sold
1	12	10
2	9	15
3	8	20
4	8	20
5	9	27

The group's goal was to sell 115 cups of lemonade. What percent of this goal did the group achieve?

- A. .80%
- B. 80%
- C. .60
- D. 60%
- E. 92%

ANSWER: B

Explanation:

The group achieved **80%** of its lemonade-sales goal. The graph shows that the group sold a total of 92 cups of lemonade. To find the percentage of a goal achieved, divide the actual amount by the target amount and multiply by 100: **$(92 \div 115) \times 100$** . Since $92 \div 115 = 0.8$, multiplying by 100 gives 80. Thus, the group met 80% of its goal of selling 115 cups. This calculation follows the standard percent relationship: part $\div$ whole = decimal equivalent of the percent. Here, 92 is the part (cups sold) and 115 is the whole (the stated goal). Expressing 0.8 as a percentage requires moving the decimal two places to the right, resulting in 80%. For additional guidance on calculating percentages, see the [Khan Academy percentage review](#) and the [Purplemath lesson on percentages](#).

QUESTION NO: 5

The _____ dress of the performers was considered _____ by the censors.

- A. matching ... unfashionable
- B. ostentatious ... repugnant
- C. overly revealing ... acceptable
- D. uniform ... haughty
- E. color of ... errant

ANSWER: B

Explanation:

The correct completion is “ostentatious ... repugnant.” “Ostentatious” describes clothing intended to attract notice through a showy, excessively elaborate, or conspicuous appearance. That meaning fits naturally with the noun “dress” and establishes that the performers’ attire stood out in a manner likely to draw official scrutiny. “Repugnant” means highly offensive, objectionable, or distasteful. Censors are officials who examine material or performances according to standards governing what may be publicly presented, so it is coherent for them to regard conspicuously showy attire as offensive and therefore

worthy of disapproval or suppression. The completed sentence has a clear cause-and-evaluation relationship: the clothing's conspicuous character is the feature that led the censors to judge it negatively. This selection also produces a grammatically complete sentence, with an adjective modifying “dress” and a predicate adjective following “was considered.” For vocabulary-in-context questions, the College Board advises using the surrounding sentence to determine which word meanings create the most logical, precise relationship. See the [College Board's Reading and Writing overview](#) and [Merriam-Webster's definition of “ostentatious”](#).

QUESTION NO: 6

NOTE: The use of a calculator is not permitted.

Kathy is a repair technician for a phone company. Each week, she receives a batch of phones that need repairs. The number of phones that she has left to fix at the end of each day can be estimated with the equation $P = 108 - 23d$, where P is the number of phones left and d is the number of days she has worked that week. What is the meaning of the value 108 in this equation?

- A. Kathy will complete the repairs within 108 days.
- B. Kathy starts each week with 108 phones to fix.
- C. Kathy repairs phones at a rate of 108 per hour.
- D. Kathy repairs phones at a rate of 108 per day.

ANSWER: B

Explanation:

“Kathy starts each week with 108 phones to fix.” is correct because 108 is the constant term, or initial value, in the linear equation $P = 108 - 23d$. The initial value represents the number of phones remaining when the number of days worked, d , equals 0. Substituting 0 for d gives $P = 108 - 23(0) = 108$. Thus, before Kathy has worked any days during the week, she has all 108 phones in the batch left to repair. As the week progresses, the expression $-23d$ accounts for the phones removed from the remaining total after each day of work. Interpreting a linear equation by evaluating it at an input of 0 is a standard way to identify its starting amount, often called the y-intercept in a graph of the relationship. This matches the SAT's expectation that students connect the constants and variables in a linear model to their meanings in the stated context. See the [College Board SAT Practice Test materials](#) and the [College Board overview of SAT Math](#).

QUESTION NO: 7

Children today are being taught to be _____ of any abnormality including strangers, standing packages, or simply anything out of the order; not for merely their own good, but for the good of the community – such are the times we now live in.

- A. skittish
- B. wary
- C. shy
- D. impudent
- E. challenging

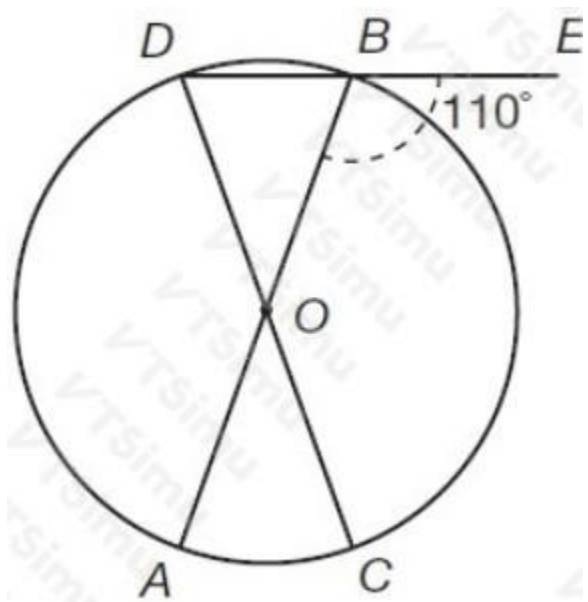
ANSWER: B

Explanation:

The correct answer is **wary**. In this sentence, children are being instructed to notice potentially unusual or dangerous situations—such as unfamiliar people, unattended packages, and things that seem out of place—and to respond with appropriate caution. *Wary* means watchful, cautious, and alert to possible danger or problems. It fits naturally with the construction “wary of,” which is the standard idiomatic way to express being cautious about a particular person, object, or circumstance.

The surrounding details establish a public-safety context rather than a description of personality or emotion. The phrase “not for merely their own good, but for the good of the community” emphasizes the value of attentiveness and prudent judgment in shared spaces. Thus, “being taught to be wary of any abnormality” conveys exactly the intended meaning: children should remain alert when they encounter circumstances that may warrant care. Merriam-Webster defines *wary* as “marked by keen caution, cunning, and watchfulness especially in detecting and escaping danger.” See [Merriam-Webster’s definition of wary](#) and [Cambridge Dictionary’s entry for wary](#).

QUESTION NO: 8



In the diagram above, if angle OBE measures 110 degrees, what is the measure of arc AC?

- A. 20 degrees
- B. 40 degrees
- C. 55 degrees
- D. 80 degrees
- E. cannot be determined

ANSWER: B

Explanation:

40 degrees is correct. Because points D, B, and E lie on a straight line, angle DBO is supplementary to angle OBE. Its measure is therefore $180^\circ - 110^\circ = 70^\circ$. Segments OB and OD are radii of the same circle, so they are congruent. Thus triangle DOB is isosceles, and its base angles at D and B have equal measures. Since angle DBO is 70° , angle ODB is also 70° . The remaining angle at the center, angle DOB, measures $180^\circ - 70^\circ - 70^\circ = 40^\circ$.

In the diagram, angle DOB and angle AOC are vertical angles formed by the intersecting lines through the center O. Vertical angles are congruent, so angle AOC also measures 40° . Angle AOC is a central angle: its vertex is at the circle’s center and its sides meet the circle at A and C. A central angle has the same measure as its intercepted minor arc, so arc AC measures 40° . This uses the standard circle relationship between central angles and their intercepted arcs, as summarized by [Khan Academy’s central-angle guidance](#) and the [OpenStax explanation of isosceles-triangle base angles](#).

QUESTION NO: 9

But the Dust-Bin was going down then, and your father took but little, excepting from a liquid point of view. Your mother’s object in those visits was of a house-keeping character, and you was set on to whistle your father out. Sometimes he came out, but generally not. Come or not come, however, all that part of his existence which was unconnected with open Waitering

was kept a close secret, and was acknowledged by your mother to be a close secret, and you and your mother flitted about the court, close secrets both of you, and would scarcely have confessed under torture that you know your father, or that your father had any name than Dick (which wasn't his name, though he was never known by any other), or that he had kith or kin or chick or child. Perhaps the attraction of this mystery, combined with your father's having a damp compartment, to himself, behind a leaky cistern, at the Dust Bin, a sort of a cellar compartment, with a sink in it, and a smell, and a plate-rack, and a bottle-rack, and three windows that didn't match each other or anything else, and no daylight, caused your young mind to feel convinced that you must grow up to be a Waiter too; but you did feel convinced of it, and so did all your brothers, down to your sister. Every one of you felt convinced that you was born to the Waiting. At this stage of your career, what was your feelings one day when your father came home to your mother in open broad daylight, of itself an act of Madness on the part of a Waiter, and took to his bed (leastwise, your mother and family's bed), with the statement that his eyes were devilled kidneys. Physicians being in vain, your father expired, after repeating at intervals for a day and a night, when gleams of reason and old business fitfully illuminated his being, "Two and two is five. And three is sixpence." Interred in the parochial department of the neighbouring churchyard, and accompanied to the grave by as many Waiters of long standing as could spare the morning time from their soiled glasses (namely, one), your bereaved form was attired in a white neckankecher, and you was took on from motives of benevolence at The George and Gridiron, theatrical and supper. Here, supporting nature on what you found in the plates (which was as it happened, and but too often thoughtlessly, immersed in mustard), and on what you found in the glasses (which rarely went beyond driblets and lemon), by night you dropped asleep standing, till you was cuffed awake, and by day was set to polishing every individual article in the coffee-room. Your couch being sawdust; your counterpane being ashes of cigars. Here, frequently hiding a heavy heart under the smart tie of your white neck ankecher (or correctly speaking lower down and more to the left), you picked up the rudiments of knowledge from an extra, by the name of Bishops, and by calling plate-washer, and gradually elevating your mind with chalk on the back of the corner-box partition, until such time as you used the inkstand when it was out of hand, attained to manhood, and to be the Waiter that you find yourself.

I could wish here to offer a few respectful words on behalf of the calling so long the calling of myself and family, and the public interest in which is but too often very limited. We are not generally understood. No, we are not. Allowance enough is not made for us. For, say that we ever show a little drooping listlessness of spirits, or what might be termed indifference or apathy. Put it to yourself what would your own state of mind be, if you was one of an enormous family every member of which except you was always greedy, and in a hurry. Put it to yourself that you was regularly replete with animal food at the slack hours of one in the day and again at nine p.m., and that the repleter you was, the more voracious all your fellow-creatures came in. Put it to yourself that it was your business, when your digestion was well on, to take a personal interest and sympathy in a hundred gentlemen fresh and fresh (say, for the sake of argument, only a hundred), whose imaginations was given up to grease and fat and gravy and melted butter, and abandoned to questioning you about cuts of this, and dishes of that, each of 'em going on as if him and you and the bill of fare was alone in the world.

The use of the term "expired" in 1st paragraph in lieu of "died" is an example of:

- A. litotes.
- B. anaphora.
- C. hyperbole.
- D. understatement.
- E. allegory.
- F. euphemism.

ANSWER: F

Explanation:

"euphemism" is correct because "expired" substitutes a more indirect, formal, and less emotionally blunt expression for "died." A euphemism softens, avoids, or makes more socially acceptable a word or idea that may be painful, harsh, embarrassing, or unsettling. Death is a common subject for euphemistic language, and English offers many such substitutions, including "passed away," "departed," and "expired." In this passage, the narrator's father has plainly died, but the narration uses "expired" rather than naming the event in its most direct terms. The choice creates a degree of distance from the unpleasant fact while retaining the meaning clearly enough for readers to understand what happened. This is especially appropriate to the passage's mock-formal narrative voice: "expired" has an official or clinical quality that contrasts with the grim circumstances described. Literary and rhetorical terminology distinguishes euphemism by its indirect, softened wording, rather than by whether it minimizes the importance of an event. For definitions and examples of euphemism, see [Encyclopaedia Britannica](#) and [Purdue OWL](#).

QUESTION NO: 10

If $4x + 5 = 15$, then $10x + 5 =$:

- A. 2.5.
- B. 15.
- C. 22.5.
- D. 25.
- E. 30.

ANSWER: E**Explanation:**

The correct answer is **30**. Start with the given equation, $4x + 5 = 15$. Subtracting 5 from both sides gives $4x = 10$. Dividing both sides by 4 gives $x = 10/4 = 2.5$. The question then asks for the value of a different expression, $10x + 5$, using this value of x . Substitute $x = 2.5$: $10(2.5) + 5 = 25 + 5 = 30$. Therefore, the expression equals 30. This is an example of solving a linear equation and then evaluating another expression by substitution. These skills are assessed in SAT Math under Algebra, including solving linear equations and using the resulting value in related expressions. For SAT Math topic guidance, see the College Board's [SAT Math overview](#) and its [Digital SAT Suite assessment framework](#).

QUESTION NO: 11

DIRECTIONS: Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

Some questions will direct you to an underlined portion of a passage. Other questions will direct you to a location in a passage or ask you to think about the passage as a whole.

After reading each passage, choose the answer to each question that most effectively improves the quality of writing in the passage or that makes the passage conform to the conventions of standard written English. Many questions include a "NO CHANGE" option. Choose that option if you think the best choice is to leave the relevant portion of the passage as it is.

Read the passage and answer question (3).

How Do You Like Those Apples?

Marketed as SmartFresh, the chemical 1-MCP (1 methylcyclopropene) has been used by fruit growers since 2002 in the United States and elsewhere to preserve the crispness and lengthen the storage life of apples and other fruit, which often must travel long distances before being eaten by consumers. (1) 1-MCP lengthens storage life by three to four times when applied to apples. This extended life allows producers to sell their apples in the off season, months after the apples have been harvested. And at a cost of about one cent per pound of apples, 1-MCP is a highly cost effective treatment. However, 1-MCP is not a panacea for fruit producers or sellers: there are problems and limitations associated with its use.

[1] 1-MCP works by limiting a fruit's production of ethylene, (2) it is a chemical that causes fruit to ripen and eventually rot. [2] While 1-MCP keeps apples (3) tight and crisp for months, it also limits (4) their scent production. [3] This may not be much of a problem with certain kinds of apples that are not naturally very fragrant, such as Granny Smith, but for apples that are prized for their fruity fragrance, such as McIntosh, this can be a problem with consumers, (5) that will reject apples lacking the expected aroma. [4] But some fruits do not respond as well to 1-MCP as others (6) did, and some even respond adversely. [5] Furthermore, some fruits, particularly those that naturally produce a large amount of ethylene, do not respond as well to 1-MCP treatment. [6] Take Bartlett (7) pears, for instance, unless they are treated with exactly the right amount of 1-MCP at exactly the right time, they will remain hard and green until they rot, and consumers who experience this will be unlikely to purchase them again. (8)

Finally, researchers have found that 1-MCP actually increases susceptibility to some pathologies in certain apple varieties. For example, Empire apples are prone to a condition that causes the flesh of the apple to turn brown. Traditionally, apple producers have dealt with this problem by leaving the apples in the open air for three weeks before storing them in a

controlled atmosphere with tightly regulated temperature, humidity, and carbon dioxide levels. As the graph shows, the flesh of untreated Empire apples that are first stored in the open air undergoes (9) roughly five percent less browning than the flesh of untreated Empire apples that are immediately put into storage in a controlled environment. However, when Empire apples are treated with 1-MCP, (10) their flesh turns brown when the apples are first stored in the open air, though not under other conditions. Although researchers continue to search for the right combination of factors that will keep fruits fresh and attractive, (11) the problem may be that consumers are overly concerned with superficial qualities rather than the actual freshness of the fruit.

Adapted from Hannah J. James, Jacqueline

F. Nock, and Chris

B. Watkins, "The Failure of Postharvest Treatments to Control Firm Flesh Browning in Empire Apples." Copyright 2010 by The New York State Horticultural Society.

A. NO CHANGE

B. Watkins, "The Failure of Postharvest Treatments to Control Firm Flesh Browning in Empire Apples." Copyright 2010 by The New York State Horticultural Society.
firm

C. stiff

D. taut

E. Nock, and Chris

ANSWER: B

Explanation:

The intended answer is **firm**. In the sentence, "While 1-MCP keeps apples firm and crisp for months," *firm* precisely describes the desirable solid texture of an apple that has retained its freshness during storage. The paired adjectives also work naturally together: *firm* characterizes the apple's resistance to softness or mealiness, while *crisp* conveys the fresh, crunchy quality of its flesh. This wording supports the passage's central discussion of how 1-MCP delays ripening and helps preserve apples for sale long after harvest. In postharvest and food-quality contexts, "firmness" is a standard measure used to describe fruit texture and to evaluate how well fruit maintains quality during storage. Thus, the revision is both idiomatic and appropriately precise for the scientific, explanatory tone of the passage. The College Board's Writing and Language guidance emphasizes choosing words that are accurate and appropriate to a passage's context and purpose; see [College Board: SAT Reading and Writing](#). The postharvest relevance of firmness as a fruit-quality characteristic is also reflected in research information from the [USDA Agricultural Research Service](#).

QUESTION NO: 12

DIRECTIONS: In the passage below, certain phrases are underlined and numbered . The question will present alternatives for the underlined part. In most cases, you are to choose the one that best expresses the idea, makes the statement appropriate for standard written English, or is worded most consistently with the style and tone of the passage as a whole. If you think the original version is the best, choose "NO CHANGE".

Read the passage and answer question <5>.

The Spine

Good spine health is important for every person. The human spine support the weight of the head, protects the body's organs, and receives <1> the gravitational pull that helps with posture. Comprised of 33 bones, each called vertebra, the spine is divided into five regions: cervical, <2> thoracic, lumbar, sacral, and coccygeal. Vertebra are named according to the region where they are located along the spine and in numerical order. Discs serve as cushions between each vertebra. Nerves run along the spine, carrying signals between the spine and the rest of the body.

There are many reasons why people experience problems with their spine. Some people like us are born <3> with defects such as spina bifida, which stunts infant <4> brain and spine development. Trauma to the spine can also create problems, in addition <5> when the damage is irreversible. Paralysis happened <6> when the spine is injured beyond repair, and may result in loss of function in the arms or legs. Another reason for damage is the body's natural deterioration. As a person ages, the spine wears out. The discs that separate each vertebra lose moisture, and nerves that run alongside the spine can

become more narrow, which <7> decreases the spines <8> ability to absorb pressure, especially when walking, jogging, or jumping.

Prevention is the best way to maintain a healthy back. There are varieties of ways that people keep themselves pain free and functioning at optimum levels. Sleeping on your back with a pillow under the knees supports its <9> natural curve during the night. When sitting at a desk, keeping ears, shoulders, and hips in line while resting the back firmly against the chair helps with posture. Standing straight with relaxed shoulders, hips, and knees will eliminate undue pressure on the spine. Walking with your head held high, chin tucked, and toes pointed forward will prevent slouching. Plus, you will look fantastically confident. <10>

Diet and sunshine are also important for back health, well-balanced <11> foods build lean muscles that support the spine. Lean proteins, fresh fruits and vegetables, and plenty <12> of water to keep the body hydrated are best choices for a daily regimen. While Vitamin D is found in many foods such as salmon and green leaf lettuce. The <13> sunshine is a body's best source. At least ten minutes of day <14> sunlight will strengthen bones and provide energy to the body's systems, encouraging the body to stand straighter. <15>

A. NO CHANGE

B. especially

C. moreover

D. nevertheless

ANSWER: B

Explanation:

“especially” is correct because it creates the intended relationship between the general statement and the condition that follows. The sentence first establishes that trauma to the spine can cause problems, then narrows its focus to emphasize the particularly serious circumstance in which the damage cannot be reversed: “Trauma to the spine can also create problems, especially when the damage is irreversible.” This construction is both grammatically complete and precise. The phrase “especially when” naturally introduces a condition that represents a notable or severe instance of the preceding claim. It also maintains the passage’s straightforward, informative tone by clearly connecting irreversible injury with the heightened seriousness of spinal trauma. On SAT Reading and Writing questions, effective transitions and revisions must accurately express the logical relationship between ideas while producing a fluent, standard-English sentence. Here, the relationship is emphasis and specification: irreversible damage is an especially consequential type of spinal trauma. For guidance on the SAT Reading and Writing section’s focus on expressing ideas clearly and making effective revisions, see the [College Board’s SAT Reading and Writing overview](#) and its [Digital SAT test specifications](#).

QUESTION NO: 13

Passage 1 is adapted from Catharine Beecher, Essay on Slavery and Abolitionism. Originally published in 1837. Passage 2 is adapted from Angelina

E. Grimké, Letters to Catharine Beecher.

Originally published in 1838. Grimké encouraged Southern women to oppose slavery publicly. Passage 1 is Beecher’s response to Grimké’s views. Passage 2 is Grimké’s response to Beecher.

Passage 1

Heaven has appointed to one sex the superior, and to the other the subordinate station, and this without any reference to the character or conduct of either. It is therefore as much for the dignity as it is for the interest of females, in all respects to conform to the duties of this relation... But while woman holds a subordinate relation in society to the other sex, it is not because it was designed that her duties or her influence should be any the less important, or all pervading. But it was designed that the mode of gaining influence and of exercising power should be altogether different and peculiar...

A man may act on society by the collision of intellect, in public debate; he may urge his measures by a sense of shame, by fear and by personal interest; he may coerce by the combination of public sentiment; he may drive by physical force, and he does not outstep the boundaries of his sphere. But all the power, and all the conquests that are lawful to woman, are those only which appeal to the kindly, generous, peaceful and benevolent principles.

Woman is to win everything by peace and love; by making herself so much respected, esteemed and loved, that to yield to her opinions and to gratify her wishes, will be the free will offering of the heart. But this is to be all accomplished in the domestic and social circle. There let every woman become so cultivated and refined in intellect, that her taste and judgment will be respected; so benevolent in feeling and action; that her motives will be revered; – so unassuming and unambitious, that collision and competition will be banished; – so “gentle and easy to be entreated,” as that every heart will repose in her presence; then, the fathers, the husbands, and the sons, will find an influence thrown around them, to which they will yield not only willingly but proudly...

A woman may seek the aid of co-operation and combination among her own sex, to assist her in her appropriate offices of piety, charity, maternal and domestic duty; but whatever, in any measure, throws a woman into the attitude of a combatant, either for herself or others – whatever binds her in a party conflict – whatever obliges her in any way to exert coercive influences, throws her out of her appropriate sphere. If these general principles are correct, they are entirely opposed to the plan of arraying females in any Abolition movement.

Passage 2

The investigation of the rights of the slave has led me to a better understanding of my own. I have found the Anti-Slavery cause to be the high school of morals in our land – the school in which human rights are more fully investigated, and better understood and taught, than in any other. Here a great fundamental principle is uplifted and illuminated, and from this central light, rays innumerable stream all around.

Human beings have rights, because they are moral beings: the rights of all men grow out of their moral nature; and as all men have the same moral nature, they have essentially the same rights. These rights may be wrested from the slave, but they cannot be alienated: his title to himself is as perfect now, as is that of Lyman Beecher*: it is stamped on his moral being, and is, like it, imperishable. Now if rights are founded in the nature of our moral being, then the mere circumstance of sex does not give to man higher rights and responsibilities, than to woman. To suppose that it does, would be to deny the self-evident truth, that the “physical constitution is the mere instrument of the moral nature.” To suppose that it does, would be to break up utterly the relations, of the two natures, and to reverse their functions, exalting the animal nature into a monarch, and humbling the moral into a slave; making the former a proprietor, and the latter its property.

When human beings are regarded as moral beings, sex, instead of being enthroned upon the summit, administering upon rights and responsibilities, sinks into insignificance and nothingness. My doctrine then is, that whatever it is morally right for man to do, it is morally right for woman to do. Our duties originate, not from difference of sex, but from the diversity of our relations in life, the various gifts and talents committed to our care, and the different eras in which we live.

* Lyman Beecher was a famous minister and the father of Catharine Beecher.

As used in sentence 1 of paragraph 1 of Passage 1, the word “station” most nearly means:

- A. region.
- B. studio.
- C. district.
- D. rank.
- E. Passage text and question stem.

ANSWER: D

Explanation:

“rank.” is correct because “station” is used to identify a person’s relative social position, not a physical place. Beecher contrasts a “superior” station assigned to one sex with a “subordinate” station assigned to the other. That contrast establishes a hierarchy: one group is described as having higher standing and the other as having lower standing. In this context, “rank” precisely conveys that relative level or status within society.

The surrounding sentences reinforce this meaning. Beecher continues by describing women as holding a “subordinate relation in society” and argues that women should act within a distinct social sphere. These references make clear that the passage concerns assigned status, duties, and authority in social relationships. Thus, substituting “rank” preserves both the hierarchical comparison and the passage’s focus on social position.

This is a word-in-context task: the intended meaning must be determined from how the word functions in its sentence and from nearby textual clues, rather than from an unrelated dictionary sense. The College Board’s SAT guidance emphasizes

using evidence from the passage to determine word meaning in context: [SAT Reading and Writing](#). For a historical definition of “station” as social rank or position, see [Merriam-Webster’s entry for “station”](#).

QUESTION NO: 14

All of the following are less than $\frac{2}{5}$ EXCEPT:

- A. $\frac{1}{3}$
- B. 0.04
- C. $\frac{3}{8}$
- D. $\frac{3}{7}$
- E. 0.0404

ANSWER: D

Explanation:

The correct answer is $\frac{3}{7}$, because it is greater than $\frac{2}{5}$. To compare these fractions precisely, cross-multiply: compare 3×5 with 2×7 . The products are 15 and 14, respectively. Since 15 is greater than 14, $\frac{3}{7}$ is greater than $\frac{2}{5}$. Therefore, $\frac{3}{7}$ is the one value that does *not* satisfy the condition “less than $\frac{2}{5}$,” making it the required exception.

The same conclusion follows from decimal equivalents. The fraction $\frac{2}{5}$ equals 0.4, while $\frac{3}{7}$ is approximately 0.428571. Because 0.428571 is greater than 0.4, $\frac{3}{7}$ lies to the right of $\frac{2}{5}$ on a number line. Cross-multiplication is especially useful on SAT mathematics questions because it compares positive fractions without rounding recurring decimals. For additional practice with comparing fractions, see [Khan Academy’s comparison of fractions lesson](#) and the [College Board SAT Math overview](#).

QUESTION NO: 15

Here my friend, about whose madness I now saw, or fancied that I saw, certain indications of method, removed the peg which marked the spot where the beetle fell, to a spot about three inches to the westward of its former position. Taking, now, the tape measure from the nearest point of the trunk to the peg, as before, and continuing the extension in a straight line to the distance of fifty feet, a spot was indicated, removed, by several yards, from the point at which we had been digging.

Around the new position a circle, somewhat larger than in the former instance, was now described, and we again set to work with the spades. I was dreadfully weary, but, scarcely understanding what had occasioned the change in my thoughts, I felt no longer any great aversion from the labor imposed. I had become most unaccountably interested – nay, even excited. Perhaps there was something, amid all the extravagant demeanor of Legrand – some air of forethought, or of deliberation, which impressed me. I dug eagerly, and now and then caught myself actually looking, with something that very much resembled expectation, for the fancied treasure, the vision of which had demented my unfortunate companion. At a period when such vagaries of thought most fully possessed me, and when we had been at work perhaps an hour and a half, we were again interrupted by the violent howlings of the dog. His uneasiness, in the first instance, had been, evidently, but the result of playfulness or caprice, but he now assumed a bitter and serious tone. Upon Jupiter’s again attempting to muzzle him, he made furious resistance, and, leaping into the hole, tore up the mould frantically with his claws. In a few seconds he had uncovered a mass of human bones, forming two complete skeletons, intermingled with several buttons of metal, and what appeared to be the dust of decayed woolen. One or two strokes of a spade upturned the blade of a large Spanish knife, and, as we dug farther, three or four loose pieces of gold and silver coin came to light.

At sight of these the joy of Jupiter could scarcely be restrained, but the countenance of his master wore an air of extreme disappointment he urged us, however, to continue our exertions, and the words were hardly uttered when I stumbled and fell forward, having caught the toe of my boot in a large ring of iron that lay half buried in the loose earth.

We now worked in earnest, and never did I pass ten minutes of more intense excitement. During his interval we had fairly unearthed an oblong chest of wood, which, from its perfect preservation and wonderful hardness, had plainly been subjected to some mineralizing process – perhaps that of the Bi-chloride of Mercury. This box was three feet and a half long, three feet broad, and two and a half feet deep. It was firmly secured by bands of wrought iron, riveted, and forming a kind of open trelliswork over the whole. On each side of the chest, near the top, were three rings of iron

– six in all – by means of which a firm hold could be obtained by six persons. Our utmost united endeavors served only to disturb the coffer very slightly in its bed. We at once saw the

impossibility of removing so great a weight. Luckily, the sole fastenings of the lid consisted of two sliding bolts. These we drew back trembling and panting with anxiety. In an instant, a treasure of incalculable value lay gleaming before us. As the rays of the lanterns fell within the pit, there flashed upwards a glow and a glare, from a confused heap of gold and of jewels, that absolutely dazzled our eyes.

I shall not pretend to describe the feelings with which I gazed. Amazement was, of course, predominant. Legrand appeared exhausted with excitement, and spoke very few words. Jupiter's countenance wore, for some minutes, as deadly a pallor as it is possible, in nature of things, for any negro's visage to assume. He seemed stupefied-thunderstricken. Presently he fell upon his knees in the pit, and, burying his naked arms up to the elbows in gold, let them there remain, as if enjoying the luxury of a bath.

It became necessary, at last, that I should arouse both master and valet to the expediency of removing the treasure. It was growing late, and it behooved us to make exertion, that we might get every thing housed before daylight. It was difficult to say what should be done, and much time was spent in deliberation – so confused were the ideas of all. We, finally, lightened the box by removing two thirds of its contents, when we were enabled, with some trouble, to raise it from the hole. The articles taken out were deposited among the brambles, and the dog left to guard them, with strict orders from Jupiter neither, upon any pretence, to stir from the spot, nor to open his mouth until our return.

What was the likely origin of the “three or four loose pieces of gold and silver coin”?

- A. a buried treasure
- B. coins from the buried box
- C. a portion of the treasure
- D. coins previously on the corpses
- E. a marker to indicate where the treasure was buried

ANSWER: D

Explanation:

“coins previously on the corpses” is correct because the passage establishes a close physical and narrative connection between the loose coins and the two skeletons. The dog uncovers “two complete skeletons,” along with clothing remnants, metal buttons, and a knife; immediately afterward, as the digging continues in that same area, several loose gold and silver coins appear. This sequence supports the inference that the coins had once been carried or worn by the deceased people and were scattered into the surrounding soil as their bodies and clothing decayed.

The narrator's observation that Legrand looks extremely disappointed when the small number of coins is found also helps clarify their role in the scene. These few pieces are not treated as the sought-after cache; rather, they are incidental discoveries among the remains. The much larger treasure is discovered only later, in a separate, securely constructed chest. Therefore, the coins are best understood as personal possessions associated with the corpses, likely people connected to the burial of the chest. This is a context-based inference: readers use the order of discoveries and the details surrounding them to determine the most plausible source of the coins. The excerpt is from Edgar Allan Poe's [“The Gold-Bug”](#); see also the [Britannica overview](#).

QUESTION NO: 16

DIRECTIONS: In the passage below, certain phrases are underlined and numbered . The question will present alternatives for the underlined part. In most cases, you are to choose the one that best expresses the idea, makes the statement appropriate for standard written English, or is worded most consistently with the style and tone of the passage as a whole. If you think the original version is the best, choose "NO CHANGE".

Read the passage and answer question <3>.

Rio de Janeiro

Rio de Janeiro, Brazil is a fantastic place to visit. It's alarming <1> that Rio is called the “Wonderful City.” Beaches, mountains, and forests await its visitors, who can tour for days and still not experience everything the city has to offer. When

I visit, I always have a great time with my boyfriend. <2> At the end of a busy day exploring nature, gloomy <3> travelers can unwind at one of the beachfront hotspots for coconut water and live samba music.

Rio's most famed attractions are Sugarloaf Mountain and Christ the Redeemer statue. However, <4> these destinations welcome over 2.8 million international tourists each year. Sugarloaf Mountain is located in the city's south zone right near to the vast Atlantic Ocean. <5> Its peak is at 1300 feet, and accessible by two cable cars that take less than five minutes to arrive. Visitors enjoy 360-degree panoramic views of Rio, and can shop or dine at several locations on the mountain.

(1) Christ the Redeemer stands on the Corcovado Mountain, recently named one of the new seven wonders of the world. (2) With arms outstretched, the concrete Christ was built between 1922 and 1931, to resemble embracing the people of Rio. (3) Millions of tourists recreate the attraction by taking photos on its pedestal with their own arms outstretched. (4) The statue's pedestal is over 26 feet high, while the statue itself is nearly 100 feet high. <6>

There are so many amazing sites to see! <7> Fort Copacabana is a military base and history museum that sits at the south end of Copacabana beach and divides the neighborhood from Ipanema. Visitors explored <8> galleries filled with original military memorabilia from the late nineteenth and early twentieth centuries. There are also exhibits featuring indigenous artwork from some of Brazil's 2000 native tribes. These relics are important for Brazilian history, and tourists are nevertheless blown away <9> at their historical significance.

Another great place to visit, and for learning about Brazilian history <10> is the Botanical Gardens, built in 1808 by King John VI of Portugal. Children especially enjoy this 346-acre park, which is home to 6500 species of plants and trees and 140 species of birds. Kid-friendly areas are designated for picnics and games, and monkeys that roam the grounds often entertain children by swinging from tree to tree or rummaging for leftover food in the park's trash bins. <11>

After a busy day of sightseeing Rio's natural settings, because <12> tourists sit at beachfront drink stands and enjoy coconut water sipped from the fruit. Local musicians wander the sands playing Brazilian samba music each night. The sounds of tamborims, surdos, and agogos delight visitors, who, dance <13> all night long to the sounds <14> under the Copacabana moonlight.

A. NO CHANGE

B. Tired

C. Angry

D. Overheated

ANSWER: B

Explanation:

"Tired" is correct because it supplies the precise, contextually appropriate description of the travelers' condition after "a busy day exploring nature." A traveler who has spent the day touring beaches, mountains, and forests would naturally be tired and ready to "unwind" at a beachfront venue. The sentence's logic is therefore direct: activity creates fatigue, and relaxing with coconut water and live samba offers relief from that fatigue. The revision also maintains the upbeat, inviting tone of a travel passage about Rio de Janeiro. On SAT Reading and Writing questions, effective word choice depends on selecting language that fits the sentence's immediate context and conveys the intended meaning clearly and economically. Here, "Tired travelers can unwind" creates a coherent relationship between the travelers' earlier exertion and their later relaxation. For an overview of the SAT Reading and Writing section and its emphasis on revising text for clear, effective expression, consult the [College Board's Reading and Writing test overview](#). The College Board's [Digital SAT sample questions](#) also illustrate how context guides revisions involving vocabulary and rhetorical effectiveness.

QUESTION NO: 17

DIRECTIONS: In the passage below, certain phrases are underlined and numbered . The question will present alternatives for the underlined part. In most cases, you are to choose the one that best expresses the idea, makes the statement appropriate for standard written English, or is worded most consistently with the style and tone of the passage as a whole. If you think the original version is the best, choose "NO CHANGE".

Read the passage and answer question after it.

Rio de Janeiro

Rio de Janeiro, Brazil is a fantastic place to visit. It's alarming <1> that Rio is called the "Wonderful City." Beaches, mountains, and forests await its visitors, who can tour for days and still not experience everything the city has to offer. When I visit, I always have a great time with my boyfriend. <2> At the end of a busy day exploring nature, gloomy <3> travelers can unwind at one of the beachfront hotspots for coconut water and live samba music.

Rio's most famed attractions are Sugarloaf Mountain and Christ the Redeemer statue. However, <4> these destinations welcome over 2.8 million international tourists each year. Sugarloaf Mountain is located in the city's south zone right near to the vast Atlantic Ocean. <5> Its peak is at 1300 feet, and accessible by two cable cars that take less than five minutes to arrive. Visitors enjoy 360-degree panoramic views of Rio, and can shop or dine at several locations on the mountain.

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There are so many amazing sites to see! <7> Fort Copacabana is a military base and history museum that sits at the south end of Copacabana beach and divides the neighborhood from Ipanema. Visitors explored <8> galleries filled with original military memorabilia from the late nineteenth and early twentieth centuries. There are also exhibits featuring indigenous artwork from some of Brazil's 2000 native tribes. These relics are important for Brazilian history, and tourists are nevertheless blown away <9> at their historical significance.

Another great place to visit, and for learning about Brazilian history <10> is the Botanical Gardens, built in 1808 by King John VI of Portugal. Children especially enjoy this 346-acre park, which is home to 6500 species of plants and trees and 140 species of birds. Kid-friendly areas are designated for picnics and games, and monkeys that roam the grounds often entertain children by swinging from tree to tree or rummaging for leftover food in the park's trash bins. <11>

After a busy day of sightseeing Rio's natural settings, because <12> tourists sit at beachfront drink stands and enjoy coconut water sipped from the fruit. Local musicians wander the sands playing Brazilian samba music each night. The sounds of tamborims, surdos, and agogos delight visitors, who, dance <13> all night long to the sounds <14> under the Copacabana moonlight.

Would it fit with Paragraph 5 <11> for the author to include a sentence about the types of monkeys that live in the Botanical Gardens?

- A. Yes, because tourists who visit natural settings are always interested in wildlife.
- B. Yes, because more information is always helpful.
- C. No, because this information does not fit with the main topic of the passage.
- D. No, because tourists to Brazil are not interested in what animals live in the country.
- E. Yes, because the paragraph already discusses monkeys that live in the Botanical Gardens.

ANSWER: E

Explanation:

"Yes, because the paragraph already discusses monkeys that live in the Botanical Gardens" is correct. The question asks whether the proposed information fits specifically within the paragraph about the Botanical Gardens, not whether it reflects the broad topic of the entire passage. That paragraph presents the gardens as a visitor destination and describes features that visitors—particularly children—may enjoy: the park's plants, birds, picnic and game areas, and monkeys roaming the grounds. A sentence identifying the types of monkeys found there would directly develop the existing discussion of wildlife in that setting. It would also give the reader a more specific and relevant detail about an attraction that the passage recommends to tourists. Effective revision questions require added material to be relevant to the paragraph's central focus and to connect logically with surrounding sentences. Here, the immediately preceding sentence explicitly mentions monkeys and their behavior, so a detail about the kinds of monkeys would form a clear, coherent continuation. This follows the SAT's emphasis on assessing whether a proposed addition improves the passage's organization, cohesion, and development; see the [College Board overview of SAT Reading and Writing](#) and [Khan Academy's SAT Reading and Writing practice resources](#).

QUESTION NO: 18

When it comes to energy, everyone loves efficiency. Cutting energy waste is one of those goals that both sides of the political divide can agree on, even if they sometimes diverge on how best to get there. Energy efficiency allows us to get more out of our given resources, which is good for the economy and (mostly) good for the environment as well. In an increasingly hot and crowded world, the only sustainable way to live is to get more out of less. Every environmentalist would agree.

But change the conversation to food, and suddenly efficiency doesn't look so good. Conventional industrial agriculture has become incredibly efficient on a simple land to food basis. Thanks to fertilizers, mechanization and irrigation, each American farmer feeds over 155 people worldwide. Conventional farming gets more and more crop per square foot of cultivated land – over 170 bushels of corn per acre in Iowa, for example – which can mean less territory needs to be converted from wilderness to farmland. And since a third of the planet is already used for agriculture – destroying forests and other wild habitats along the way – anything that could help us produce more food on less land would seem to be good for the environment.

Of course, that's not how most environmentalists regard their arugula [a leafy green]. They have embraced organic food as better for the planet – and healthier and tastier, too – than the stuff produced by agricultural corporations. Environmentalists disdain the enormous amounts of energy needed and waste created by conventional farming, while organic practices – forgoing artificial fertilizers and chemical pesticides – are considered far more sustainable. Sales of organic food rose 7.7% in 2010, up to \$26.7 billion – and people are making those purchases for their consciences as much as their taste buds.

Yet a new meta-analysis in *Nature* does the math and comes to a hard conclusion: organic farming yields 25% fewer crops on average than conventional agriculture. More land is therefore needed to produce fewer crops – and that means organic farming may not be as good for the planet as we think.

In the *Nature* analysis, scientists from McGill University in Montreal and the University of Minnesota performed an analysis of 66 studies comparing conventional and organic methods across 34 different crop species, from fruits to grains to legumes. They found that organic farming delivered a lower yield for every crop type, though the disparity varied widely. For rain watered legume crops like beans or perennial crops like fruit trees, organic trailed conventional agriculture by just 5%. Yet for major cereal crops like corn or wheat, as well as most vegetables – all of which provide the bulk of the world's calories – conventional agriculture outperformed organics by more than 25%.

The main difference is nitrogen, the chemical key to plant growth. Conventional agriculture makes use of 171 million metric tons of synthetic fertilizer each year, and all that nitrogen enables much faster plant growth than the slower release of nitrogen from the compost or cover crops used in organic farming. When we talk about a Green Revolution, we really mean a nitrogen revolution – along with a lot of water.

But not all the nitrogen used in conventional fertilizer ends up in crops – much of it ends up running off the soil and into the oceans, creating vast polluted dead zones. We're already putting more nitrogen into the soil than the planet can stand over the long term. And conventional agriculture also depends heavily on chemical pesticides, which can have unintended side effects.

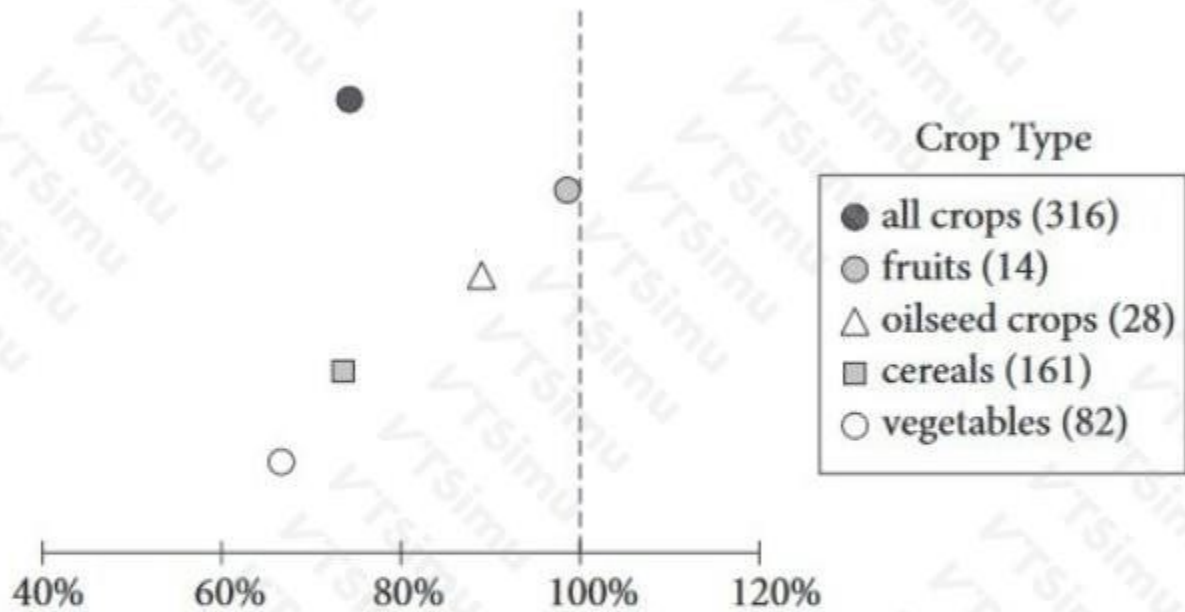
What that means is that while conventional agriculture is more efficient – sometimes much more efficient – than organic farming, there are trade-offs with each. So an ideal global agriculture system, in the views of the study's authors, may borrow the best from both systems, as Jonathan Foley of the University of Minnesota explained:

"The bottom line? Today's organic farming practices are probably best deployed in fruit and vegetable farms, where growing nutrition (not just bulk calories) is the primary goal. But for delivering sheer calories, especially in our staple crops of wheat, rice, maize, soybeans and so on, conventional farms have the advantage right now.

Looking forward, I think we will need to deploy different kinds of practices (especially new, mixed approaches that take the best of organic and conventional farming systems) where they are best suited – geographically, economically, socially, etc."

Figure 1

Organic Yield as a Percentage of Conventional Yield, by Crop Type

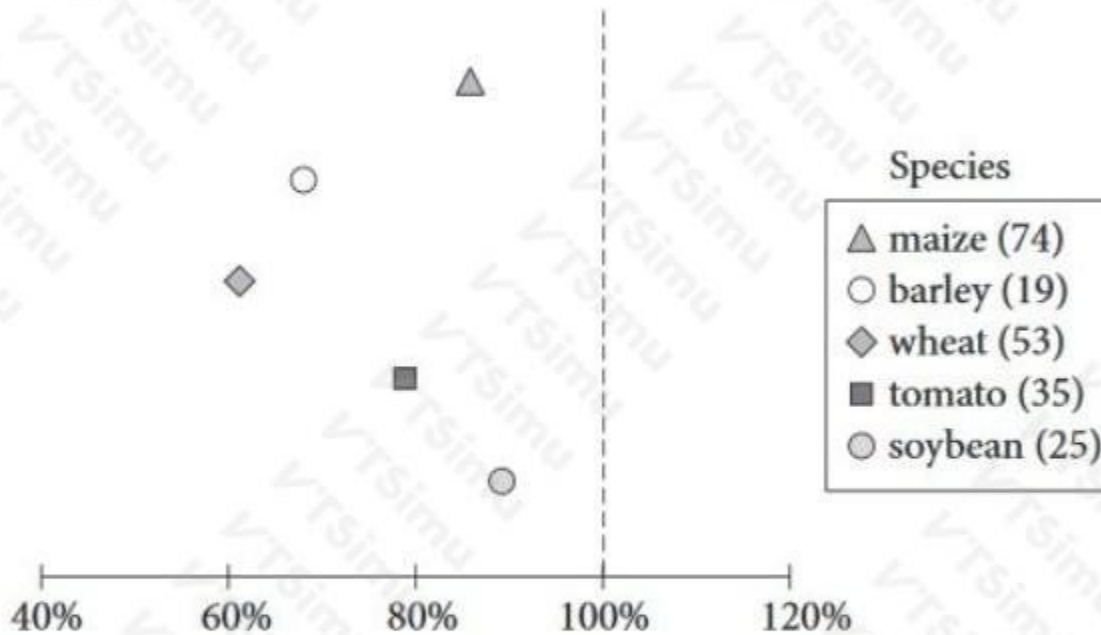


At 100%, the organic yield is the same as the conventional yield. The number of observations for each crop type is shown in parentheses.

Figure adapted from Verena Seufert, Navin Ramankutty, and Jonathan A. Foley, "Comparing the Yields of Organic and Conventional Agriculture." ©2012 by Nature Publishing Group.

Figure 2

Organic Yield as a Percentage of Conventional Yield, by Species



At 100%, the organic yield is the same as the conventional yield. The number of observations for each species is shown in parentheses.

Figure adapted from Verena Seufert, Navin Ramankutty, and Jonathan A. Foley, "Comparing the Yields of Organic and Conventional Agriculture." ©2012 by Nature Publishing Group.

As used in sentence 2 of paragraph 2, the word "simple" most nearly means:

- A. straightforward.
- B. modest.
- C. unadorned.
- D. easy.

ANSWER: A

Explanation:

"straightforward." is correct because "simple" describes the particular measurement being used to judge agricultural efficiency: the relationship between the amount of land used and the amount of food produced. The author is not claiming that industrial agriculture itself is easy or uncomplicated. In fact, the following sentence identifies fertilizers, mechanization, and irrigation, all of which indicate a complex system. Instead, the phrase "on a simple land to food basis" narrows the comparison to one direct, readily understood calculation: crop output per unit of cultivated land.

This meaning fits the passage's reasoning. The author first establishes that conventional farming produces more crops per square foot or acre, then considers the environmental implication that higher output can reduce pressure to convert wilderness into farmland. Thus, "simple" means that the land-to-food measure is a basic, direct way of evaluating yield, even though it does not capture every environmental trade-off discussed later in the passage. This contextual approach—using nearby wording and the sentence's role in the author's argument—is central to SAT Words in Context questions. The College Board describes the Reading and Writing section's focus on using context to determine word meaning in its [SAT Reading and Writing overview](#). The sense of "straightforward" also aligns with the dictionary definition of [straightforward](#) as direct and uncomplicated.

QUESTION NO: 19

The continued strong demand for business loans, combined with a tightening in the availability of funds has caused commercial banks in most parts of the country to begin trimming their lists of customers entitled to prime-rate loans.

The prime rate is the interest rate that banks charge their best customers with the highest credit ratings. The present rate is 5.5 percent.

The executive in charge of the national department at one of New York's leading banks noted yesterday, for example, that "the change has come particularly in the short and medium term range."

In these categories, the bank officers said, rates are generally 5.75% when they had been 5.5% formerly.

Short term loans are for less than one year while medium term loans are from one to five years.

A top executive at another large New York bank added that "we also see a trend toward shorter maturities on term loans." The longest maturity his bank would give the, he said, was seven or eight years at any rate.

"Personally I feel that we shouldn't be giving prime-rate loans on any maturities of more than two years," he asserted.

The president of a large Texas bank stated flatly that "we are negotiating with each individual customer," implying in that no customer is guaranteed the prime rate.

A senior loan officer at a major California bank said, "We've been shying away from even talking about the prime rate and have been fixing rates with each loan rather than gearing our rates to the prime."

One area, however, apparently not experiencing the pinch was Chicago, where the executive of a large bank reported that "I don't think we're in a position where we have to reduce the list of prime customers."

The interest rate of prime-rate customers varies inversely with:

- A. the number of risky borrowers
- B. the number of banks in existence
- C. the rise in the demand for loans
- D. the drop in the demand for loans
- E. the number of depositors

ANSWER: D

Explanation:

The correct answer is **the drop in the demand for loans**. The passage establishes a relationship between loan demand and the rates banks offer even to highly creditworthy, prime-rate customers. It reports that continued strong demand for business loans, together with a tighter supply of available funds, led banks to restrict prime-rate eligibility and raise rates on short- and medium-term loans from 5.5 percent to about 5.75 percent. Thus, when demand is high, the interest rate tends to rise. The inverse relationship follows: when demand for loans drops, the pressure on banks' available lending funds decreases, allowing the interest rate charged to prime customers to fall. In other words, a larger drop in loan demand corresponds to a lower prime-customer interest rate, while less of a drop—or stronger demand—corresponds to a higher rate. This is consistent with the basic market principle that borrowing costs respond to the demand for credit and the supply of lendable funds. The Federal Reserve discusses how financial conditions and interest rates affect household and business borrowing in its overview of monetary policy transmission: [Federal Reserve: How Monetary Policy Works](#). For SAT Reading

questions, the needed relationship should be inferred directly from the details supplied in the passage; see the [College Board Reading and Writing overview](#).

QUESTION NO: 20

Your knowledge of English Literature – to which I am indebted for the first faithful and intelligent translation of my novels into the Italian language – has long since informed you, that there are certain important social topics which are held to be forbidden to the English novelist (no matter how seriously and how delicately he may treat them), by a narrow-minded minority of readers, and by the critics who flatter their prejudices. You also know, having done me the honor to read my books; that I respect my art far too sincerely to permit limits to be wantonly assigned to it, which are imposed in no other civilized country on the face of the earth. When my work is undertaken with a pure purpose, I claim the same liberty which is accorded to a writer in a newspaper, or to a clergyman in a pulpit; knowing, by previous experience, that the increase of readers and the lapse of time will assuredly do me justice, if I have only written well enough to deserve it.

Which selections best indicates how the author believes he will be vindicated?

- A. when sufficient people cry out for more liberal values
- B. when moral values deteriorate over time
- C. when well recognized enough to command acceptance
- D. when enough readers read over a prolonged period of time
- E. when the limiting country lessens its hold on literary writers

ANSWER: D

Explanation:

The author believes he will be vindicated “when enough readers read over a prolonged period of time.” His prediction is stated directly in the final sentence: “the increase of readers and the lapse of time will assuredly do me justice.” “Increase of readers” indicates that a growing audience will encounter and evaluate his work, while “lapse of time” indicates that this judgment will develop gradually rather than immediately. Together, these ideas show his confidence that broader readership and sustained attention will ultimately recognize the worth of his novels, provided that he has written them well enough to merit such recognition.

This conviction is central to the passage’s defense of artistic freedom. The author accepts that a minority of contemporary readers and critics may object to certain social subjects, but he does not regard their reaction as the final measure of literary value. Instead, he appeals to the judgment of future and wider audiences. The wording “assuredly do me justice” makes vindication a matter of later fair assessment by readers over time. The passage appears in Wilkie Collins’s *Man and Wife*, available through [Project Gutenberg](#); background on Collins is available from the [Encyclopaedia Britannica](#).

QUESTION NO: 21

DIRECTIONS: Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

Some questions will direct you to an underlined portion of a passage. Other questions will direct you to a location in a passage or ask you to think about the passage as a whole.

After reading each passage, choose the answer to each question that most effectively improves the quality of writing in the passage or that makes the passage conform to the conventions of standard written English. Many questions include a “NO CHANGE” option. Choose that option if you think the best choice is to leave the relevant portion of the passage as it is.

Read the passage and answer question (6).

The Consolations of Philosophy

Long viewed by many as the stereotypical useless major, philosophy is now being seen by many students and prospective employers as in fact a very useful and practical major, offering students a host of transferable skills with relevance to the modern workplace. (1) In broad terms, philosophy is the study of meaning and the values underlying thought and behavior. But (2) more pragmatically, the discipline encourages students to analyze complex material, question conventional beliefs, and express thoughts in a concise manner.

Because philosophy (3) teaching students not what to think but how to think, the age-old discipline offers consistently useful tools for academic and professional achievement. (4) A 1994 survey concluded that only 18 percent of American colleges required at least one philosophy course. (5) Therefore, between 1992 and 1996, more than 400 independent philosophy departments were eliminated from institutions.

More recently, colleges have recognized the practicality and increasing popularity of studying philosophy and have markedly increased the number of philosophy programs offered. By 2008 there were 817 programs, up from 765 a decade before. In addition, the number of four-year graduates in philosophy has grown 46 percent in a decade. Also, studies have found that those students who major in philosophy often do better than students from other majors in both verbal reasoning and analytical (6) writing. These results can be measured by standardized test scores. On the Graduate Record Examination (GRE), for example, students intending to study philosophy in graduate school (7) has scored higher than students in all but four other majors.

These days, many (8) student's majoring in philosophy have no intention of becoming philosophers; instead they plan to apply those skills to other disciplines. Law and business specifically benefit from the complicated theoretical issues raised in the study of philosophy, but philosophy can be just as useful in engineering or any field requiring complex analytic skills. (9) That these skills are transferable across professions (10) which makes them especially beneficial to twenty-first-century students. Because today's students can expect to hold multiple jobs – some of which may not even exist yet – during (11) our lifetime, studying philosophy allows them to be flexible and adaptable. High demand, advanced exam scores, and varied professional skills all argue for maintaining and enhancing philosophy courses and majors within academic institutions.

Which choice most effectively combines the sentences at the underlined portion?

- A. writing as
- B. writing, and these results can be
- C. writing, which can also be
- D. writing when the results are

ANSWER: A

Explanation:

The correct revision is **“writing as”**, which produces the sentence: “Also, studies have found that those students who major in philosophy often do better than students from other majors in both verbal reasoning and analytical writing as measured by standardized test scores.” This construction efficiently integrates the information from the following sentence into the claim it qualifies. The phrase “as measured by standardized test scores” clearly identifies the basis on which students’ performance in verbal reasoning and analytical writing is being compared.

This revision is effective because it creates a direct, logical relationship between the finding and its evidence without interrupting the sentence’s flow. It also avoids repeating the general idea of performance “results” after the sentence has already stated precisely what students do better in. The resulting sentence is concise and clear: the comparison concerns verbal reasoning and analytical writing, and standardized-test scores provide the measurement for that comparison. This reflects the SAT’s focus on combining sentences in a way that preserves essential information while improving clarity, cohesion, and economy of expression. See the College Board’s overview of the [SAT Reading and Writing section](#) and its [official SAT practice resources](#).

QUESTION NO: 22

Here my friend, about whose madness I now saw, or fancied that I saw, certain indications of method, removed the peg which marked the spot where the beetle fell, to a spot about three inches to the westward of its former position. Taking, now, the tape measure from the nearest point of the trunk to the peg, as before, and continuing the extension in a straight line to the distance of fifty feet, a spot was indicated, removed, by several yards, from the point at which we had been digging.

Around the new position a circle, somewhat larger than in the former instance, was now described, and we again set to work with the spades. I was dreadfully weary, but, scarcely understanding what had occasioned the change in my thoughts, I felt no longer any great aversion from the labor imposed. I had become most unaccountably interested – nay, even excited. Perhaps there was something, amid all the extravagant demeanor of Legrand – some air of forethought, or of deliberation, which impressed me. I dug eagerly, and now and then caught myself actually looking, with something that very much resembled expectation, for the fancied treasure, the vision of which had demented my unfortunate companion. At a period when such vagaries of thought most fully possessed me, and when we had been at work perhaps an hour and a half, we were again interrupted by the violent howlings of the dog. His uneasiness, in the first instance, had been, evidently, but the result of playfulness or caprice, but he now assumed a bitter and serious tone. Upon Jupiter's again attempting to muzzle him, he made furious resistance, and, leaping into the hole, tore up the mould frantically with his claws. In a few seconds he had uncovered a mass of human bones, forming two complete skeletons, intermingled with several buttons of metal, and what appeared to be the dust of decayed woolen. One or two strokes of a spade upturned the blade of a large Spanish knife, and, as we dug farther, three or four loose pieces of gold and silver coin came to light.

At sight of these the joy of Jupiter could scarcely be restrained, but the countenance of his master wore an air of extreme disappointment he urged us, however, to continue our exertions, and the words were hardly uttered when I stumbled and fell forward, having caught the toe of my boot in a large ring of iron that lay half buried in the loose earth.

We now worked in earnest, and never did I pass ten minutes of more intense excitement. During his interval we had fairly unearthed an oblong chest of wood, which, from its perfect preservation and wonderful hardness, had plainly been subjected to some mineralizing process – perhaps that of the Bi-chloride of Mercury. This box was three feet and a half long, three feet broad, and two and a half feet deep. It was firmly secured by bands of wrought iron, riveted, and forming a kind of open trelliswork over the whole. On each side of the chest, near the top, were three rings of iron

– six in all – by means of which a firm hold could be obtained by six persons. Our utmost united endeavors served only to disturb the coffer very slightly in its bed. We at once saw the

impossibility of removing so great a weight. Luckily, the sole fastenings of the lid consisted of two sliding bolts. These we drew back trembling and panting with anxiety. In an instant, a treasure of incalculable value lay gleaming before us. As the rays of the lanterns fell within the pit, there flashed upwards a glow and a glare, from a confused heap of gold and of jewels, that absolutely dazzled our eyes.

I shall not pretend to describe the feelings with which I gazed. Amazement was, of course, predominant. Legrand appeared exhausted with excitement, and spoke very few words. Jupiter's countenance wore, for some minutes, as deadly a pallor as it is possible, in nature of things, for any negro's visage to assume. He seemed stupefied-thunderstricken. Presently he fell upon his knees in the pit, and, burying his naked arms up to the elbows in gold, let them there remain, as if enjoying the luxury of a bath.

It became necessary, at last, that I should arouse both master and valet to the expediency of removing the treasure. It was growing late, and it behooved us to make exertion, that we might get every thing housed before daylight. It was difficult to say what should be done, and much time was spent in deliberation – so confused were the ideas of all. We, finally, lightened the box by removing two thirds of its contents, when we were enabled, with some trouble, to raise it from the hole. The articles taken out were deposited among the brambles, and the dog left to guard them, with strict orders from Jupiter neither, upon any pretence, to stir from the spot, nor to open his mouth until our return.

Which selection best represents the phrase “Here my friend, about whose madness I now saw, or fancied that I saw, certain indications of method”?

- A. The narrator finally realized his friend has gone mad.
- B. The narrator discovered the method or cause of his friend's madness.
- C. The narrator realizes that his friend went mad only temporarily.
- D. The narrator began to see method rather than mere madness in his friend's actions.
- E. The narrator only believes his friend has gone mad.

ANSWER: D

Explanation:

“The narrator began to see method rather than mere madness in his friend's actions” best represents the phrase because it captures the narrator's important shift in perception. Earlier, he has interpreted Legrand's behavior as irrational and has regarded the treasure hunt as evidence of mental disturbance. As Legrand carefully moves the peg, measures from the tree,

and extends the line a precise distance, however, the narrator notices a purposeful procedure behind what had seemed erratic. The wording “saw, or fancied that I saw” preserves the narrator’s uncertainty: he is not fully convinced that Legrand is sane, but he recognizes possible planning, deliberation, and logic in his actions. This growing recognition also explains why the narrator becomes interested and excited enough to dig eagerly. The phrase is therefore not chiefly about identifying a cause of madness; it conveys an emerging awareness that Legrand’s conduct may follow an intelligible method. The passage is from Edgar Allan Poe’s “The Gold-Bug,” available through [Project Gutenberg](#). For guidance on answering evidence-based reading questions by closely attending to precise wording and context, see the [College Board’s Reading and Writing overview](#).

QUESTION NO: 23

In compliance with the request of a friend of mine, who wrote me from the East, I called on good-natured, garrulous old Simon Wheeler, and inquired after my friend’s friend, Leonidas W. Smiley, as requested to do, and I hereunto append the result. I have a lurking suspicion that Leonidas W. Smiley is a myth; that my friend never knew such a personage; and that he only conjectured that, if I asked old Wheeler about him, it would remind him of his infamous Jim Smiley, and he would go to work and bore me nearly to death with some infernal reminiscence of him as long and tedious as it should be useless to me. If that was the design, it certainly succeeded.

I found Simon Wheeler dozing comfortably by the barroom stove of the old, dilapidated tavern in the ancient mining camp of Angel’s, and I noticed that he was fat and bald-headed, and had an expression of winning gentleness and simplicity upon his tranquil countenance. He roused up and gave me good-day. I told him a friend of mine had commissioned me to make some inquiries about a cherished companion of his boyhood named Leonidas W.

Smiley – Rev. Leonidas W. Smiley – a young minister of the Gospel, who he had heard was at one time a resident of Angel’s Camp. I added that, if Mr. Wheeler could tell me anything about this Rev. Leonidas W. Smiley, I would feel under many obligations to him.

What is the significance of the information “he was fat and bald-headed, and had an expression of winning gentleness and simplicity upon his tranquil countenance” in 2nd paragraph to the narrator?

- A. The narrator was hesitant about meeting someone unknown and his countenance settled his nerves.
- B. Wheeler’s unassuming nature allowed the narrator to let his guard down to Wheeler’s garrulous side.
- C. This made the narrator feel reassured that his friend from the East was serious.
- D. This allowed the narrator to be reassured of Wheeler’s “tranquil countenance.”
- E. Wheeler’s winning gentleness calmed the narrator allowing an open discussion as to his business.

ANSWER: B

Explanation:

“Wheeler’s unassuming nature allowed the narrator to let his guard down to Wheeler’s garrulous side” is correct because the physical description presents Simon Wheeler as harmless, placid, and approachable. His “winning gentleness,” “simplicity,” and “tranquil countenance” establish the narrator’s initial impression of a mild, good-natured man rather than someone likely to dominate the encounter. That impression matters because the narrator has already suspected that the inquiry about Leonidas Smiley is a trick intended to prompt Wheeler into telling an excessively long story about Jim Smiley. The gentle appearance therefore contributes to the story’s comic setup: Wheeler seems disarming enough that the narrator proceeds with the inquiry, even though the narrator’s earlier comments reveal concern about being trapped in exactly the kind of rambling reminiscence that follows. The detail is not chiefly evidence about the friend from the East or a general fear of strangers. Instead, it characterizes Wheeler in a way that makes the narrator’s eventual experience with Wheeler’s talkative storytelling more pointed and humorous. The passage is from Mark Twain’s *The Celebrated Jumping Frog of Calaveras County*; the complete text is available through [Project Gutenberg](#), and background on Twain’s work is available from [The Mark Twain Project](#).

QUESTION NO: 24

F. Scott Fitzgerald was a prominent American writer of the twentieth century. This passage comes from one of his short stories and tells the story of a young John Unger leaving home for boarding school. John T. Unger came from a family that

had been well known in Hades a small town on the Mississippi River for several generations. John's father had held the amateur golf championship through many a heated contest; Mrs. Unger was known "from hot-box to hot-bed," as the local phrase went, for her political addresses; and young John T. Unger, who had just turned sixteen, had danced all the latest dances from New York before he put on long trousers. And now, for a certain time, he was to be away from home.

That respect for a New England education which is the bane of all provincial places, which drains them yearly of their most promising young men, had seized upon his parents. Nothing would suit them but that he should go to St. Midas's School near Boston – Hades was too small to hold their darling and gifted son. Now in Hades – as you know if you ever have been there the names of the more fashionable preparatory schools and colleges mean very little. The inhabitants have been so long out of the world that, though they make a show of keeping up-to-date in dress and manners and literature, they depend to a great extent on hearsay, and a function that in Hades would be considered elaborate would doubtless be hailed by a Chicago beef-princess as "perhaps a little tacky."

John T. Unger was on the eve of departure. Mrs. Unger, with maternal fatuity, packed his trunks full of linen suits and electric fans, and Mr. Unger presented his son with an asbestos pocket-book stuffed with money. "Remember, you are always welcome here," he said. "You can be sure, boy, that we'll keep the home fires burning." "I know," answered John huskily.

"Don't forget who you are and where you come from," continued his father proudly, "and you can do nothing to harm you. You are an Unger – from Hades."

So the old man and the young shook hands, and John walked away with tears streaming from his eyes. Ten minutes later he had passed outside the city limits and he stopped to glance back for the last time. Over the gates the old-fashioned Victorian motto seemed strangely attractive to him. His father had tried time and time again to have it changed to something with a little more push and verve about it, such as "Hades – Your Opportunity," or else a plain "Welcome" sign set over a hearty handshake pricked out in electric lights. The old motto was a little depressing, Mr. Unger had thought – but now.

So John took his look and then set his face resolutely toward his destination. And, as he turned away, the lights of Hades against the sky seemed full of a warm and passionate beauty.

From the conversation between John and his father in paragraphs 3–6, it can be inferred that John feels:

- A. rejected and angry.
- B. melancholic but composed.
- C. impassive and indifferent.
- D. resigned but filled with dread.
- E. relieved but apprehensive.
- F. No answer choice provided.

ANSWER: B

Explanation:

melancholic but composed. is supported by John's husky reply to his father and, immediately after their brief farewell, by the tears that stream from his eyes as he walks away. These details establish genuine sadness about leaving his home and parents. His later decision to stop outside the city limits, look back at Hades one final time, and find its lights "full of a warm and passionate beauty" further shows an emotional attachment to the place he is leaving. The narration presents this response as wistful and reflective rather than explosive or uncontrolled.

At the same time, John handles the departure with restraint. He and his father simply shake hands, and John continues on his journey. After his final look back, he "set his face resolutely toward his destination," an action that conveys self-control and determination despite his sadness. The inference therefore depends on pairing the emotional evidence—his husky voice, tears, and affectionate final view of home—with his controlled conduct and resolute movement forward. This is consistent with the SAT Reading approach of drawing conclusions from specific textual details rather than relying on unsupported assumptions. See the College Board's [SAT Reading and Writing overview](#) and Fitzgerald's text at [Project Gutenberg](#).

QUESTION NO: 25

NOTE: The use of a calculator is permitted.

Alma bought a laptop computer at a store that gave a 20 percent discount off its original price. The total amount she paid to the cashier was p dollars, including an 8 percent sales tax on the discounted price. Which of the following represents the original price of the computer in terms of p ?

- A. $0.88p$
- B. $\frac{p}{0.88}$
- C. $(0.8)(1.08)p$
- D. $\frac{p}{(0.8)(1.08)}$

- A. Option A
- B. Option B
- C. Option C
- D. $\frac{125p}{108}$

ANSWER: D

Explanation:

The original price is $125p/108$. Let the original price be x . A 20 percent discount means that the discounted price is 80 percent of the original price, or $0.80x$. The 8 percent sales tax is applied after the discount, so the amount paid is 108 percent of the discounted price: $p = 1.08(0.80x)$. Multiplying the factors gives $p = 0.864x$. Solving for the original price yields $x = p/0.864 = 125p/108$. This setup correctly treats the discount and sales tax as successive percentage changes rather than combining 20 percent and 8 percent directly. On the SAT, translating a percent decrease into multiplication by its remaining percent and a tax increase into multiplication by one plus the tax rate is a reliable approach for this type of proportional-reasoning question. The College Board's SAT Suite materials describe the mathematical skills assessed on the exam, including percent and proportional reasoning: [SAT Math: What's on the Test](#). Additional official practice resources are available through [SAT Practice and Preparation](#).

QUESTION NO: 26

DIRECTIONS: Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

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After reading each passage, choose the answer to each question that most effectively improves the quality of writing in the passage or that makes the passage conform to the conventions of standard written English. Many questions include a "NO CHANGE" option. Choose that option if you think the best choice is to leave the relevant portion of the passage as it is.

Read the passage and answer question (6).

Rethinking Crowdfunding in the Arts

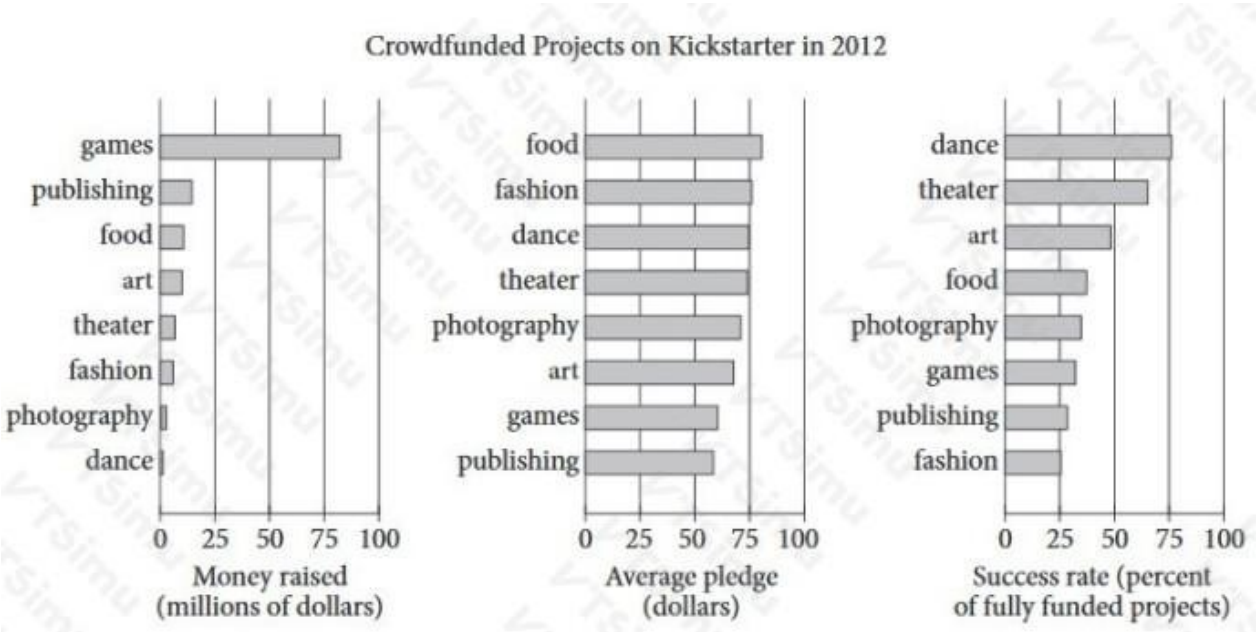
Crowdfunding is a popular way to raise money using the Internet. The process sounds simple: an artist, entrepreneur, or other innovator takes his or her ideas straight to the public via a crowdfunding website. The innovator creates a video about the project and offers, in exchange for donations, a series of "perks," from acknowledgment on a social media site to a small piece of art. Many crowdfunding programs are all or nothing; in other words, the innovator must garner 100 percent funding

for the project or the money is refunded to the donors. At (1) it's best, the system can give creators direct access to millions of potential backers.

The home page of one leading crowdfunding site features a project to manufacture pinhole cameras on a 3 D printer. (2) The idea is obviously very attractive. An obscure method of photography may be made available to many with little expense. Within weeks, the project was 621 percent funded. In contrast, on the same page, a small Brooklyn performance venue is attempting to raise money for its current season. The venue features works of performance art showcased in a storefront window. Those who have seen the space consider it vital. (3) However, that group may not be large enough; with just fourteen days to go in the fund raising period, the campaign is only 46 percent funded.

Artists such as these Brooklyn performers find that crowdfunding exacerbates problems that already exist. (4) Work, that is easily understood and appreciated, is supported, while more complex work goes unnoticed. (5) Time that could be used creating art is spent devising clever perks to draw the attention of potential contributors. (6) In addition, audiences may contain many “free (7) riders,” they did not make contributions. Ironically, the success of crowdfunding may weaken overall funding for the arts if people begin to feel that paying for the art (8) loved by them is someone else’s responsibility.

[1] One innovative playwright has woven the deficiencies of the system into her crowdfunding model. [2] Though the price for her tickets was higher than that of tickets for comparable shows, it was still affordable to most theatergoers – and reflected the real cost of the performance. [3] She presented the total cost for producing her play on a crowdfunding site. [4] Then she divided the total cost by the number of people she expected to attend the performance. [5] The result of the calculation was the minimum donor price, and only donors who paid at least the minimum ticket price were allowed to attend the performance. [6] By subverting the presumption that money used for her project is an altruistic donation, the playwright showed that (9) our work has monetary value to those who enjoy it. (10)



Adapted from “These Were the Most Successful Projects on Kickstarter Last Year.” ©2013 by The Economist Newspaper Limited.

- A. NO CHANGE
- B. Conversely,
- C. However,
- D. Thus,

ANSWER: A

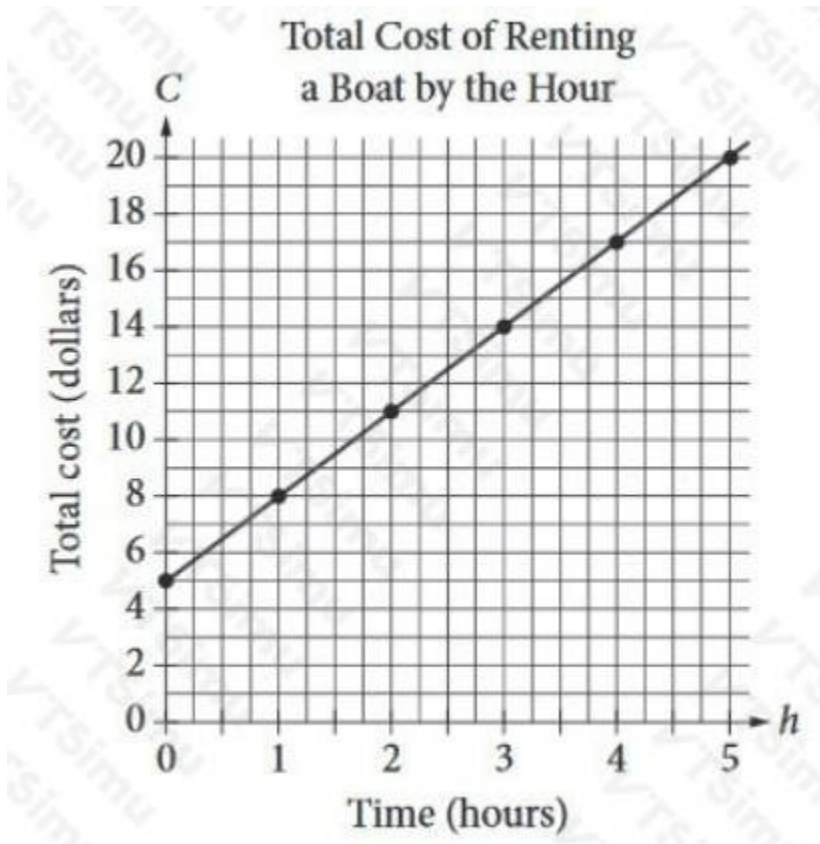
Explanation:

“In addition,” is correct because it signals that the sentence introduces one more problem associated with crowdfunding for artists. The paragraph first identifies how crowdfunding favors work that is immediately easy to understand and then explains that artists must spend time designing appealing rewards rather than making art. The following sentence adds a further concern: some audience members may become “free riders” who enjoy or expect access to art without contributing financially. The additive transition therefore creates a clear, logical progression among several related drawbacks.

This choice also preserves the paragraph’s organizational pattern. The author begins with a broad claim that crowdfunding can intensify existing arts-funding problems and then supplies a sequence of supporting examples. A transition meaning “also” or “furthermore” is needed before the final example, and “In addition,” performs precisely that function while maintaining a concise, formal style appropriate to an SAT Writing and Language passage. The College Board describes these questions as testing revision for logical organization and effective transitions between ideas; see the [SAT Reading and Writing overview](#) and the [Digital SAT sample questions](#).

QUESTION NO: 27

NOTE: The use of a calculator is permitted.



The graph above displays the total cost C , in dollars, of renting a boat for h hours.

What does the C -intercept represent in the graph?

- A. The initial cost of renting the boat
- B. The total number of boats rented
- C. The total number of hours the boat is rented
- D. The increase in cost to rent the boat for each additional hour

ANSWER: A

Explanation:

The initial cost of renting the boat is correct because the C -intercept is the point where the graph crosses the vertical axis labeled C , the total cost in dollars. At this point, the horizontal-coordinate value, h , equals 0. In the context of the graph, this represents the amount charged when the boat has been rented for zero hours. A boat-rental cost can be modeled by a linear relationship of the form $C = mh + b$, where m is the hourly rate and b is the fixed starting charge. Substituting $h = 0$ leaves $C = b$, so the vertical intercept gives the initial rental cost. This interpretation follows the general meaning of a graph’s vertical intercept: it is the dependent-variable value when the independent variable is zero. For additional background on interpreting

linear graphs and intercepts, see [Khan Academy's overview of slope and y-intercept](#) and the [College Board SAT Math overview](#).

QUESTION NO: 28

The main purpose of this story is to appeal to the reader's interest in a subject which has been the theme of some of the greatest writers, living and dead – but which has never been, and can never be, exhausted, because it is a subject eternally interesting to all mankind. Here is one more book that depicts the struggle of a human creature, under those opposing influences of Good and Evil, which we have all felt, which we have all known.

It has been my aim to make the character of “Magdalen,” which personifies this struggle, a pathetic character even in its perversity and its error; and I have tried hard to attain this result by the least obtrusive and the least artificial of all means – by a resolute adherence throughout to the truth as it is in Nature. This design was no easy one to accomplish; and it has been a great encouragement to me (during the publication of my story in its periodical form) to know, on the authority of many readers, that the object which I had proposed to myself, I might, in some degree, consider as an object achieved.

Round the central figure in the narrative other characters will be found grouped, in sharp contrast – contrast, for the most part, in which I have endeavored to make the element of humor mainly predominant. I have sought to impart this relief to the more serious passages in the book, not only because I believe myself to be justified in doing so by the laws of Art – but because experience has taught me (what the experience of my readers will doubtless confirm) that there is no such moral phenomenon as unmixed tragedy to be found in the world around us. Look where we may, the dark threads and the light cross each other perpetually in the texture of human life.

What is the overall purpose of this passage?

- A. to explain the balance in Nature between Good and Evil
- B. to identify the character of Magdalen as possessing Natural characteristics
- C. to introduce the reader to a new work and explain his artistic rationale
- D. to delineate the significance of the age-old battle between Good and Evil
- E. to dimension the similarities between humor and tragedy

ANSWER: C

Explanation:

The passage functions as an authorial preface: the writer presents a newly published narrative and clarifies the artistic intentions that shaped it. The author first identifies the work's enduring subject—the human struggle between good and evil—and then explains how Magdalen was designed to embody that conflict in a way that evokes sympathy. The discussion is not merely about the theme itself; it describes the deliberate choices used to portray it, especially adherence to observed human nature rather than artificial characterization. The final paragraph similarly explains a structural and tonal choice: surrounding serious material with contrasting, often humorous characters because real life combines sorrow and lightness rather than presenting “unmixed tragedy.” Taken together, these details show that the passage introduces the work while defending and explaining its method, characterization, and use of humor. This is characteristic of a preface, which commonly supplies an author's purpose, context, and rationale before readers encounter the main text. The passage is from Wilkie Collins's preface to *No Name*, available through [Project Gutenberg](#). For SAT Reading questions, identifying the overall purpose requires synthesizing the passage's central function rather than selecting one supporting topic; see the College Board's [Reading and Writing overview](#).

QUESTION NO: 29 - (HOTSPOT)

HOTSPOT

NOTE: The use of a calculator is not permitted.

Directions: solve the problem and enter your answer in the grid.

$$\sin x^\circ = \frac{4}{5}$$

In a right triangle, one angle measures x° , where $\sin x^\circ = \frac{4}{5}$. What is $\cos(90^\circ - x^\circ)$?

Hot Area:

	/	/	/	
.	.	.	.	.
	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

ANSWER:

	/	/	/	
.	.	.	.	.
	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

Explanation:

The value to enter is $4/5$. The given relationship states that $\sin(x^\circ)$ equals $4/5$. In a right triangle, the two acute angles are complementary: together, they measure 90° . A key trigonometric cofunction identity says that the cosine of an angle's complement equals the sine of the original angle: $\cos(90^\circ - x^\circ) = \sin(x^\circ)$. Therefore, because $\sin(x^\circ)$ is $4/5$, $\cos(90^\circ - x^\circ)$ must also be $4/5$.

This can also be seen from a right-triangle side-ratio model. If $\sin(x^\circ) = 4/5$, then for the angle x° , the ratio of the opposite leg to the hypotenuse is 4 to 5. The other acute angle has measure $90^\circ - x^\circ$. Relative to that complementary angle, the same leg of length 4 is adjacent rather than opposite, while the hypotenuse remains 5. Thus its cosine, defined as adjacent side divided by hypotenuse, is $4/5$. The fraction should be gridded by selecting the digit 4, then the fraction bar, then the digit 5, with any unused leading grid column left blank. For a reference on complementary-angle trigonometric identities, see [OpenStax Precalculus: Trigonometric Identities](#).

QUESTION NO: 30

The expression $4x^2 - 2x + 3$ is equal to 3 when $x = 0$ and when $x =$

- A. $-1/2$
- B. $-1/4$
- C. $1/8$
- D. $1/4$
- E. $1/2$

ANSWER: E

Explanation:

The correct value is $\frac{1}{2}$. Interpreting the expression as $\sqrt{4x^2-2x+3}$, set it equal to the stated value, 3: $\sqrt{4x^2-2x+3}=3$. Subtracting 3 from both sides gives $\sqrt{4x^2-2x}=0$. Factoring out the common factor $\sqrt{2x}$ produces $\sqrt{2x(2x-1)}=0$. By the zero-product property, either $\sqrt{2x}=0$, which gives the already supplied solution $\sqrt{x}=0$, or $\sqrt{2x-1}=0$. Solving the second equation gives $\sqrt{2x-1}$, so $\sqrt{x}=\frac{1}{2}$. A quick substitution confirms the result: $\sqrt{4(\frac{1}{2})^2-2(\frac{1}{2})+3}=\sqrt{4(\frac{1}{4})-1+3}=\sqrt{1-1+3}=\sqrt{3}$. Thus, in addition to zero, the expression equals 3 when $\sqrt{x}=\frac{1}{2}$. This method uses standard algebraic factoring and the zero-product property, both of which are essential for solving quadratic equations on the SAT. See the [Khan Academy overview of factoring out a greatest common factor](#) and the [College Board SAT Math content description](#).

QUESTION NO: 31

This passage is adapted from William Maxwell, *The Folded Leaf*. ©1959 by William Maxwell. Originally published in 1945.

The Alcazar Restaurant was on Sheridan Road near Devon Avenue. It was long and narrow, with tables for two along the walls and tables for four down the middle. The decoration was art moderne, except for the series of murals depicting the four seasons, and the sick ferns in the front window. Lymie sat down at the second table from the cash register, and ordered his dinner. The history book, which he propped against the catsup and the glass sugar bowl, had been used by others before him. Blank pages front and back were filled in with maps, drawings, dates, comic cartoons, and organs of the body; also with names and messages no longer clear and never absolutely legible. On nearly every other page there was some marginal notation, either in ink or in very hard pencil. And unless someone had upset a glass of water, the marks on page 177 were from tears.

While Lymie read about the Peace of Paris, signed on the thirtieth of May, 1814, between France and the Allied powers, his right hand managed again and again to bring food up to his mouth. Sometimes he chewed, sometimes he swallowed whole the food that he had no idea he was eating. The Congress of Vienna met, with some allowance for delays, early in November of the same year, and all the powers engaged in the war on either side sent plenipotentiaries. It was by far the most splendid and important assembly ever convoked to discuss and determine the affairs of Europe. The Emperor of Russia, the King of Prussia, the Kings of Bavaria, Denmark, and Wurttemberg, all were present in person at the court of the Emperor Francis I in the Austrian capital. When Lymie put down his fork and began to count them off, one by one, on the fingers of his left hand, the waitress, whose name was Irma, thought he was through eating and tried to take his plate away. He stopped her. Prince Metternich (his right thumb) presided over the Congress, and Prince Talleyrand (the index finger) represented France.

A party of four, two men and two women, came into the restaurant, all talking at once, and took possession of the center table nearest Lymie. The women had shingled hair and short tight skirts which exposed the underside of their knees when they sat down. One of the women had the face of a young boy but disguised by one trick or another (rouge, lipstick, powder, wet bangs plastered against the high forehead, and a pair of long pendent earrings) to look like a woman of thirty-five, which as a matter of fact she was. The men were older. They laughed more than there seemed any occasion for, while they were deciding between soup and shrimp cocktail, and their laughter was too loud. But it was the women's voices, the terrible not quite sober pitch of the women's voices which caused Lymie to skim over two whole pages without knowing what was on them. Fortunately he realized this and went back. Otherwise he might never have known about the secret treaty concluded between England, France, and Austria, when the pretensions of Prussia and Russia, acting in concert, seemed to threaten a renewal of the attack. The results of the Congress were stated clearly at the bottom of page 67 and at the top of page 68, but before Lymie got halfway through them, a coat that he recognized as his father's was hung on the hook next to his chair. Lymie closed the book and said, "I didn't think you were coming."

Time is probably no more unkind to sporting characters than it is to other people, but physical decay unsustained by respectability is somehow more noticeable. Mr. Peters' hair was turning gray and his scalp showed through on top. He had lost weight also; he no longer filled out his clothes the way he used to. His color was poor, and the flower had disappeared from his buttonhole. In its place was an American Legion button.

Apparently he himself was not aware that there had been any change. He straightened his tie self-consciously and when Irma handed him a menu, he gestured with it so that the two women at the next table would notice the diamond ring on the fourth finger of his right hand. Both of these things, and also the fact that his hands showed signs of the manicurist, one can blame on the young man who had his picture taken with a derby hat on the back of his head, and also sitting with a girl in the curve of the moon. The young man had never for one second deserted Mr. Peters.

He was always there, tugging at Mr. Peters' elbow, making him do things that were not becoming in a man of forty-five.

As used in sentence 5 of paragraph 5, the word "becoming" most nearly means:

A. emerging.

B. fitting.

C. developing.

D. happening.

ANSWER: B

Explanation:

“fitting.” is correct because “becoming” is used here as an adjective meaning suitable, appropriate, or well matched to a person’s circumstances. The narrator describes Mr. Peters as a forty-five-year-old man whose older self is still influenced by the image of his younger, more flamboyant self. That lingering younger persona prompts him to straighten his tie self-consciously, display his diamond ring, and maintain manicured hands in an effort to attract notice. The final sentence says that this influence makes him behave in ways “not becoming in a man of forty-five,” meaning ways that do not suit or befit a man of his age and situation. The word therefore conveys a judgment about social appropriateness rather than a process of change or an event taking place. SAT vocabulary-in-context questions require readers to use the surrounding details and the word’s grammatical role to select the meaning intended in that particular passage. The College Board explains that Reading and Writing questions assess understanding of words and phrases in context; see [SAT Reading and Writing overview](#). Merriam-Webster likewise defines this sense of “becoming” as “suitable” or “appropriate”; see [Merriam-Webster’s definition of becoming](#).

QUESTION NO: 32

NOTE: The use of a calculator is permitted.

Dreams Recalled during One Week

	None	1 to 4	5 or more	Total
Group X	15	28	57	100
Group Y	21	11	68	100
Total	36	39	125	200

The data in the preceding table were produced by a sleep researcher studying the number of dreams people recall when asked to record their dreams for one week. Group X consisted of 100 people who observed early bedtimes, and Group Y consisted of 100 people who observed later bedtimes. If a person is chosen at random from those who recalled at least 1 dream, what is the probability that the person belonged to Group Y?

A. $\frac{68}{100}$

B. $\frac{79}{100}$

C. $\frac{79}{164}$

D. $\frac{164}{200}$

A. Option A

B. Option B

C. 79/164

D. Option D

ANSWER: C

Explanation:

The correct probability is **79/164**. Because the person is selected only from people who recalled at least one dream, the relevant sample space excludes everyone who recalled zero dreams. In Group Y, 11 people recalled 1 to 4 dreams and 68 people recalled 5 or more dreams. Therefore, the number of eligible people from Group Y is $11 + 68 = 79$. Across both groups, the eligible total is $28 + 57 + 11 + 68 = 164$ people. Equivalently, this total can be found as the 79 eligible people in Group Y plus the $28 + 57 = 85$ eligible people in Group X. Thus, the conditional probability that a randomly selected eligible person belonged to Group Y is 79 out of 164, or 79/164. This calculation follows the conditional-probability principle: restrict the denominator to the condition stated in the question, then count the desired outcome within that restricted group. This is the type of quantitative reasoning assessed in the SAT Math section; see the [College Board SAT Math overview](#) and the [College Board scoring overview](#).

QUESTION NO: 33

Mathew ascended three flights of stairs – passed half-way down a long arched gallery – and knocked at another old-fashioned oak door. This time the signal was answered. A low, clear, sweet voice, inside the room, inquired who was waiting without? In a few hasty words Mathew told his errand. Before he had done speaking the door was quietly and quickly opened, and Sarah Leeson confronted him on the threshold, with her candle in her hand.

Not tall, not handsome, not in her first youth – shy and irresolute in manner – simple in dress to the utmost limits of plainness – the lady's-maid, in spite of all these disadvantages, was a woman whom it was impossible to look at without a feeling of curiosity, if not of interest. Few men, at first sight of her, could have resisted the desire to find out who she was; few would have been satisfied with receiving for answer, She is Mrs. Treverton's maid; few would have refrained from the attempt to extract some secret information for themselves from her face and manner; and none, not even the most patient and practiced of observers, could have succeeded in discovering more than that she must have passed through the ordeal of some great suffering at some former period of her life. Much in her manner, and more in her face, said plainly and sadly: I am the wreck of something that you might once have liked to see; a wreck that can never be repaired – that must drift on through life unnoticed, unguided, unpitied – drift till the fatal shore is touched, and the waves of Time have swallowed up these broken relics of me forever.

This was the story that was told in Sarah Leeson's face – this, and no more.

No two men interpreting that story for themselves, would probably have agreed on the nature of the suffering which this woman had undergone. It was hard to say, at the outset, whether the past pain that had set its ineffaceable mark on her had been pain of the body or pain of the mind. But whatever the nature of the affliction she had suffered, the traces it had left were deeply and strikingly visible in every part of her face.

Her cheeks had lost their roundness and their natural color; her lips, singularly flexible in movement and delicate in form, had faded to an unhealthy paleness; her eyes, large and black and overshadowed by unusually thick lashes, had contracted an anxious startled look, which never left them and which piteously expressed the painful acuteness of her sensibility, the inherent timidity of her disposition. So far, the marks which sorrow or sickness had set on her were the marks common to most victims of mental or physical suffering. The one extraordinary personal deterioration which she had undergone consisted in the unnatural change that had passed over the color of her hair. It was as thick and soft, it grew as gracefully, as the hair of a young girl; but it was as gray as the hair of an old woman. It seemed to contradict, in the most startling manner, every personal assertion of youth that still existed in her face. With all its haggardness and paleness, no one could have looked at it and supposed for a moment that it was the face of an elderly woman. Wan as they might be, there was not a wrinkle in her cheeks. Her eyes, viewed apart from their prevailing expression of uneasiness and timidity, still preserved that bright, clear moisture which is never seen in the eyes of the old. The skin about her temples was as delicately smooth as the skin of a child. These and other physical signs which never mislead, showed that she was still, as to years, in the very prime of her life. Sickly and sorrow-stricken as she was, she looked, from the eyes downward, a woman who had barely reached thirty years of age. From the eyes upward, the effect of her abundant gray hair, seen in connection with her face, was not simply incongruous – it was absolutely startling; so startling as to make it no paradox to say that she would have looked most natural, most like herself if her hair had been dyed. In her case, Art would have seemed to be the truth, because Nature looked like falsehood.

What shock had stricken her hair, in the very maturity of its luxuriance, with the hue of an unnatural old age? Was it a serious illness, or a dreadful grief that had turned her gray in the prime of her womanhood? That question had often been agitated among her fellow-servants, who were all struck by the peculiarities of her personal appearance, and rendered a little suspicious of her, as well, by an inveterate habit that she had of talking to herself. Inquire as they might, however, their curiosity was always baffled. Nothing more could be discovered than that Sarah Leeson was, in the common phrase, touchy on the subject of her gray hair and her habit of talking to herself, and that Sarah Leeson's mistress had long since forbidden every one, from her husband downward, to ruffle her maid's tranquility by inquisitive questions.

In the context, the word "ineffaceable" in 4th paragraph most nearly means:

- A. inescapable.
- B. horrible.
- C. devastating.
- D. ugly.
- E. inerasable.

ANSWER: E

Explanation:

"inerasable." is correct because *ineffaceable* means incapable of being erased, removed, or obliterated. The passage says that Sarah's past pain had set an "ineffaceable mark" on her. The following sentence clarifies this meaning by emphasizing that the traces of her affliction remained "deeply and strikingly visible in every part of her face." Thus, the word describes a permanent mark: her suffering has left signs that cannot be wiped away or concealed.

This meaning is supported by standard dictionary definitions. Merriam-Webster defines *ineffaceable* as "incapable of being effaced," with *efface* meaning to erase or destroy a mark; see [Merriam-Webster's definition of ineffaceable](#). Cambridge Dictionary likewise defines the term as impossible to remove or forget, especially when describing a lasting impression or effect; see [Cambridge Dictionary's definition of ineffaceable](#). In context, "inerasable" precisely conveys that Sarah's physical appearance continues to bear enduring evidence of earlier suffering.

QUESTION NO: 34

This passage is adapted from J.

- D. Watson and
- F. H.

C. Crick, "Genetical Implications of the Structure of Deoxyribonucleic Acid." Copyright 1953 by Nature Publishing Group. Watson and Crick deduced the structure of DNA using evidence from Rosalind Franklin and R.

G. Gosling's X ray crystallography diagrams of DNA and from Erwin Chargaff's data on the base composition of DNA.

The chemical formula of deoxyribonucleic acid (DNA) is now well established. The molecule is a very long chain, the backbone of which consists of a regular alternation of sugar and phosphate groups. To each sugar is attached a nitrogenous base, which can be of four different types. Two of the possible bases – adenine and guanine – are purines, and the other two – thymine and cytosine – are pyrimidines. So far as is known, the sequence of bases along the chain is irregular. The monomer unit, consisting of phosphate, sugar and base, is known as a nucleotide.

The first feature of our structure which is of biological interest is that it consists not of one chain, but of two. These two chains are both coiled around a common fiber axis. It has often been assumed that since there was only one chain in the chemical formula there would only be one in the structural unit. However, the density, taken with the X ray evidence, suggests very strongly that there are two.

The other biologically important feature is the manner in which the two chains are held together. This is done by hydrogen bonds between the bases. The bases are joined together in pairs, a single base from one chain being hydrogen bonded to a single base from the other. The important point is that only certain pairs of bases will fit into the structure. One member of a pair must be a purine and the other a pyrimidine in order to bridge between the two chains. If a pair consisted of two purines, for example, there would not be room for it.

We believe that the bases will be present almost entirely in their most probable forms. If this is true, the conditions for forming hydrogen bonds are more restrictive, and the only pairs of bases possible are: adenine with thymine, and guanine with cytosine. Adenine, for example, can occur on either chain; but when it does, its partner on the other chain must always be thymine.

The phosphate sugar backbone of our model is completely regular, but any sequence of the pairs of bases can fit into the structure. It follows that in a long molecule many different permutations are possible, and it therefore seems likely that the precise sequence of bases is the code which carries the genetical information. If the actual order of the bases on one of the pair of chains were given, one could write down the exact order of the bases on the other one, because of the specific pairing. Thus one chain is, as it were, the complement of the other, and it is this feature which suggests how the deoxyribonucleic acid molecule might duplicate itself.

The table shows, for various organisms, the percentage of each of the four types of nitrogenous bases in that organism's DNA.

Base Composition of DNA				
Organism	Percentage of base in organism's DNA			
	adenine (%)	guanine (%)	cytosine (%)	thymine (%)
Maize	26.8	22.8	23.2	27.2
Octopus	33.2	17.6	17.6	31.6
Chicken	28.0	22.0	21.6	28.4
Rat	28.6	21.4	20.5	28.4
Human	29.3	20.7	20.0	30.0
Grasshopper	29.3	20.5	20.7	29.3
Sea urchin	32.8	17.7	17.3	32.1
Wheat	27.3	22.7	22.8	27.1
Yeast	31.3	18.7	17.1	32.9
<i>E. coli</i>	24.7	26.0	25.7	23.6

Adapted from Manju Bansal, "DNA Structure: Revisiting the Watson-Crick Double Helix." ©2003 by Current Science Association, Bangalore.

Based on the table, is the percentage of adenine in each organism's DNA the same or does it vary, and which statement made by the authors is most consistent with that data?

A. The same; “Two of the possible bases – adenine and guanine – are purines, and the other two – thymine and cytosine – are pyrimidines.”

B. The same; “The important point is that only certain pairs of bases will fit into the structure.”

C. Crick, “Genetical Implications of the Structure of Deoxyribonucleic Acid.” Copyright 1953 by Nature Publishing Group. Watson and Crick deduced the structure of DNA using evidence from Rosalind Franklin and R.

It varies; “Adenine for example, can occur on either chain; but when it does, its partner on the other chain must always be thymine.”

D. Watson and

It varies; “It follows that in a long molecule many different permutations are possible, and it therefore seems likely that the precise sequence of bases is the code which carries the genetical information.”

E. H.

F. Gosling’s X ray crystallography diagrams of DNA and from Erwin Chargaff’s data on the base composition of DNA. The chemical formula of deoxyribonucleic acid (DNA) is now well established. The molecule is a very long chain, the backbone of which consists of a regular alternation of sugar and phosphate groups. To each sugar is attached a nitrogenous base, which can be of four different types. Two of the possible bases – adenine and guanine – are purines, and the other two – thymine and cytosine – are pyrimidines. So far as is known, the sequence of bases along the chain is irregular. The monomer unit, consisting of phosphate, sugar and base, is known as a nucleotide.

The first feature of our structure which is of biological interest is that it consists not of one chain, but of two. These two chains are both coiled around a common fiber axis. It has often been assumed that since there was only one chain in the chemical formula there would only be one in the structural unit. However, the density, taken with the X ray evidence, suggests very strongly that there are two.

The other biologically important feature is the manner in which the two chains are held together. This is done by hydrogen bonds between the bases. The bases are joined together in pairs, a single base from one chain being hydrogen bonded to a single base from the other. The important point is that only certain pairs of bases will fit into the structure. One member of a pair must be a purine and the other a pyrimidine in order to bridge between the two chains. If a pair consisted of two purines, for example, there would not be room for it.

We believe that the bases will be present almost entirely in their most probable forms. If this is true, the conditions for forming hydrogen bonds are more restrictive, and the only pairs of bases possible are: adenine with thymine, and guanine with cytosine. Adenine, for example, can occur on either chain; but when it does, its partner on the other chain must always be thymine.

The phosphate sugar backbone of our model is completely regular, but any sequence of the pairs of bases can fit into the structure. It follows that in a long molecule many different permutations are possible, and it therefore seems likely that the precise sequence of bases is the code which carries the genetical information. If the actual order of the bases on one of the pair of chains were given, one could write down the exact order of the bases on the other one, because of the specific pairing. Thus one chain is, as it were, the complement of the other, and it is this feature which suggests how the deoxyribonucleic acid molecule might duplicate itself.

The table shows, for various organisms, the percentage of each of the four types of nitrogenous bases in that organism’s DNA.

Based on the table, is the percentage of adenine in each organism’s DNA the same or does it vary, and which statement made by the authors is most consistent with that data?

ANSWER: D

Explanation:

“It varies; ‘It follows that in a long molecule many different permutations are possible, and it therefore seems likely that the precise sequence of bases is the code which carries the genetical information.’” is correct because the table reports different adenine percentages for different organisms. The listed values range from 24.7% in *E. coli* to 33.2% in octopus DNA, so adenine is not present at one fixed percentage across all organisms. The passage’s statement about “many different permutations” directly accounts for this observation: while DNA has a regular sugar-phosphate backbone and follows specific complementary-pairing rules, the sequence and overall distribution of base pairs can differ among organisms. Those differences permit distinct DNA sequences to encode different genetic information. Complementarity still requires adenine to pair with thymine on the opposite strand, so within a given double-stranded DNA sample adenine and thymine occur in corresponding amounts; it does not require every species to have the same adenine percentage. This relationship is commonly called Chargaff’s rule and is described by the [National Human Genome Research Institute](#). The molecular basis for complementary base pairing and the double-helix model is also summarized by [Nature Education](#).

QUESTION NO: 35

DIRECTIONS: Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

Some questions will direct you to an underlined portion of a passage. Other questions will direct you to a location in a passage or ask you to think about the passage as a whole.

After reading each passage, choose the answer to each question that most effectively improves the quality of writing in the passage or that makes the passage conform to the conventions of standard written English. Many questions include a “NO CHANGE” option. Choose that option if you think the best choice is to leave the relevant portion of the passage as it is.

Read the passage and answer question (9).

Whey to Go

Greek yogurt – a strained form of cultured yogurt – has grown enormously in popularity in the United States since it was first introduced in the country in the late 1980s.

From 2011 to 2012 alone, sales of Greek yogurt in the U S increased by 50 percent. The resulting increase in Greek yogurt production has forced those involved in the business to address the detrimental effects that the yogurt-making process may be having on the environment. Fortunately, farmers and others in the Greek yogurt business have found many methods of controlling and eliminating most environmental threats. Given these solutions as well as the many health benefits of the food, the advantages of Greek yogurt (1) outdo the potential drawbacks of its production.

[1] The main environmental problem caused by the production of Greek yogurt is the creation of acid whey as a by-product. [2] Because it requires up to four times more milk to make than conventional yogurt does, Greek yogurt produces larger amounts of acid whey, which is difficult to dispose of. [3] To address the problem of disposal, farmers have found a number of uses for acid whey. [4] They can add it to livestock feed as a protein (2) supplement, and people can make their own Greek-style yogurt at home by straining regular yogurt. [5] If it is improperly introduced into the environment, acid-whey runoff (3) can pollute waterways, depleting the oxygen content of streams and rivers as it decomposes. [6] Yogurt manufacturers, food (4) scientists; and government officials are also working together to develop additional solutions for reusing whey. (5)

(6) Though these conservation methods can be costly and time-consuming, they are well worth the effort. Nutritionists consider Greek yogurt to be a healthy food: it is an excellent source of calcium and protein, serves (7) to be a digestive aid, and (8) it contains few calories in its unsweetened low- and non-fat forms. Greek yogurt is slightly lower in sugar and carbohydrates than conventional yogurt is. (9) Also, because it is more concentrated, Greek yogurt contains slightly more protein per serving, thereby helping people stay (10) satiated for longer periods of time. These health benefits have prompted Greek yogurt’s recent surge in popularity. In fact, Greek yogurt can be found in an increasing number of products such as snack food and frozen desserts. Because consumers reap the nutritional benefits of Greek yogurt and support those who make and sell (11) it, therefore farmers and businesses should continue finding safe and effective methods of producing the food.

- A. NO CHANGE
- B. In other words,
- C. Therefore,
- D. For instance,

ANSWER: A

Explanation:

“NO CHANGE” is correct because “Also” accurately signals that the sentence adds one more point to an ongoing list of nutritional benefits. The preceding sentences identify Greek yogurt as a source of calcium and protein, describe its usefulness as a digestive aid, note its relatively low calorie content in certain forms, and compare its sugar and carbohydrate content with conventional yogurt. The following sentence continues that same line of reasoning by introducing an additional benefit: its higher protein content per serving and the resulting ability to help people remain satiated longer. “Also” creates a clear additive relationship between these closely connected claims and maintains the paragraph’s coherent progression from one health advantage to another. This reflects the SAT Reading and Writing expectation that transitions express the logical

relationship between ideas and contribute to a passage's cohesion. The sentence therefore needs no revision. The College Board's overview of the digital SAT Reading and Writing section emphasizes testing expression of ideas and the effective connection of information: [College Board: SAT Reading and Writing](#). Additional official preparation materials are available at [College Board: SAT Practice and Preparation](#).

QUESTION NO: 36

NOTE: The use of a calculator is not permitted.

On Saturday afternoon, Armand sent m text messages each hour for 5 hours, and Tyrone sent p text messages each hour for 4 hours. Which of the following represents the total number of messages sent by Armand and Tyrone on Saturday afternoon?

- A. $9mp$
- B. $20mp$
- C. $5m + 4p$
- D. $4m + 5p$

ANSWER: C

Explanation:

The correct expression is $5m + 4p$. A total is found by multiplying each person's hourly texting rate by the number of hours that person texted, then adding the two results. Armand sent m messages per hour for 5 hours, so his total is $5 \times m$, or $5m$ messages. Tyrone sent p messages per hour for 4 hours, so his total is $4 \times p$, or $4p$ messages. Because the question asks for the combined number of messages sent by both people, these separate totals must be added: $5m + 4p$. This expression also preserves the units correctly: each product represents a number of messages, and their sum represents the overall number of messages. The calculation uses the fundamental relationship $\text{total} = \text{rate} \times \text{time}$, followed by addition of the individual totals. This type of translation from a verbal description into an algebraic expression is a core SAT mathematics skill; see the [College Board SAT Math overview](#) and the [Khan Academy introduction to rates](#).

QUESTION NO: 37

The following passage was written by John Janovec, an ecologist who has worked in the Los Amigos watershed in Peru.

The Amazonian wilderness harbors the greatest number of species on this planet and is an irreplaceable resource for present and future generations. Amazonia is crucial for maintaining global climate and genetic resources, and its forest and rivers provide vital sources of food, building materials, pharmaceuticals, and water needed by wildlife and humanity.

The Los Amigos watershed in the state of Madre de Dios, southeastern Peru, is representative of the pristine lowland moist forest once found throughout most of upper Amazonian South America. Threats to tropical forests occur in the form of fishing, hunting, gold mining, timber extraction, impending road construction, and slash-and-burn agriculture. The Los Amigos watershed, consisting of 1.6 million hectares (3.95 million acres), still offers the increasingly scarce opportunity to study rainforest as it was before the disruptive encroachment of modern human civilization. Because of its relatively pristine condition and the immediate need to justify it as a conservation zone, this area deserves intensive, long-term projects aimed at botanical training, ecotourism, biological inventory, and information synthesis.

On July 24, 2001, the government of Peru and the Amazon Conservation Association signed a contractual agreement creating the first long-term permanently renewable conservation concession. To our knowledge this is the first such agreement to be implemented in the world. The conservation concession protects 340,000 acres of old-growth Amazonian forest in the Los Amigos watershed, which is located in southeastern Peru. This watershed protects the eastern flank of Manu National Park and is part of the lowland forest corridor that links it to BahuajaSonene National Park. The Los Amigos conservation concession will serve as a mechanism for the development of a regional center of excellence in natural forest management and biodiversity science.

Several major projects are being implemented at the Los Amigos Conservation Area. Louise Emmons is initiating studies of mammal diversity and ecology in the Los Amigos area. Other projects involve studies of the diversity of arthropods, amphibians, reptiles, and birds. Robin Foster has conducted botanical studies at Los Amigos, resulting in the labeling of

hundreds of plant species along two kilometers of trail in upland and lowland forest. Michael Goulding is leading a fisheries and aquatic ecology program, which aims to document the diversity of fish, their ecologies, and their habitats in the Los Amigos area and the Madre de Dios watershed in general.

With support from the Amazon Conservation Association, and in collaboration with U.S. and Peruvian colleagues, the Botany of the Los Amigos project has been initiated. At Los Amigos, we are attempting to develop a system of preservation, sustainability, and scientific research; a marriage between various disciplines, from human ecology to economic botany, product marketing to forest management. The complexity of the ecosystem will best be understood through a multidisciplinary approach, and improved understanding of the complexity will lead to better management. The future of these forests will depend on sustainable management and development of alternative practices and products that do not require irreversible destruction.

The botanical project will provide a foundation of information that is essential to other programs at Los Amigos. By combining botanical studies with fisheries and mammology, we will better understand plant/animal interactions. By providing names, the botanical program will facilitate accurate communication about plants and the animals that use them. Included in this scenario are humans, as we will dedicate time to people-plant interactions in order to learn what plants are used by people in the Los Amigos area, and what plants could potentially be used by people.

To be informed, we must develop knowledge. To develop knowledge, we must collect, organize, and disseminate information. In this sense, botanical information has conservation value. Before we can use plant-based products from the forest, we must know what species are useful and we must know their names. We must be able to identify them, to know where they occur in the forest, how many of them exist, how they are pollinated and when they produce fruit (or other useful products). Aside from understanding the species as they occur locally at Los Amigos, we must have information about their overall distribution in tropical America in order to better understand and manage the distribution, variation, and viability of their genetic diversity. This involves a more complete understanding of the species through studies in the field and herbarium.

In 1st paragraph, “genetic resources” refers to:

- A. plant seeds.
- B. different races of people.
- C. natural resources, such as oil.
- D. diverse species of plants and animals.
- E. cells that can be used in genetic cures for diseases

ANSWER: D

Explanation:

“Diverse species of plants and animals.” is correct because the first paragraph establishes that Amazonia contains an extraordinary number of species and then identifies this biological richness as one of the region’s irreplaceable values. In this context, “genetic resources” means the genetic variation contained within living organisms—especially the many plant and animal species, their populations, and their inherited traits. Protecting a highly diverse forest preserves this biological information and the potential benefits it may provide, including resilient ecosystems, food sources, medicines, and future scientific research.

The passage’s later focus on identifying plant species, studying plant-animal interactions, documenting distribution, and managing “the distribution, variation, and viability of their genetic diversity” confirms this meaning. The author views accurate biological knowledge as necessary for conservation because species diversity is a resource that can be lost when habitats are destroyed. This usage aligns with the Convention on Biological Diversity’s definition of genetic resources as genetic material of actual or potential value, and with the Food and Agriculture Organization’s explanation that genetic diversity within and among species supports biodiversity and human well-being. See the [Convention on Biological Diversity, Article 2](#) and the [FAO biodiversity overview](#).

QUESTION NO: 38

DIRECTIONS: In the passage below, certain phrases are underlined and numbered . The question will present alternatives for the underlined part. In most cases, you are to choose the one that best expresses the idea, makes the statement

appropriate for standard written English, or is worded most consistently with the style and tone of the passage as a whole. If you think the original version is the best, choose "NO CHANGE".

Read the passage and answer question <4>.

J.K. Rowling

While many people may get frustrated with train delays, Joanne Rowling turned her experience into a life-changing story. She began writing about a young wizard while delayed at a Manchester station stop, and brought Harry Potter to life <1> over the next five years. The *Philosopher's Stone* was the first of seven children's books published under her pen name J. K. Rowling. The Harry Potter series has sold over 447 million copies worldwide and been translated into seventy-three languages, including Latin and Ancient Greek.<2>

When the *Philosopher's Stone* was published <3> in 1997, the book industry had given up on young readers. It's <4> first edition was a mere 500 books, and most copies were sent to public libraries across England. By the time Rowling's seventh Harry Potter novel was published in 2007, Rowling had already become the woman who put a new face on children's literacy. *Harry Potter and the Deathly Hallows*, the final installment, has <5> a word count of nearly 1.1 million words, and sold 11 million copies in the first 24 hours of its release.<6>

Today, Rowling spends much <7> of her time working with her foundation, Lumos, which is named after a spell in the Potter series that brought light into darkness. <8> She founded <9> the nonprofit organization after seeing a photograph of a child in a caged bed who appeared to be screaming through its chain links. Rowling was overcome by the image that she <10> vowed to use her money and popularity to raise awareness of the 8 million children who live in such institutions globally. According to research, over 80% of orphaned children have living relatives which <11> cannot care for them because of poverty or disability. The staff at Lumos equip families with necessary resources to provide for their children rather than leaving them institutionalized. Lumos' long-term goal is the closure of every orphanage around the world, by returning all children to live with its <12> families, either biological or adoptive.

Rowling once said, "Happiness can be found in the darkest places if one only remembers to turn on the light". <13> J. K. Rowling has created happiness for millions of children through make-believe stories of triumph and real-life stories of hope.<15>

A. NO CHANGE

B. It is

C. Its'

D. Its

ANSWER: D

Explanation:

The correct replacement is "Its" because the sentence needs a possessive determiner: it identifies the first edition belonging to *The Philosopher's Stone*. In the phrase "Its first edition was a mere 500 books," "its" functions like other possessive words such as "his," "her," and "their," modifying the noun phrase "first edition." Possessive *its* never takes an apostrophe. The apostrophe form, *it's*, is a contraction meaning "it is" or "it has," neither of which fits before the noun phrase "first edition." A useful test is to expand *it's* into "it is": "It is first edition was a mere 500 books" is not grammatical, confirming that the possessive form is required. This distinction is a standard convention tested in SAT Writing and Language questions because apostrophes can indicate contractions or possession, depending on the word. The College Board's digital SAT preparation materials identify conventions of punctuation and sentence structure as assessed writing skills, including choosing forms that produce grammatically complete and conventional sentences. See the [College Board overview of SAT Reading and Writing](#) and the [Purdue OWL guide to apostrophes](#).

QUESTION NO: 39

DIRECTIONS: Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

Some questions will direct you to an underlined portion of a passage. Other questions will direct you to a location in a passage or ask you to think about the passage as a whole.

After reading each passage, choose the answer to each question that most effectively improves the quality of writing in the passage or that makes the passage conform to the conventions of standard written English. Many questions include a “NO CHANGE” option. Choose that option if you think the best choice is to leave the relevant portion of the passage as it is.

Read the passage and answer question (6).

Prehistoric Printing

Paleontologists are using modern technology to gain greater understanding of the distant past. With the aid of computed tomography (CT) scanning and 3-D printing, researchers are able to create accurate models of prehistoric fossils. (1) These models have expanded researchers’ knowledge of ancient species and (2) swear to advance the field of paleontology in the years to come.

CT scanners use X-rays to map the surface of a fossil in minute detail, recording as many as one million data points to create a digital blueprint. A 3-D printer then builds a polymer model based on this blueprint, much as a regular computer printer reproduces digital documents on paper. (3) Whereas the head of an ordinary computer printer moves back and forth while printing ink onto paper, the corresponding part of a 3-D printer moves in multiple dimensions while squirting out thin layers of melted polymer plastic. The plastic hardens quickly, (4) it allows the printer to build the layers of the final model. Compared with older ways of modeling fossils, scanning and printing in this way is extremely versatile.

[1] One significant benefit of 3-D printing technology is its ability to create scale reproductions of fossils. [2] But now 3-D scale models can be rearranged with ease, which is a huge boon to scientists. [3] A team led by Drexel University professor Kenneth Layover is making models of dinosaur bones one-tenth the bones’ original sizes (5) in order to learn how they fit together when the animals were alive. [4] In the past, such research was limited by the weight and bulk of the fossils as well as (6) its preciousness and fragility. [5] In many cases, scientists had to rearrange bones virtually, using artists’ renderings. (7)

Because CT scanners can map objects that are impossible to excavate, CT scanning and 3-D printing can also be used to reproduce fossils that scientists cannot observe firsthand. (8) By contrast, researchers from the National Museum of Brazil (9) has relied on this technique to study a fossilized skeleton that was discovered protruding from a rock at an old São Paulo railroad site. (10) The fossil was too delicate to be removed from the rock. Because of the fossil’s delicate nature, the team dug up a block of stone around the fossil and brought it to their lab. With the aid of a CT scanner and a 3-D printer, they were able to produce a resin model of the fossil. Examining the model, the researchers determined that (11) one had found a new species, a 75-million-year-old crocodile. While not every discovery will be as dramatic as this one, paleontologists anticipate further expanding their knowledge of ancient life-forms as CT scanning and 3-D printing continue to make fossils more accessible.

A. NO CHANGE

B. it’s

C. their

D. there

ANSWER: C

Explanation:

The correct revision is **their** because the possessive pronoun must agree in number with the noun it refers to. In the sentence, the relevant antecedent is “the fossils,” a plural noun. The sentence identifies two characteristics that limited research involving those fossils: their weight and bulk, followed by their preciousness and fragility. Using **their** creates consistent plural reference and clearly attributes both preciousness and fragility to the fossils under discussion.

Pronoun–antecedent agreement is a standard convention of written English tested in SAT Writing and Language questions. A pronoun must match its antecedent in number: plural antecedents require plural pronouns. Here, “fossils” calls for the plural possessive form **their**. The wording also maintains parallel structure within the phrase “the weight and bulk of the fossils as well as their preciousness and fragility,” making the relationship among the fossils’ physical and scientific characteristics clear. For further guidance on pronoun agreement, see the [Purdue Online Writing Lab’s pronoun–antecedent agreement guidance](#) and the [College Board overview of SAT Reading and Writing conventions](#).

QUESTION NO: 40

DIRECTIONS: Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

Some questions will direct you to an underlined portion of a passage. Other questions will direct you to a location in a passage or ask you to think about the passage as a whole.

After reading each passage, choose the answer to each question that most effectively improves the quality of writing in the passage or that makes the passage conform to the conventions of standard written English. Many questions include a “NO CHANGE” option. Choose that option if you think the best choice is to leave the relevant portion of the passage as it is.

Read the passage and answer question (1).

Prehistoric Printing

Paleontologists are using modern technology to gain greater understanding of the distant past. With the aid of computed tomography (CT) scanning and 3-D printing, researchers are able to create accurate models of prehistoric fossils. (1) These models have expanded researchers’ knowledge of ancient species and (2) swear to advance the field of paleontology in the years to come.

CT scanners use X-rays to map the surface of a fossil in minute detail, recording as many as one million data points to create a digital blueprint. A 3-D printer then builds a polymer model based on this blueprint, much as a regular computer printer reproduces digital documents on paper. (3) Whereas the head of an ordinary computer printer moves back and forth while printing ink onto paper, the corresponding part of a 3-D printer moves in multiple dimensions while squirting out thin layers of melted polymer plastic. The plastic hardens quickly, (4) it allows the printer to build the layers of the final model. Compared with older ways of modeling fossils, scanning and printing in this way is extremely versatile.

[1] One significant benefit of 3-D printing technology is its ability to create scale reproductions of fossils. [2] But now 3-D scale models can be rearranged with ease, which is a huge boon to scientists. [3] A team led by Drexel University professor Kenneth Layover is making models of dinosaur bones one-tenth the bones’ original sizes (5) in order to learn how they fit together when the animals were alive. [4] In the past, such research was limited by the weight and bulk of the fossils as well as (6) its preciousness and fragility. [5] In many cases, scientists had to rearrange bones virtually, using artists’ renderings. (7)

Because CT scanners can map objects that are impossible to excavate, CT scanning and 3-D printing can also be used to reproduce fossils that scientists cannot observe firsthand. (8) By contrast, researchers from the National Museum of Brazil (9) has relied on this technique to study a fossilized skeleton that was discovered protruding from a rock at an old São Paulo railroad site. (10) The fossil was too delicate to be removed from the rock. Because of the fossil’s delicate nature, the team dug up a block of stone around the fossil and brought it to their lab. With the aid of a CT scanner and a 3-D printer, they were able to produce a resin model of the fossil. Examining the model, the researchers determined that (11) one had found a new species, a 75-million-year-old crocodile. While not every discovery will be as dramatic as this one, paleontologists anticipate further expanding their knowledge of ancient life-forms as CT scanning and 3-D printing continue to make fossils more accessible.

At this point (1), the writer is considering adding the following sentence.

Fossils provide paleontologists with a convenient way of estimating the age of the rock in which the fossils are found.

Should the writer make this addition here?

- A. Yes, because it supports the paragraph’s argument with an important detail.
- B. Yes, because it provides a logical transition from the preceding sentence.
- C. No, because it is not directly related to the main point of the paragraph.
- D. No, because it undermines the main claim of the paragraph.

ANSWER: C

Explanation:

No, because it is not directly related to the main point of the paragraph. The proposed sentence should not be added at this location. The opening paragraph establishes that paleontologists use CT scanning and 3-D printing to create accurate fossil models and that these models expand scientists' knowledge of ancient species. The sentences immediately surrounding the proposed addition focus specifically on the role of modern imaging and printing technologies in making and studying those models. Information about using fossils to estimate the ages of surrounding rocks introduces a separate paleontological practice and does not develop the paragraph's central focus on CT scanning, 3-D printing, or model-based research. Since the sentence has no clear connection to the discussion of technological fossil reproduction, inserting it would interrupt the paragraph's cohesion rather than strengthen its development. Effective SAT revision decisions require added details to be relevant to the paragraph's purpose and logically connected to adjacent ideas. The College Board describes the Reading and Writing section as assessing students' ability to revise text for rhetorical synthesis and effective expression of ideas; relevance and cohesion are essential to those revision judgments. See the [College Board's SAT Reading and Writing overview](#) and its [Digital SAT test specifications](#).

QUESTION NO: 41

In the year 1860, the reputation of Doctor Wybrow as a London physician reached its highest point. It was reported on good authority that he was in receipt of one of the largest incomes derived from the practice of medicine in modern times.

One afternoon, towards the close of the London season, the doctor had just taken his luncheon after a specially hard morning's work in his consulting-room, and with a formidable list of visits to patients at their own houses to fill up the rest of his day – when the servant announced that a lady wished to speak to him. “Who is she?” the Doctor asked. “A stranger?”

“Yes, sir.”

“I see no strangers out of consulting-hours. Tell her what the hours are, and send her away.”

“I have told her, sir.”

“Well?”

“And she won't go.”

“Won't go?” The doctor smiled as he repeated the words. He was a humorist in his way; and there was an absurd side to the situation which rather amused him. “Has this obstinate lady given you her name?” he inquired.

“No, sir. She refused to give any name – she said she wouldn't keep you five minutes, and the matter was too important to wait till to-morrow. There she is in the consulting-room; and how to get her out again is more than I know.”

Doctor Wybrow considered for a moment. His knowledge of women (professionally speaking) rested on the ripe experience of more than thirty years; he had met with them in all their varieties – especially the variety which knows nothing of the value of time, and never hesitates at sheltering itself behind the privileges of its sex. A glance at his watch informed him that he must soon begin his rounds among the patients who were waiting for him at their own houses. He decided forthwith on taking the only wise course that was open under the circumstances. In other words, he decided on taking to flight.

“Is the carriage at the door?” he asked.

“Yes, sir.”

“Very well. Open the house-door for me without making any noise, and leave the lady in undisturbed possession of the consulting-room. When she gets tired of waiting, you know what to tell her.

If she asks when I am expected to return, say that I dine at my club, and spend the evening at the theatre. Now then, softly, Thomas! If your shoes creak, I am a lost man.”

What was the female characteristic that was most often observed by Doctor Wybrow?

- A. Once their mind was committed to something, it was impossible to change.
- B. They were all at the same a most peculiarly stubborn species.
- C. Notwithstanding their generally good nature, if cornered, they could become reticent.
- D. They knew nothing of the value of time.
- E. When it comes to determination, there is no creature on earth so prepared to fixate

ANSWER: D

Explanation:

The correct answer is “They knew nothing of the value of time.” The narrator directly identifies the characteristic Doctor Wybrow believed he had encountered most often during his more than thirty years of professional experience with women: “especially the variety which knows nothing of the value of time.” This is not an inference based solely on the unnamed visitor’s refusal to leave; it is the passage’s explicit statement of the doctor’s general observation. The visitor’s insistence on seeing him outside consulting hours and the doctor’s urgent schedule reinforce the relevance of time in this scene. His glance at his watch and decision to escape show that he considers the interruption especially costly because patients are waiting for visits. The wording also reflects the narrator’s presentation of Wybrow’s own biased, humorous perspective rather than an objective claim about women. For a close-reading question, the strongest answer therefore restates the precise trait named in the passage rather than broadening it into determination or stubbornness. The excerpt is from Wilkie Collins’s *The Law and the Lady*; the full text is available through [Project Gutenberg](#) and bibliographic information is available from the [Encyclopaedia Britannica biography of Wilkie Collins](#).

QUESTION NO: 42

Passage 1 is adapted from Catharine Beecher, *Essay on Slavery and Abolitionism*. Originally published in 1837. Passage 2 is adapted from Angelina

E. Grimké, *Letters to Catharine Beecher*.

Originally published in 1838. Grimké encouraged Southern women to oppose slavery publicly. Passage 1 is Beecher’s response to Grimké’s views. Passage 2 is Grimké’s response to Beecher.

Passage 1

Heaven has appointed to one sex the superior, and to the other the subordinate station, and this without any reference to the character or conduct of either. It is therefore as much for the dignity as it is for the interest of females, in all respects to conform to the duties of this relation... But while woman holds a subordinate relation in society to the other sex, it is not because it was designed that her duties or her influence should be any the less important, or all pervading. But it was designed that the mode of gaining influence and of exercising power should be altogether different and peculiar...

A man may act on society by the collision of intellect, in public debate; he may urge his measures by a sense of shame, by fear and by personal interest; he may coerce by the combination of public sentiment; he may drive by physical force, and he does not outstep the boundaries of his sphere. But all the power, and all the conquests that are lawful to woman, are those only which appeal to the kindly, generous, peaceful and benevolent principles.

Woman is to win everything by peace and love; by making herself so much respected, esteemed and loved, that to yield to her opinions and to gratify her wishes, will be the free will offering of the heart. But this is to be all accomplished in the domestic and social circle. There let every woman become so cultivated and refined in intellect, that her taste and judgment will be respected; so benevolent in feeling and action; that her motives will be revered; – so unassuming and unambitious, that collision and competition will be banished; – so “gentle and easy to be entreated,” as that every heart will repose in her presence; then, the fathers, the husbands, and the sons, will find an influence thrown around them, to which they will yield not only willingly but proudly...

A woman may seek the aid of co-operation and combination among her own sex, to assist her in her appropriate offices of piety, charity, maternal and domestic duty; but whatever, in any measure, throws a woman into the attitude of a combatant, either for herself or others – whatever binds her in a party conflict – whatever obliges her in any way to exert coercive influences, throws her out of her appropriate sphere. If these general principles are correct, they are entirely opposed to the plan of arraying females in any Abolition movement.

Passage 2

The investigation of the rights of the slave has led me to a better understanding of my own. I have found the Anti-Slavery cause to be the high school of morals in our land – the school in which human rights are more fully investigated, and better understood and taught, than in any other. Here a great fundamental principle is uplifted and illuminated, and from this central light, rays innumerable stream all around.

Human beings have rights, because they are moral beings: the rights of all men grow out of their moral nature; and as all men have the same moral nature, they have essentially the same rights. These rights may be wrested from the slave, but they cannot be alienated: his title to himself is as perfect now, as is that of Lyman Beecher*: it is stamped on his moral being, and is, like it, imperishable. Now if rights are founded in the nature of our moral being, then the mere circumstance of sex

does not give to man higher rights and responsibilities, than to woman. To suppose that it does, would be to deny the self-evident truth, that the “physical constitution is the mere instrument of the moral nature.” To suppose that it does, would be to break up utterly the relations, of the two natures, and to reverse their functions, exalting the animal nature into a monarch, and humbling the moral into a slave; making the former a proprietor, and the latter its property.

When human beings are regarded as moral beings, sex, instead of being enthroned upon the summit, administering upon rights and responsibilities, sinks into insignificance and nothingness. My doctrine then is, that whatever it is morally right for man to do, it is morally right for woman to do. Our duties originate, not from difference of sex, but from the diversity of our relations in life, the various gifts and talents committed to our care, and the different eras in which we live.

* Lyman Beecher was a famous minister and the father of Catharine Beecher.

In Passage 1, Beecher implies that women’s effect on public life is largely:

- A. overlooked, because few men are interested in women’s thoughts about politics.
- B. indirect, because women exert their influence within the home and family life.
- C. unnecessary, because men are able to govern society themselves.
- D. symbolic, because women tend to be more idealistic about politics than men are.
- E. No answer choice is provided.

ANSWER: B

Explanation:

The correct answer is *indirect, because women exert their influence within the home and family life*. Beecher presents women’s influence as real and significant, but she confines the means of exercising it to domestic and social relationships rather than direct public participation. She says that women should gain power through “peace and love,” becoming sufficiently respected, esteemed, and loved that men voluntarily yield to their opinions and wishes. She then explicitly locates this process in “the domestic and social circle.” Her examples—“the fathers, the husbands, and the sons”—show the route by which women affect broader public life: they shape the attitudes and decisions of men who act in the public sphere. Thus, the influence is indirect, moving from women’s household and social roles outward to society through family relationships. This interpretation also fits Beecher’s stated belief that women’s mode of influence is “different and peculiar” and that public conflict or coercion lies outside what she calls their appropriate sphere. The question therefore requires identifying the passage’s distinction between women’s meaningful private influence and men’s direct public action. For background on the SAT Reading approach of using specific textual evidence to support an inference, see the [College Board SAT Reading overview](#). The historical text is available through the [Project Gutenberg edition of Essay on Slavery and Abolitionism](#).

QUESTION NO: 43

This passage is adapted from Francis J. Flynn and Gabrielle S. Adams, "Money Can't Buy Love: Asymmetric Beliefs about Gift Price and Feelings of Appreciation." Copyright 2008 by Elsevier Inc.

Every day, millions of shoppers hit the stores in full force – both online and on foot – searching frantically for the perfect gift. Last year, Americans spent over \$30 billion at retail stores in the month of December alone. Aside from purchasing holiday gifts, most people regularly buy presents for other occasions throughout the year, including weddings, birthdays, anniversaries, graduations, and baby showers. This frequent experience of gift-giving can engender ambivalent feelings in gift-givers. Many relish the opportunity to buy presents because gift-giving offers a powerful means to build stronger bonds with one’s closest peers. At the same time, many dread the thought of buying gifts; they worry that their purchases will disappoint rather than delight the intended recipients.

Anthropologists describe gift-giving as a positive social process, serving various political, religious, and psychological functions. Economists, however, offer a less favorable view. According to

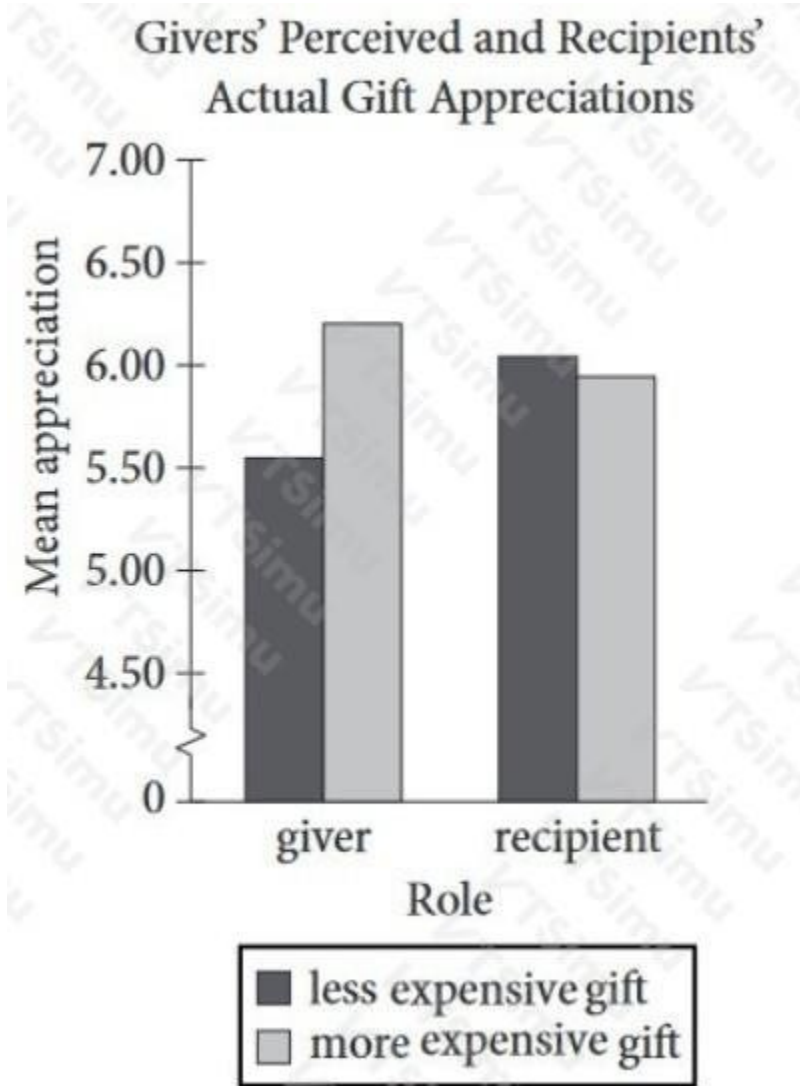
Waldfoegel (1993), gift-giving represents an objective waste of resources. People buy gifts that recipients would not choose to buy on their own, or at least not spend as much money to purchase (a phenomenon referred to as “the deadweight loss of Christmas”). To wit, givers are likely to spend \$100 to purchase a gift that receivers would spend only \$80 to buy themselves. This “deadweight loss” suggests that gift-givers are not very good at predicting what gifts others will appreciate. That in itself is not surprising to social psychologists. Research has found that people often struggle to take account of others’ perspectives – their insights are subject to egocentrism, social projection, and multiple attribution errors.

What is surprising is that gift-givers have considerable experience acting as both gift-givers and gift-recipients, but nevertheless tend to overspend each time they set out to purchase a meaningful gift. In the present research, we propose a unique psychological explanation for this overspending problem – that is, that gift-givers equate how much they spend with how much recipients will appreciate the gift (the more expensive the gift, the stronger a gift-recipient's feelings of appreciation). Although a link between gift price and feelings of appreciation might seem intuitive to gift-givers, such an assumption may be unfounded. Indeed, we propose that gift-recipients will be less inclined to base their feelings of appreciation on the magnitude of a gift than givers assume.

Why do gift-givers assume that gift price is closely linked to gift-recipients' feelings of appreciation? Perhaps givers believe that bigger (that is, more expensive) gifts convey stronger signals of thoughtfulness and consideration. According to Camerer (1988) and others, gift-giving represents a symbolic ritual, whereby gift-givers attempt to signal their positive attitudes toward the intended recipient and their willingness to invest resources in a future relationship. In this sense, gift-givers may be motivated to spend more money on a gift in order to send a "stronger signal" to their intended recipient. As for gift-recipients, they may not construe smaller and larger gifts as representing smaller and larger signals of thoughtfulness and consideration.

The notion of gift-givers and gift-recipients being unable to account for the other party's perspective seems puzzling because people slip in and out of these roles every day, and, in some cases, multiple times in the course of the same day. Yet, despite the extensive experience that people have as both givers and receivers, they often struggle to transfer information gained from one role

(for example, as a giver) and apply it in another, complementary role (for example, as a receiver). In theoretical terms, people fail to utilize information about their own preferences and experiences in order to produce more efficient outcomes in their exchange relations. In practical terms, people spend hundreds of dollars each year on gifts, but somehow never learn to calibrate their gift expenditures according to personal insight.



The authors most likely use the examples in paragraph 1 of the passage ("Every ... showers") to highlight the:

- A. regularity with which people shop for gifts.
- B. recent increase in the amount of money spent on gifts.
- C. anxiety gift shopping causes for consumers.
- D. number of special occasions involving gift-giving.

ANSWER: A

Explanation:

The correct answer is “**regularity with which people shop for gifts.**” The cited portion establishes that gift buying is a routine and widespread activity. It begins with “Every day” and describes “millions of shoppers” looking for gifts, then provides a large December spending figure, and finally notes that people “regularly” purchase presents throughout the year for occasions such as weddings, birthdays, anniversaries, graduations, and baby showers. Together, these details emphasize both the recurring nature and the broad extent of gift shopping rather than merely supplying background statistics.

This emphasis is important because the passage’s central puzzle depends on people having repeated experience with gift giving. After establishing that people shop for gifts often, the authors introduce their claim that this frequent experience can produce mixed emotions and later question why people continue to overspend despite serving repeatedly as both givers and recipients. Thus, the opening examples function as evidence that gift shopping is common and habitual, setting up the research problem explored in the rest of the passage. This aligns with the SAT Reading approach of identifying how specific textual details support a paragraph’s purpose and the passage’s developing argument. See the [College Board overview of SAT Reading and Writing](#) and [Khan Academy’s SAT Reading and Writing resources](#).

QUESTION NO: 44

Also the Emperor became more and more excited with curiosity, and with great suspense one awaited the hour, when according to mask-law, each masked guest must make himself known. This moment came, but although all other unmasked; the secret knight still refused to allow his features to be seen, till at last the Queen driven by curiosity, and vexed at the obstinate refusal; commanded him to open his Vizier.

He opened it, and none of the high ladies and knights knew him. But from the crowded spectators, two officials advanced, who recognized the black dancer, and horror and terror spread in the saloon, as they said who the supposed knight was. It was the executioner of Bergen. But glowing with rage, the King commanded to seize the criminal and lead him to death, who had ventured to dance, with the queen; so disgraced the Empress, and insulted the crown. The culpable threw himself at the Emperor, and said:

“Indeed I have heavily sinned against all noble guests assembled here, but most heavily against you my sovereign and my queen. The Queen is insulted by my haughtiness equal to treason, but no punishment even blood, will not be able to wash out the disgrace, which you have suffered by me. Therefore oh King! allow me to propose a remedy, to efface the shame, and to render it as if not done. Draw your sword and knight me, then I will throw down my gauntlet, to everyone who dares to speak disrespectfully of my king.”

All of the following would qualify to support the secret knight being labeled a “criminal” 1st paragraph EXCEPT:

- A. he was executioner of Bergen.
- B. he disobeyed the mask-law.
- C. he was physically in the saloon.
- D. he represented himself as a knight.
- E. he danced and fraternized with royalty.

ANSWER: A

Explanation:

“he was executioner of Bergen.” is the best answer because being an executioner was an occupation, not itself a criminal act. Historically, executioners were officials charged with carrying out sentences imposed by legal authorities. Although they could be socially marginalized or treated with fear and contempt, their work was performed under governmental or judicial authority rather than in defiance of it. Thus, the revelation that the masked dancer was the executioner explains the court’s shocked reaction and the class-based sense of impropriety surrounding his presence among nobles, but it does not independently establish that he was a criminal.

The passage’s use of “criminal” is instead connected to the ruler’s perception that the man has dishonored the crown and violated the expected social boundaries of the royal gathering. The executioner himself describes his conduct as an offense against the sovereign and queen, showing that his alleged wrongdoing arises from the event and its etiquette, not from his profession. For historical context on executioners as public officials carrying out legal punishments, see [Encyclopaedia Britannica’s entry on executioners](#). A broader overview of the historic relationship between courts and punishment is available from [The UK National Archives](#).

QUESTION NO: 45

DIRECTIONS: Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

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Read the passage and answer question (4).

Shed Some Light on the Workplace

Studies have shown that employees are happier, (1) healthier, and more productive when they work in an environment (2) in which temperatures are carefully controlled. New buildings may be designed with these studies in mind, but many older buildings were not, resulting in spaces that often depend primarily on artificial lighting. While employers may balk at the expense of reconfiguring such buildings to increase the amount of natural light, the investment has been shown to be well worth it in the long run – for both employees and employers.

For one thing, lack of exposure to natural light has a significant impact on employees’ health. A study conducted in 2013 by Northwestern University in Chicago showed that inadequate natural light could result in eye strain, headaches, and fatigue, as well as interference with the body’s circadian rhythms. (3) Circadian rhythms, which are controlled by the (4) bodies biological clocks, influence body temperature, hormone release, cycles of sleep and wakefulness, and other bodily functions. Disruptions of circadian rhythms have been linked to sleep disorders, diabetes, depression, and bipolar disorder. Like any other health problems, these ailments can increase employee absenteeism, which, in turn, (5) is costly for employers. Employees who feel less than 100 percent and are sleep deprived are also less prone to work at their maximal productivity. One company in California (6) gained a huge boost in its employees’ morale when it moved from an artificially lit distribution facility to one with natural illumination.

(7) Artificial light sources are also costly aside from lowering worker productivity. They typically constitute anywhere from 25 to 50 percent of a building’s energy use. When a plant in Seattle, Washington, was redesigned for more natural light, the company was able to enjoy annual electricity cost reductions of \$500,000 (8) each year.

Among the possibilities to reconfigure a building’s lighting is the installation of full pane windows to allow the greatest degree of sunlight to reach office interiors. (9) Thus, businesses can install light tubes, (10) these are pipes placed in workplace roofs to capture and funnel sunlight down into a building’s interior. Glass walls and dividers can also be used to replace solid walls as a means (11) through distributing natural light more freely. Considering the enormous costs of artificial lighting, both in terms of money and productivity, investment in such improvements should be a natural choice for businesses.

A. NO CHANGE

B. bodies’ biological clocks’,

C. body’s biological clocks,

D. body’s biological clock’s,

ANSWER: C

Explanation:

The correct revision is “body’s biological clocks,” because the sentence refers generally to the biological clocks belonging to one representative human body. The singular possessive noun “body’s” properly shows that the clocks belong to the body, while the plural noun “clocks” accurately reflects that circadian timing involves multiple biological clocks throughout the body. The comma is also needed because it closes the nonessential relative clause beginning with “which are controlled by.” With the phrase correctly written, the sentence clearly states that circadian rhythms are controlled by the body’s biological clocks and then continues with the main verb, “influence.” This usage follows standard conventions for forming possessives: add an apostrophe and s to a singular noun to show possession, and use a regular plural noun without an apostrophe when it is simply naming more than one thing. The College Board’s SAT grammar guidance assesses conventions of punctuation and possession in context, including correct use of apostrophes. See the [College Board’s SAT Writing and Language overview](#) and the [Purdue OWL guide to apostrophes](#).

QUESTION NO: 46

When Rob became interested in electricity, his clear-headed father considered the boy’s fancy to be instructive as well as amusing; so he heartily encouraged his son, and Rob never lacked batteries, motors, or supplies of any sort that his experiments might require.

He fitted up the little back room in the attic as his workshop, and from thence, a network of wires soon ran throughout the house. Not only had every outside door its electric bell, but every window was fitted with a burglar alarm; moreover, no one could cross the threshold of any interior room without registering the fact in Rob’s workshop. The gas was lighted by an electric fob; a chime, connected with an erratic clock in the boy’s room, woke the servants at all hours of the night and caused the cook to give warning; a bell rang whenever the postman dropped a letter into the box; there were bells, bells, bells everywhere, ringing at the right time, the wrong time and all the time. And there were telephones in the different rooms, too, through which Rob could call up the different members of the family just when they did not wish to be disturbed.

His mother and sisters soon came to vote the boy’s scientific craze a nuisance; but his father was delighted with these evidences of Rob’s skill as an electrician and insisted that he be allowed perfect freedom in carrying out his ideas.

Paragraph three performs which of the following functions?

- A. shows that mother and sister’s input is valuable and heralded
- B. shows father is willing to listen and alter decisions if warranted
- C. postulates the notion that perhaps the experiments have gone too far
- D. demonstrates the continuing grip father has over the entire household
- E. warrants a rethinking of the continuous supplying of materials to Rob

ANSWER: C

Explanation:

“postulates the notion that perhaps the experiments have gone too far” is correct because the paragraph introduces a clear consequence of the increasingly elaborate electrical setup described previously: Rob’s mother and sisters now regard his “scientific craze” as a nuisance. This reaction invites the reader to recognize that the inventions, though initially encouraged as educational and amusing, have become disruptive to ordinary household life. The paragraph therefore shifts the passage from simply cataloging Rob’s impressive but intrusive devices to raising a tension about their practical limits. The father’s continued delight and insistence on Rob’s “perfect freedom” intensify that tension, since his approval allows the disruptive situation to continue despite the objections of other family members. In SAT Reading questions about a paragraph’s function, the best answer identifies the role that paragraph plays in the development of the passage rather than making an unsupported broad claim about a character. Here, the paragraph develops the idea that Rob’s experiments may have exceeded what the household can comfortably tolerate. See the College Board’s overview of Reading and Writing skills at <https://satsuite.collegeboard.org/sat/whats-on-the-test/reading-writing> and its guidance on interpreting information and ideas at <https://satsuite.collegeboard.org/sat/whats-on-the-test/reading-writing/information-ideas>.

QUESTION NO: 47

DIRECTIONS: Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

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Read the passage and answer question (2).

Coworking: A Creative Solution

When I left my office job as a website developer at a small company for a position that allowed me to work full-time from home, I thought I had it made: I gleefully traded in my suits and dress shoes for sweatpants and slippers, my frantic early-morning bagged lunch packing for a leisurely midday trip to my refrigerator. The novelty of this comfortable work-from-home life, however, (1) soon got worn off quickly. Within a month, I found myself feeling isolated despite having frequent email and instant messaging contact with my colleagues. Having become frustrated trying to solve difficult problems, (2) no colleagues were nearby to share ideas. It was during this time that I read an article (3) into coworking spaces.

The article, published by Forbes magazine, explained that coworking spaces are designated locations that, for a fee, individuals can use to conduct their work. The spaces are usually stocked with standard office (4) equipment, such as photocopiers, printers, and fax machines. (5) In these locations, however, the spaces often include small meeting areas and larger rooms for hosting presentations. (6) The cost of launching a new coworking business in the United States is estimated to be approximately \$58,000.

What most caught my interest, though, was a quotation from someone who described coworking spaces as “melting pots of creativity.” The article refers to a 2012 survey in which (7) 64 percent of respondents noted that coworking spaces prevented them from completing tasks in a given time. The article goes on to suggest that the most valuable resources provided by coworking spaces are actually the people (8) whom use them.

[1] Thus, even though I already had all the equipment I needed in my home office, I decided to try using a coworking space in my city. [2] Because I was specifically interested in coworking’s reported benefits related to creativity, I chose a facility that offered a bright, open work area where I wouldn’t be isolated. [3] Throughout the morning, more people appeared. [4] Periods of quiet, during which everyone worked independently, were broken up occasionally with lively conversation. (9)

I liked the experience so much that I now go to the coworking space a few times a week. Over time, I’ve gotten to know several of my coworking (10) colleagues: another website developer, a graphic designer, a freelance writer, and several mobile app coders. Even those of us who work in disparate fields are able to (11) share advice and help each other brainstorm. In fact, it’s the diversity of their talents and experiences that makes my coworking colleagues so valuable.

A. NO CHANGE

B. colleagues were important for sharing ideas.

C. ideas couldn’t be shared with colleagues.

D. I missed having colleagues nearby to consult.

ANSWER: D

Explanation:

“I missed having colleagues nearby to consult.” correctly completes the sentence because it gives the opening participial phrase, “Having become frustrated trying to solve difficult problems,” a clear and logical subject: the narrator. A participial phrase at the beginning of a sentence ordinarily modifies the noun or pronoun that immediately follows it. Here, the narrator is the person who became frustrated while attempting to solve problems, so placing “I” directly after the comma creates a standard, coherent construction. The completed sentence also fits the passage’s meaning and progression: working from home has left the narrator isolated, and the narrator misses the opportunity to seek input from nearby coworkers. That experience naturally leads to the next sentence, in which the narrator reads about coworking spaces. This revision therefore

improves both grammatical clarity and the narrative's cohesion. Guidance on avoiding dangling modifiers similarly emphasizes that the noun being modified should be stated clearly and placed immediately after an introductory modifying phrase. See the [Purdue Online Writing Lab's guidance on modifiers](#) and the [University of North Carolina Writing Center's explanation of dangling modifiers](#).

QUESTION NO: 48

The following passage was written by John Janovec, an ecologist who has worked in the Los Amigos watershed in Peru.

The Amazonian wilderness harbors the greatest number of species on this planet and is an irreplaceable resource for present and future generations. Amazonia is crucial for maintaining global climate and genetic resources, and its forest and rivers provide vital sources of food, building materials, pharmaceuticals, and water needed by wildlife and humanity.

The Los Amigos watershed in the state of Madre de Dios, southeastern Peru, is representative of the pristine lowland moist forest once found throughout most of upper Amazonian South America. Threats to tropical forests occur in the form of fishing, hunting, gold mining, timber extraction, impending road construction, and slash-and-burn agriculture. The Los Amigos watershed, consisting of 1.6 million hectares (3.95 million acres), still offers the increasingly scarce opportunity to study rainforest as it was before the disruptive encroachment of modern human civilization. Because of its relatively pristine condition and the immediate need to justify it as a conservation zone, this area deserves intensive, long-term projects aimed at botanical training, ecotourism, biological inventory, and information synthesis.

On July 24, 2001, the government of Peru and the Amazon Conservation Association signed a contractual agreement creating the first long-term permanently renewable conservation concession. To our knowledge this is the first such agreement to be implemented in the world. The conservation concession protects 340,000 acres of old-growth Amazonian forest in the Los Amigos watershed, which is located in southeastern Peru. This watershed protects the eastern flank of Manu National Park and is part of the lowland forest corridor that links it to BahuajaSonene National Park. The Los Amigos conservation concession will serve as a mechanism for the development of a regional center of excellence in natural forest management and biodiversity science.

Several major projects are being implemented at the Los Amigos Conservation Area. Louise Emmons is initiating studies of mammal diversity and ecology in the Los Amigos area. Other projects involve studies of the diversity of arthropods, amphibians, reptiles, and birds. Robin Foster has conducted botanical studies at Los Amigos, resulting in the labeling of hundreds of plant species along two kilometers of trail in upland and lowland forest. Michael Goulding is leading a fisheries and aquatic ecology program, which aims to document the diversity of fish, their ecologies, and their habitats in the Los Amigos area and the Madre de Dios watershed in general.

With support from the Amazon Conservation Association, and in collaboration with U.S. and Peruvian colleagues, the Botany of the Los Amigos project has been initiated. At Los Amigos, we are attempting to develop a system of preservation, sustainability, and scientific research; a marriage between various disciplines, from human ecology to economic botany, product marketing to forest management. The complexity of the ecosystem will best be understood through a multidisciplinary approach, and improved understanding of the complexity will lead to better management. The future of these forests will depend on sustainable management and development of alternative practices and products that do not require irreversible destruction.

The botanical project will provide a foundation of information that is essential to other programs at Los Amigos. By combining botanical studies with fisheries and mammology, we will better understand plant/animal interactions. By providing names, the botanical program will facilitate accurate communication about plants and the animals that use them. Included in this scenario are humans, as we will dedicate time to people-plant interactions in order to learn what plants are used by people in the Los Amigos area, and what plants could potentially be used by people.

To be informed, we must develop knowledge. To develop knowledge, we must collect, organize, and disseminate information. In this sense, botanical information has conservation value. Before we can use plant-based products from the forest, we must know what species are useful and we must know their names. We must be able to identify them, to know where they occur in the forest, how many of them exist, how they are pollinated and when they produce fruit (or other useful products). Aside from understanding the species as they occur locally at Los Amigos, we must have information about their overall distribution in tropical America in order to better understand and manage the distribution, variation, and viability of their genetic diversity. This involves a more complete understanding of the species through studies in the field and herbarium.

When the author says that the botanical project will “provide names,” he means that the project will:

- A. help recognize new species.
- B. aid in the standardization of names for new species.

- C. participate in naming the region's different zones.
- D. publish information for corporations and researchers regarding the most appropriate names for specific plants.
- E. clarify the confusion surrounding the names of different organizations working in Amazonia.

ANSWER: B

Explanation:

The correct answer is *aid in the standardization of names for new species*. In context, “providing names” refers to the botanical work of identifying plants and assigning or documenting the scientific names by which researchers can refer to them consistently. The passage directly connects this work to “accurate communication about plants and the animals that use them.” A shared, standardized naming system lets botanists, ecologists, fisheries researchers, mammalogists, and others know they are discussing the same organism, connect observations across projects, and organize information about ecological relationships and potential human uses.

This meaning is reinforced in the final paragraph, where the author stresses that conservation and sustainable use require knowing what species are useful, knowing “their names,” being able to identify them, and recording where and how they occur. Thus, naming is not merely labeling plants on a trail; it establishes reliable scientific identification that makes research findings communicable and usable. This is a text-evidence question: the best answer follows from the specific function the author assigns to names in the cited sentences. The SAT Reading and Writing section assesses interpretation supported by passage details, as described by the [College Board's Reading and Writing overview](#). The role of scientific naming in enabling clear biological communication is also reflected in the [International Code of Nomenclature](#).

QUESTION NO: 49

DIRECTIONS: Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

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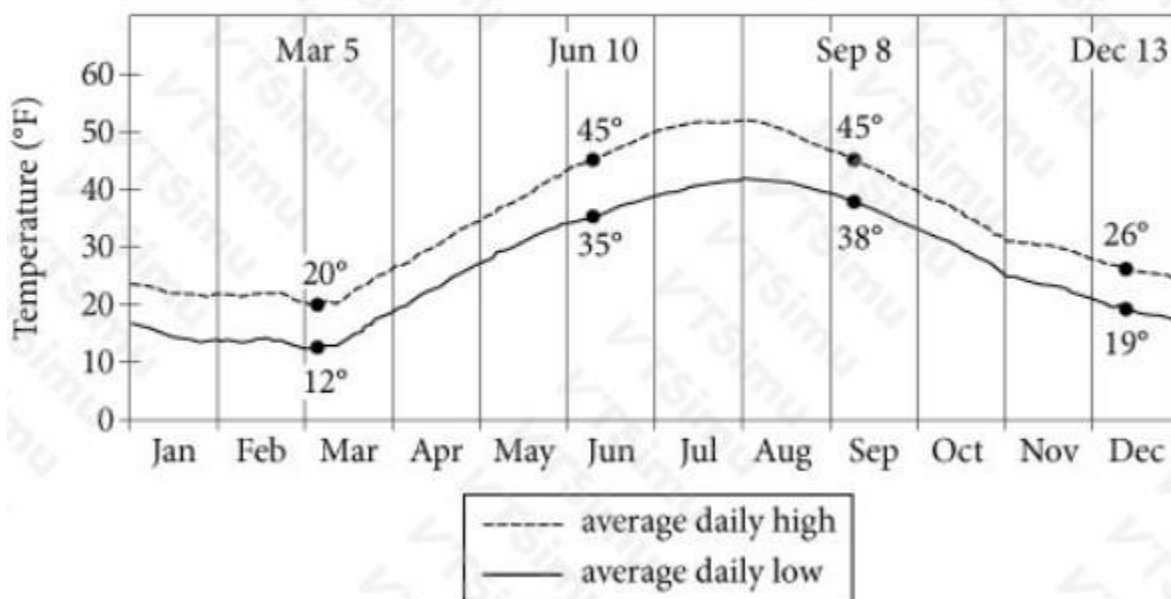
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Read the passage and answer question (9).

Dark Snow

Most of Greenland's interior is covered by a thick layer of ice and compressed snow known as the Greenland Ice Sheet. The size of the ice sheet fluctuates seasonally: in summer, average daily high temperatures in Greenland can rise to slightly above 50 degrees Fahrenheit, partially melting the ice; in the winter, the sheet thickens as additional snow falls, and average daily low temperatures can drop (1) to as low as 20 degrees.

Average Daily High and Low Temperatures Recorded
at Nuuk Weather Station, Greenland (1961—1990)



Adapted from W M O. Copyright 2014 by World Meteorological Organization.

Typically, the ice sheet begins to show evidence of thawing in late (2) summer. This follows several weeks of higher temperatures. (3) For example, in the summer of 2012, virtually the entire Greenland Ice Sheet underwent thawing at or near its surface by mid-July, the earliest date on record. Most scientists looking for the causes of the Great Melt of 2012 have focused exclusively on rising temperatures. The summer of 2012 was the warmest in 170 years, records show. But Jason (4) Box, an associate professor of geology at Ohio State believes that another factor added to the early (5) thaw; the “dark snow” problem.

According to Box, a leading Greenland expert, tundra fires in 2012 from as far away as North America produced great amounts of soot, some (6) of it drifted over Greenland in giant plumes of smoke and then (7) fell as particles onto the ice sheet. Scientists have long known that soot particles facilitate melting by darkening snow and ice, limiting (8) it’s ability to reflect the Sun’s rays. As Box explains, “Soot is an extremely powerful light absorber. It settles over the ice and captures the Sun’s heat.” The result is a self-reinforcing cycle. As the ice melts, the land and water under the ice become exposed, and since land and water are darker than snow, the surface absorbs even more heat, which (9) is related to the rising temperatures.

Box’s research is important because the fires of 2012 may not be a one-time phenomenon. According to scientists, rising Arctic temperatures are making northern latitudes greener and thus more fire prone. The pattern Box observed in 2012 may repeat (10) itself again, with harmful effects on the Arctic ecosystem. Box is currently organizing an expedition to gather this crucial information. The next step for Box and his team is to travel to Greenland to perform direct sampling of the ice in order to determine just how much the soot is contributing to the melting of the ice sheet. Members of the public will be able to track his team’s progress – and even help fund the expedition – through a website Box has created. (11) Which choice best completes the description of a self-reinforcing cycle?

- A. NO CHANGE
- B. raises the surface temperature.
- C. begins to cool at a certain point.
- D. leads to additional melting.

ANSWER: D

Explanation:

The correct completion is “leads to additional melting.” The paragraph describes a feedback loop: soot first darkens the snow and ice, causing the surface to absorb more of the Sun’s energy and melt more readily. Once melting exposes the darker land and water beneath the ice, those newly exposed surfaces absorb still more heat than reflective snow and ice would. That extra heat causes further melting, which exposes additional dark surface, continuing and intensifying the same process.

Thus, “leads to additional melting” directly and concisely completes the causal chain required by the phrase “self-reinforcing cycle.” It also creates a grammatically clear sentence: “the surface absorbs even more heat, which leads to additional melting.” The scientific principle underlying this description is the ice-albedo feedback: bright snow and ice reflect a large share of incoming solar radiation, while darker surfaces absorb more energy, promoting warming and ice loss. NASA explains this feedback mechanism in its overview of albedo and climate at <https://science.nasa.gov/earth/earth-observatory/what-is-albedo/>. The National Snow and Ice Data Center likewise describes how loss of reflective sea ice allows darker ocean water to absorb more solar energy at <https://nsidc.org/learn/parts-cryosphere/sea-ice/why-sea-ice-matters>.

QUESTION NO: 50

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Read the passage and answer question (9).

More than One Way to Dress a Cat

From Michelangelo’s David to Vincent van Gogh’s series of self portraits to Grant Wood’s iconic image of a farming couple in American (1) Gothic. These works by human artists have favored representations of members of their own species to those of other species. Indeed, when we think about animals depicted in well known works of art, the image of dogs playing poker – popularized in a series of paintings by American artist

C. M. (2) Coolidge, may be the first and only one that comes to mind. Yet some of the earliest known works of art, including paintings and drawings tens of thousands of years old found on cave walls in Spain and France, (3) portrays animals. Nor has artistic homage to our fellow creatures entirely died out in the millennia since, (4) despite the many years that have passed between then and now.

[1] The State Hermitage Museum in St. Petersburg, one of Russia’s greatest art museums, has long had a productive partnership with a much loved animal: the cat. [2] For centuries, cats have guarded this famous museum, ridding it of mice, rats, and other rodents that could damage the art, not to mention (5) scared off visitors. [3] Peter the Great introduced the first cat to the

Hermitage in the early eighteenth century. [4] Later Catherine the Great declared the cats to be official guardians of the galleries. [5] Continuing the tradition, Peter’s daughter Elizaveta introduced the best and strongest cats in Russia to the Hermitage. [6] Today, the museum holds a yearly festival honoring these faithful workers. (6)

These cats are so cherished by the museum that officials recently (7) decreed original paintings to be made of six of them. In each, a cat is depicted upright in a humanlike pose and clothed in imperial era Russian attire. The person chosen for this (8) task, digital artist, Eldar Zakirov painted the cats in the style traditionally used by portrait artists, in so doing (9) presenting the cats as noble individuals worthy of respect. One portrait, The Hermitage Court Chamber Herald Cat, includes an aristocratic tilt of feline ears as well as a stately sweep of tail emerging from the stiff scarlet and gold of royal court dress. The wise, thoughtful green eyes of the subject of The Hermitage Court Outrunner Cat mimic those of a trusted royal advisor. (10) Some may find it peculiar to observe cats portrayed in formal court poses, but these felines, by (11) mastering the art of killing mice and rats, are benefactors of the museum as important as any human.

Which choice most effectively sets up the examples that follow?

- A. NO CHANGE
- B. managing to capture unique characteristics of each cat.
- C. commenting on the absurdity of dressing up cats in royal robes.
- D. indicating that the cats were very talented mouse catchers.

ANSWER: A

Explanation:

“NO CHANGE” is correct because “presenting the cats as noble individuals worthy of respect” supplies a clear, accurate general claim that the next two sentences develop with specific visual details. The first portrait is described through aristocratic and stately features: the cat has a dignified tilt of the ears, a sweeping tail, and elaborate scarlet-and-gold court dress. The second portrait reinforces the same elevated characterization by comparing the cat’s thoughtful green eyes to those of a trusted royal advisor. Thus, both examples support the idea that Zakirov’s portrait style gives the cats status, dignity, and an individual presence associated with the Russian court. The wording also maintains the passage’s respectful tone toward the Hermitage cats, whose practical work protecting the museum has earned them unusual recognition. In an SAT Writing and Language question asking which wording best sets up examples, the best choice should make a claim that is directly illustrated by the details immediately following it. Here, the examples function as evidence for the cats’ noble depiction, creating strong cohesion between the introductory sentence and the portrait descriptions. This aligns with the College Board’s emphasis on selecting revisions that improve an idea’s organization and support: [College Board: SAT Reading and Writing](#). See also [College Board digital SAT sample questions](#).

QUESTION NO: 51

It was her need to _____ that caused her to become an _____; the belief that the government was corrupt and the constant censorship being the two principal causes for move.

- A. express ... outcast
- B. release ... icon
- C. expose ... outsider
- D. expatriate ... expatriate
- E. control ... anarchist

ANSWER: D

Explanation:

The best completion is “expatriate ... expatriate.” To *expatriate* is to speak or write at length or in considerable detail about a subject. In the sentence, the woman’s belief that the government is corrupt, combined with continual censorship, gives her a strong motivation to speak or write freely and fully about those matters. That need fits naturally with the infinitive construction “need to expatriate.” Merriam-Webster defines *expatriate* as speaking or writing at length or in detail, which directly supports this meaning: [Merriam-Webster: expatriate](#).

The resulting status is also precise. An *expatriate* is a person who lives outside their native country. The sentence identifies censorship and political corruption as the principal causes for her move, so becoming an expatriate is the logical result of leaving her home country in pursuit of the freedom to express herself. This word therefore creates the required cause-and-effect relationship: persistent censorship prompts her need to communicate at length, and that pressure contributes to her relocation abroad. The noun’s meaning is confirmed by [Merriam-Webster: expatriate](#).

QUESTION NO: 52

The performer was exceedingly _____; she could juggle three apples at once.

- A. inept
- B. contentious
- C. complacent
- D. adroit
- E. astute

ANSWER: D

Explanation:

The correct answer is **adroit**. “Adroit” means skillful, deft, or highly proficient in using one’s hands or mind. Juggling three apples simultaneously requires coordination, practice, dexterity, and precise control of movement, so the context directly supports a word meaning exceptionally skillful. The adverb “exceedingly” further emphasizes that the performer possesses this quality to a high degree: she is not merely capable, but notably adept. In sentence-completion questions, the strongest choice is the one whose meaning is specifically supported by the evidence after the semicolon. Here, the successful juggling performance functions as concrete evidence of the performer’s adroitness. Major dictionaries define “adroit” as clever or skillful in the use of the hands or mind, which fits a juggling act exactly. See the definitions from [Merriam-Webster](#) and [Cambridge Dictionary](#).

QUESTION NO: 53

Passage 1 is adapted from Talleyrand et al., Report on Public Instruction. Originally published in 1791. Passage 2 is adapted from Mary Wollstonecraft, A Vindication of the Rights of Woman. Originally published in 1792. Talleyrand was a French diplomat; the Report was a plan for national education. Wollstonecraft, a British novelist and political writer, wrote Vindication in response to Talleyrand.

Passage 1

That half the human race is excluded by the other half from any participation in government; that they are native by birth but foreign by law in the very land where they were born; and that they are property owners yet have no direct influence or representation: are all political phenomena apparently impossible to explain on abstract principle. But on another level of ideas, the question changes and may be easily resolved. The purpose of all these institutions must be the happiness of the greatest number. Everything that leads us farther from this purpose is in error; everything that brings us closer is truth. If the exclusion from public employments decreed against women leads to a greater sum of mutual happiness for the two sexes, then this becomes a law that all Societies have been compelled to acknowledge and sanction.

Any other ambition would be a reversal of our primary destinies; and it will never be in women’s interest to change the assignment they have received.

It seems to us incontestable that our common happiness, above all that of women, requires that they never aspire to the exercise of political rights and functions. Here we must seek their interests in the wishes of nature. Is it not apparent, that their delicate constitutions, their peaceful inclinations, and the many duties of motherhood, set them apart from strenuous habits and onerous duties, and summon them to gentle occupations and the cares of the home? And is it not evident that the great conserving principle of Societies, which makes the division of powers a source of harmony, has been expressed and revealed by nature itself, when it divided the functions of the two sexes in so obviously distinct a manner? This is sufficient; we need not invoke principles that are inapplicable to the question. Let us not make rivals of life’s companions. You must, you truly must allow the persistence of a union that no interest, no rivalry, can possibly undo. Understand that the good of all demands this of you.

Passage 2

Contending for the rights of woman, my main argument is built on this simple principle, that if she be not prepared by education to become the companion of man, she will stop the progress of knowledge and virtue; for truth must be common to all, or it will be inefficacious with respect to its influence on general practice. And how can woman be expected to co-operate unless she know why she ought to be virtuous? unless freedom strengthen her reason till she comprehend her duty, and see in what manner it is connected with her real good? If children are to be educated to understand the true principle of patriotism, their mother must be a patriot; and the love of mankind, from which an orderly train of virtues spring, can only be produced by considering the moral and civil interest of mankind; but the education and situation of woman, at present, shuts her out from such investigations...

Consider, sir, dispassionately, these observations – for a glimpse of this truth seemed to open before you when you observed, “that to see one half of the human race excluded by the other from all participation of government, was a political phenomenon that, according to abstract principles, it was impossible to explain.” If so, on what does your constitution rest? If the abstract rights of man will bear discussion and explanation, those of woman, by a parity of reasoning, will not shrink from the same test: though a different opinion prevails in this country, built on the very arguments which you use to justify the oppression of woman – prescription.

Consider – I address you as a legislator – whether, when men contend for their freedom, and to be allowed to judge for themselves respecting their own happiness, it be not inconsistent and unjust to subjugate women, even though you firmly

believe that you are acting in the manner best calculated to promote their happiness? Who made man the exclusive judge, if woman partake with him the gift of reason?

In this style, argue tyrants of every denomination, from the weak king to the weak father of a family; they are all eager to crush reason; yet always assert that they usurp its throne only to be useful. Do you not act a similar part, when you force all women, by denying them civil and political rights, to remain immured in their families groping in the dark?

According to the author of Passage 2, in order for society to progress, women must:

- A. enjoy personal happiness and financial security.
- B. follow all currently prescribed social rules.
- C. replace men as figures of power and authority.
- D. receive an education comparable to that of men.

ANSWER: D

Explanation:

The correct answer is *receive an education comparable to that of men*. Wollstonecraft makes education the central condition for social advancement. She states directly that unless women are “prepared by education to become the companion of man,” they will “stop the progress of knowledge and virtue.” Her point is not merely that education benefits individual women; rather, knowledge and virtue can advance throughout society only when truth is shared broadly and women can use reason to understand moral, civic, and personal duties.

Wollstonecraft develops this claim through women’s roles in family and public life. For children to learn genuine patriotism, she argues, their mothers must themselves be patriots, capable of considering humanity’s moral and civil interests. That capacity requires an education that cultivates reason and permits women to participate intellectually as companions to men. Her appeal to the shared “gift of reason” further establishes that women deserve access to the intellectual development traditionally afforded men. This reading aligns with the text of [A Vindication of the Rights of Woman at Project Gutenberg](#) and with the SAT’s emphasis on selecting the answer most directly supported by specific textual evidence, described in the [College Board’s Reading and Writing overview](#).

QUESTION NO: 54

DIRECTIONS: In the passage below, certain phrases are underlined and numbered . The question will present alternatives for the underlined part. In most cases, you are to choose the one that best expresses the idea, makes the statement appropriate for standard written English, or is worded most consistently with the style and tone of the passage as a whole. If you think the original version is the best, choose "NO CHANGE".

Read the passage and answer question <2>.

J.K. Rowling

While many people may get frustrated with train delays, Joanne Rowling turned her experience into a life-changing story. She began writing about a young wizard while delayed at a Manchester station stop, and brought Harry Potter to life <1> over the next five years. The Philosopher’s Stone was the first of seven children’s books published under her pen name J. K. Rowling. The Harry Potter series has sold over 447 million copies worldwide and been translated into seventy-three languages, including Latin and Ancient Greek.<2>

When the Philosopher’s Stone was published <3> in 1997, the book industry had given up on young readers. It’s <4> first edition was a mere 500 books, and most copies were sent to public libraries across England. By the time Rowling’s seventh Harry Potter novel was published in 2007, Rowling had already become the woman who put a new face on children’s literacy. Harry Potter and the Deathly Hallows, the final installment, has <5> a word count of nearly 1.1 million words, and sold 11 million copies in the first 24 hours of its release.<6>

Today, Rowling spends much <7> of her time working with her foundation, Lumos, which is named after a spell in the Potter series that brought light into darkness. <8> She founded <9> the nonprofit organization after seeing a photograph of a child in a caged bed who appeared to be screaming through its chain links. Rowling was overcome by the image that she <10> vowed to use her money and popularity to raise awareness of the 8 million children who live in such institutions globally. According to research, over 80% of orphaned children have living relatives which <11> cannot care for them because of poverty or disability. The staff at Lumos equip families with necessary resources to provide for their children rather than

leaving them institutionalized. Lumos' long-term goal is the closure of every orphanage around the world, by returning all children to live with its <12> families, either biological or adoptive.

Rowling once said, "Happiness can be found in the darkest places if one only remembers to turn on the light". <13> J. K. Rowling has created happiness for millions of children through makebelieve stories of triumph and real-life stories of hope.<15>

Which of these sentences would most logically be added to the end of Paragraph 1?

- A. Even though children do not speak Latin or Ancient Greek, it is important that the book be translated into classical languages.
- B. These numbers show how incredibly successful J. K. Rowling really is!
- C. Rowling's international success has made her one of the most prolific writers of all time.
- D. Rowling is a great example of how successful one can be when they use their time wisely, even when waiting for a train.
- E. The series' immense sales and numerous translations demonstrate its worldwide appeal.

ANSWER: E

Explanation:

"The series' immense sales and numerous translations demonstrate its worldwide appeal." is the most logical addition because it directly synthesizes the two facts immediately before the insertion point: the Harry Potter books have sold hundreds of millions of copies and have been translated into dozens of languages. Rather than introducing a new claim, shifting attention to an unrelated detail, or using an overly conversational tone, the sentence states the clear significance of the evidence already presented. Its measured, informative wording matches the biographical style of the passage and provides a smooth closing for the opening paragraph. It also prepares readers for the next paragraph, which contrasts the series' later worldwide popularity with the modest initial publication of *Harry Potter and the Philosopher's Stone*. The description of "worldwide appeal" is accurate: the official Harry Potter site identifies the books as a global phenomenon, and the British Library notes Rowling's extraordinary impact on children's literature. These sources support the passage's focus on the broad international readership established by strong sales and widespread translation. See [Harry Potter Official](#) and [the British Library's J. K. Rowling profile](#).

QUESTION NO: 55

The _____ shantytown was infested with vermin and _____ with disease.

- A. attractive ... riddled
- B. spurious ... infected
- C. squalid ... rife
- D. tidy ... inoculated
- E. lugubrious ... fraught

ANSWER: C

Explanation:

The phrase *squalid ... rife* correctly completes both blanks by creating a coherent description and using each word in its standard idiomatic context. *Squalid* describes something extremely dirty, unpleasant, and neglected, which appropriately characterizes a shantytown that is already described as infested with vermin. The word reinforces the setting's poor sanitary and living conditions without changing the sentence's meaning or tone.

Rife means widespread, prevalent, or abundant, especially when referring to something harmful or undesirable. It is commonly used in the construction "rife with," as in "rife with disease." This wording clearly conveys that disease is widespread throughout the shantytown. The parallel structure also works smoothly: the location is "infested with vermin" and "rife with disease," pairing two conditions that emphasize the severe lack of sanitation. Dictionary definitions support these

precise uses: [Merriam-Webster's definition of squalid](#) describes it as marked by filthiness and degradation, while [Cambridge Dictionary's definition of rife](#) identifies it as being common or widespread, particularly in the phrase “rife with.”

QUESTION NO: 56

DIRECTIONS: In the passage below, certain phrases are underlined and numbered . The question will present alternatives for the underlined part. In most cases, you are to choose the one that best expresses the idea, makes the statement appropriate for standard written English, or is worded most consistently with the style and tone of the passage as a whole. If you think the original version is the best, choose "NO CHANGE".

Read the passage and answer question <6>.

Rio de Janeiro

Rio de Janeiro, Brazil is a fantastic place to visit. It's alarming <1> that Rio is called the “Wonderful City.” Beaches, mountains, and forests await its visitors, who can tour for days and still not experience everything the city has to offer. When I visit, I always have a great time with my boyfriend. <2> At the end of a busy day exploring nature, gloomy <3> travelers can unwind at one of the beachfront hotspots for coconut water and live samba music.

Rio's most famed attractions are Sugarloaf Mountain and Christ the Redeemer statue. However, <4> these destinations welcome over 2.8 million international tourists each year. Sugarloaf Mountain is located in the city's south zone right near to the vast Atlantic Ocean. <5> Its peak is at 1300 feet, and accessible by two cable cars that take less than five minutes to arrive. Visitors enjoy 360-degree panoramic views of Rio, and can shop or dine at several locations on the mountain.

(1) Christ the Redeemer stands on the Corcovado Mountain, recently named one of the new seven wonders of the world. (2) With arms outstretched, the concrete Christ was built between 1922 and 1931, to resemble embracing the people of Rio. (3) Millions of tourists recreate the attraction by taking photos on its pedestal with their own arms outstretched. (4) The statue's pedestal is over 26 feet high, while the statue itself is nearly 100 feet high. <6>

There are so many amazing sites to see! <7> Fort Copacabana is a military base and history museum that sits at the south end of Copacabana beach and divides the neighborhood from Ipanema. Visitors explored <8> galleries filled with original military memorabilia from the late nineteenth and early twentieth centuries. There are also exhibits featuring indigenous artwork from some of Brazil's 2000 native tribes. These relics are important for Brazilian history, and tourists are nevertheless blown away <9> at their historical significance.

Another great place to visit, and for learning about Brazilian history <10> is the Botanical Gardens, built in 1808 by King John VI of Portugal. Children especially enjoy this 346-acre park, which is home to 6500 species of plants and trees and 140 species of birds. Kid-friendly areas are designated for picnics and games, and monkeys that roam the grounds often entertain children by swinging from tree to tree or rummaging for leftover food in the park's trash bins. <11>

After a busy day of sightseeing Rio's natural settings, because <12> tourists sit at beachfront drink stands and enjoy coconut water sipped from the fruit. Local musicians wander the sands playing Brazilian samba music each night. The sounds of tamborims, surdos, and agogos delight visitors, who, dance <13> all night long to the sounds <14> under the Copacabana moonlight.

Sentence 4 (in paragraph 3) should be

- A. placed where it is now
- B. placed at the beginning of the paragraph
- C. placed after sentence 1
- D. OMITTED

ANSWER: C

Explanation:

“placed after sentence 1” is correct because the sentence about the pedestal's and statue's heights works best immediately after the paragraph introduces Christ the Redeemer and identifies its location. This organization creates a clear descriptive sequence: first, readers learn what and where the attraction is; next, they receive useful physical details that convey its immense scale; then, the paragraph can move naturally to the statue's construction and to the visitor activity it inspires. The dimensions are especially effective early in the paragraph because they help readers visualize the landmark before learning

historical details about when and why it was built. This placement also supports the passage's travel-guide purpose: information about the statue's setting and striking size establishes why it is a notable destination. The College Board explains that revision questions assess whether students can improve a text's organization and progression of ideas, including the logical placement of supporting details. See the [Digital SAT Suite Test Specifications](#) and the [SAT Reading and Writing overview](#).

QUESTION NO: 57

DIRECTIONS: Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

Some questions will direct you to an underlined portion of a passage. Other questions will direct you to a location in a passage or ask you to think about the passage as a whole.

After reading each passage, choose the answer to each question that most effectively improves the quality of writing in the passage or that makes the passage conform to the conventions of standard written English. Many questions include a "NO CHANGE" option. Choose that option if you think the best choice is to leave the relevant portion of the passage as it is.

Read the passage and answer question (4).

Coworking: A Creative Solution

When I left my office job as a website developer at a small company for a position that allowed me to work full-time from home, I thought I had it made: I gleefully traded in my suits and dress shoes for sweatpants and slippers, my frantic early-morning bagged lunch packing for a leisurely midday trip to my refrigerator. The novelty of this comfortable work-from-home life, however, (1) soon got worn off quickly. Within a month, I found myself feeling isolated despite having frequent email and instant messaging contact with my colleagues. Having become frustrated trying to solve difficult problems, (2) no colleagues were nearby to share ideas. It was during this time that I read an article (3) into coworking spaces.

The article, published by Forbes magazine, explained that coworking spaces are designated locations that, for a fee, individuals can use to conduct their work. The spaces are usually stocked with standard office (4) equipment, such as photocopiers, printers, and fax machines. (5) In these locations, however, the spaces often include small meeting areas and larger rooms for hosting presentations. (6) The cost of launching a new coworking business in the United States is estimated to be approximately \$58,000.

What most caught my interest, though, was a quotation from someone who described coworking spaces as "melting pots of creativity." The article refers to a 2012 survey in which (7) 64 percent of respondents noted that coworking spaces prevented them from completing tasks in a given time. The article goes on to suggest that the most valuable resources provided by coworking spaces are actually the people (8) whom use them.

[1] Thus, even though I already had all the equipment I needed in my home office, I decided to try using a coworking space in my city. [2] Because I was specifically interested in coworking's reported benefits related to creativity, I chose a facility that offered a bright, open work area where I wouldn't be isolated. [3] Throughout the morning, more people appeared. [4] Periods of quiet, during which everyone worked independently, were broken up occasionally with lively conversation. (9)

I liked the experience so much that I now go to the coworking space a few times a week. Over time, I've gotten to know several of my coworking (10) colleagues: another website developer, a graphic designer, a freelance writer, and several mobile app coders. Even those of us who work in disparate fields are able to (11) share advice and help each other brainstorm. In fact, it's the diversity of their talents and experiences that makes my coworking colleagues so valuable.

A. NO CHANGE

B. equipment, such as:

C. equipment such as:

D. equipment, such as,

ANSWER: A

Explanation:

“NO CHANGE” is correct because the sentence correctly introduces examples of “standard office equipment” with the phrase “such as”: “The spaces are usually stocked with standard office equipment, such as photocopiers, printers, and fax machines.” The comma before *such as* is appropriate here because the examples are supplementary; they illustrate the general category rather than define which type of equipment is meant. The phrase then flows directly into the series of examples, which are separated by commas in the usual way.

A colon should not follow *such as*. Both *such as* and a colon can introduce examples, but combining them creates unnecessary and nonstandard double punctuation. Likewise, no comma belongs between *such as* and the examples it introduces. The existing wording is clear, concise, and conforms to standard punctuation conventions for an illustrative phrase within a sentence. For guidance on commas with nonessential or supplementary information, see the [Purdue Online Writing Lab's comma guidance](#). The [Merriam-Webster entry for “such as”](#) also reflects its ordinary use to introduce examples.

QUESTION NO: 58

This passage is adapted from Richard J. Sharpe and Lisa Heyden, “Honey Bee Colony Collapse Disorder is Possibly Caused by a Dietary Pyrethrum Deficiency.” ©2009 by Elsevier Ltd. Colony collapse disorder is characterized by the disappearance of adult worker bees from hives.

Honey bees are hosts to the pathogenic large ectoparasitic mite *Varroa destructor* (*Varroa mites*). These mites feed on bee hemolymph (blood) and can kill bees directly or by increasing their susceptibility to secondary infection with fungi, bacteria or viruses. Little is known about the natural defenses that keep the mite infections under control.

Pyrethrums are a group of flowering plants which include *Chrysanthemum coccineum*, *Chrysanthemum cinerariifolium*, *Chrysanthemum marschalli*, and related species. These plants produce potent insecticides with anti mite activity. The naturally occurring insecticides are known as pyrethrums. A synonym for the naturally occurring pyrethrums is pyrethrin and synthetic analogues of pyrethrums are known as pyrethroids. In fact, the human mite infestation known as scabies (*Sarcoptes scabiei*) is treated with a topical pyrethrum cream.

We suspect that the bees of commercial bee colonies which are fed mono crops are nutritionally deficient. In particular, we postulate that the problem is a diet deficient in anti mite toxins: pyrethrums, and possibly other nutrients which are inherent in such plants. Without, at least, intermittent feeding on the pyrethrum producing plants, bee colonies are susceptible to mite infestations which can become fatal either directly or due to a secondary infection of immunocompromised or nutritionally deficient bees. This secondary infection can be viral, bacterial or fungal and may be due to one or more pathogens. In addition, immunocompromised or nutritionally deficient bees may be further weakened when commercially produced insecticides are introduced into their hives by bee keepers in an effort to fight mite infestation. We further postulate that the proper dosage necessary to prevent mite infestation may be better left to the bees, who may seek out or avoid pyrethrum containing plants depending on the amount necessary to defend against mites and the amount already consumed by the bees, which in higher doses could be potentially toxic to them.

This hypothesis can best be tested by a trial wherein a small number of commercial honey bee colonies are offered a number of pyrethrum producing plants, as well as a typical bee food source such as clover, while controls are offered only the clover. Mites could then be introduced to each hive with note made as to the choice of the bees, and the effects of the mite parasites on the experimental colonies versus control colonies.

It might be beneficial to test wild type honey bee colonies in this manner as well, in case there could be some genetic difference between them that affects the bees' preferences for pyrethrum producing flowers.

Pathogen Occurrence in Honey Bee Colonies With and Without Colony Collapse Disorder

Pathogen	Percent of colonies affected by pathogen	
	Colonies with colony collapse disorder (%)	Colonies without colony collapse disorder (%)
Viruses		
IAPV	83	5
KBV	100	76
Fungi		
<i>Nosema apis</i>	90	48
<i>Nosema ceranae</i>	100	81
All four pathogens	77	0

Adapted from Diana L. Cox-Foster et al., "A Metagenomic Survey of Microbes in Honey Bee Colony Collapse Disorder." ©2007 by American Association for the Advancement of Science.

The table above shows, for colonies with colony collapse disorder and for colonies without colony collapse disorder, the percent of colonies having honey bees infected by each of four pathogens and by all four pathogens together.

In sentence 1 of paragraph 4, the authors state that a certain hypothesis "can best be tested by a trial." Based on the passage, which of the following is a hypothesis the authors suggest be tested in a trial?

- A. Honeybees that are exposed to both pyrethrums and mites are likely to develop a secondary infection by a virus, a bacterium, or a fungus.
- B. Beekeepers who feed their honeybee colonies a diet of a single crop need to increase the use of insecticides to prevent mite infestations.
- C. A honeybee diet that includes pyrethrums results in honeybee colonies that are more resistant to mite infestations.
- D. Humans are more susceptible to varroa mites as a result of consuming nutritionally deficient food crops.

ANSWER: C

Explanation:

The correct answer is "**A honeybee diet that includes pyrethrums results in honeybee colonies that are more resistant to mite infestations.**" The authors explicitly propose that commercial colonies feeding on monocrops may lack pyrethrums, natural plant-produced substances with anti-mite activity. Their central claim is that, without at least intermittent access to pyrethrum-producing plants, colonies become more susceptible to mite infestations and the potentially fatal consequences that can follow. Thus, a diet containing pyrethrums is hypothesized to help colonies resist or control mite infestations.

The trial described directly tests that relationship. Experimental colonies would have access to pyrethrum-producing plants as well as clover, whereas control colonies would receive clover alone. After mites are introduced, researchers would compare the bees' food choices and the effects of mites in the two groups. This experimental-versus-control design is suited to assessing whether access to pyrethrums is associated with greater resistance to mites. The question therefore requires

identifying the authors' stated causal hypothesis and connecting it to the proposed test, a core evidence-and-ideas reading skill assessed on the SAT. See the College Board's [SAT Reading and Writing overview](#) and its [official practice-test resources](#).

QUESTION NO: 59

But the Dust-Bin was going down then, and your father took but little, excepting from a liquid point of view. Your mother's object in those visits was of a house-keeping character, and you was set on to whistle your father out. Sometimes he came out, but generally not. Come or not come, however, all that part of his existence which was unconnected with open Waiting was kept a close secret, and was acknowledged by your mother to be a close secret, and you and your mother flitted about the court, close secrets both of you, and would scarcely have confessed under torture that you know your father, or that your father had any name than Dick (which wasn't his name, though he was never known by any other), or that he had kith or kin or chick or child. Perhaps the attraction of this mystery, combined with your father's having a damp compartment, to himself, behind a leaky cistern, at the Dust Bin, a sort of a cellar compartment, with a sink in it, and a smell, and a plate-rack, and a bottle-rack, and three windows that didn't match each other or anything else, and no daylight, caused your young mind to feel convinced that you must grow up to be a Waiter too; but you did feel convinced of it, and so did all your brothers, down to your sister. Every one of you felt convinced that you was born to the Waiting. At this stage of your career, what was your feelings one day when your father came home to your mother in open broad daylight, of itself an act of Madness on the part of a Waiter, and took to his bed (leastwise, your mother and family's bed), with the statement that his eyes were devilled kidneys. Physicians being in vain, your father expired, after repeating at intervals for a day and a night, when gleams of reason and old business fitfully illuminated his being, "Two and two is five. And three is sixpence." Interred in the parochial department of the neighbouring churchyard, and accompanied to the grave by as many Waiters of long standing as could spare the morning time from their soiled glasses (namely, one), your bereaved form was attired in a white neckankecher, and you was took on from motives of benevolence at The George and Gridiron, theatrical and supper. Here, supporting nature on what you found in the plates (which was as it happened, and but too often thoughtlessly, immersed in mustard), and on what you found in the glasses (which rarely went beyond driblets and lemon), by night you dropped asleep standing, till you was cuffed awake, and by day was set to polishing every individual article in the coffee-room. Your couch being sawdust; your counterpane being ashes of cigars. Here, frequently hiding a heavy heart under the smart tie of your white neck ankecher (or correctly speaking lower down and more to the left), you picked up the rudiments of knowledge from an extra, by the name of Bishops, and by calling plate-washer, and gradually elevating your mind with chalk on the back of the corner-box partition, until such time as you used the inkstand when it was out of hand, attained to manhood, and to be the Waiter that you find yourself.

I could wish here to offer a few respectful words on behalf of the calling so long the calling of myself and family, and the public interest in which is but too often very limited. We are not generally understood. No, we are not. Allowance enough is not made for us. For, say that we ever show a little drooping listlessness of spirits, or what might be termed indifference or apathy. Put it to yourself what would your own state of mind be, if you was one of an enormous family every member of which except you was always greedy, and in a hurry. Put it to yourself that you was regularly replete with animal food at the slack hours of one in the day and again at nine p.m., and that the repleter you was, the more voracious all your fellow-creatures came in. Put it to yourself that it was your business, when your digestion was well on, to take a personal interest and sympathy in a hundred gentlemen fresh and fresh (say, for the sake of argument, only a hundred), whose imaginations was given up to grease and fat and gravy and melted butter, and abandoned to questioning you about cuts of this, and dishes of that, each of 'em going on as if him and you and the bill of fare was alone in the world.

What term best describes the overall tone toward waiters in this excerpt?

- A. satiric
- B. empathetic
- C. belittling
- D. apologetic
- E. informational

ANSWER: B

Explanation:

The correct answer is *empathetic*. The speaker presents waiters as workers whose difficult circumstances and emotional fatigue deserve readers' understanding. He explicitly speaks "on behalf of" the occupation and insists that waiters are "not generally understood," establishing a sympathetic, insider's perspective. The narration emphasizes the hardships of the

waiter's early life: poverty, exhausting work, inadequate food and sleeping conditions, and the need to remain attentive even when physically depleted. In the final paragraph, the speaker directly invites the reader to imagine enduring the same pressures: being surrounded by hungry, hurried patrons while trying to take a personal interest in each one. This repeated appeal to "Put it to yourself" asks readers to recognize the waiter's feelings and perspective. Although the prose uses comic exaggeration, its central attitude toward waiters is compassionate and understanding, grounded in the narrator's shared experience of the profession. On SAT Reading and Writing questions, tone should be determined from the author's overall attitude as supported by details and rhetorical choices, rather than from isolated humorous phrasing. See the College Board's [SAT Reading and Writing overview](#) and its [official practice resources](#).

QUESTION NO: 60

F. Scott Fitzgerald was a prominent American writer of the twentieth century. This passage comes from one of his short stories and tells the story of a young John Unger leaving home for boarding school. John T. Unger came from a family that had been well known in Hades a small town on the Mississippi River for several generations. John's father had held the amateur golf championship through many a heated contest; Mrs. Unger was known "from hot-box to hot-bed," as the local phrase went, for her political addresses; and young John T. Unger, who had just turned sixteen, had danced all the latest dances from New York before he put on long trousers. And now, for a certain time, he was to be away from home.

That respect for a New England education which is the bane of all provincial places, which drains them yearly of their most promising young men, had seized upon his parents. Nothing would suit them but that he should go to St. Midas's School near Boston – Hades was too small to hold their darling and gifted son. Now in Hades – as you know if you ever have been there the names of the more fashionable preparatory schools and colleges mean very little. The inhabitants have been so long out of the world that, though they make a show of keeping up-to-date in dress and manners and literature, they depend to a great extent on hearsay, and a function that in Hades would be considered elaborate would doubtless be hailed by a Chicago beef-princess as "perhaps a little tacky."

John T. Unger was on the eve of departure. Mrs. Unger, with maternal fatuity, packed his trunks full of linen suits and electric fans, and Mr. Unger presented his son with an asbestos pocket-book stuffed with money. "Remember, you are always welcome here," he said. "You can be sure, boy, that we'll keep the home fires burning." "I know," answered John huskily.

"Don't forget who you are and where you come from," continued his father proudly, "and you can do nothing to harm you. You are an Unger – from Hades."

So the old man and the young shook hands, and John walked away with tears streaming from his eyes. Ten minutes later he had passed outside the city limits and he stopped to glance back for the last time. Over the gates the old-fashioned Victorian motto seemed strangely attractive to him. His father had tried time and time again to have it changed to something with a little more push and verve about it, such as "Hades – Your Opportunity," or else a plain "Welcome" sign set over a hearty handshake pricked out in electric lights. The old motto was a little depressing, Mr. Unger had thought – but now.

So John took his look and then set his face resolutely toward his destination. And, as he turned away, the lights of Hades against the sky seemed full of a warm and passionate beauty.

The tone of sentence "their darling and gifted son" can best be described as:

- A. compassionate.
- B. sincere.
- C. sardonic.
- D. dismayed.
- E. understated.

F. Scott Fitzgerald was a prominent American writer of the twentieth century. This passage comes from one of his short stories and tells the story of a young John Unger leaving home for boarding school. John T. Unger came from a family that had been well known in Hades a small town on the Mississippi River for several generations. John's father had held the amateur golf championship through many a heated contest; Mrs. Unger was known "from hot-box to hot-bed," as the local phrase went, for her political addresses; and young John T. Unger, who had just turned sixteen, had danced all the latest dances from New York before he put on long trousers. And now, for a certain time, he was to be away from home. That respect for a New England education which is the bane of all provincial places, which drains them yearly of their most promising young men, had seized upon his parents. Nothing would suit them but that he should go to St. Midas's School near Boston – Hades was too small to hold their darling and gifted son. Now in Hades – as you know if you ever have been there the names of the more fashionable preparatory schools and colleges mean very little. The inhabitants have been so

long out of the world that, though they make a show of keeping up-to-date in dress and manners and literature, they depend to a great extent on hearsay, and a function that in Hades would be considered elaborate would doubtless be hailed by a Chicago beef-princess as “perhaps a little tacky.”

John T. Unger was on the eve of departure. Mrs. Unger, with maternal fatuity, packed his trunks full of linen suits and electric fans, and Mr. Unger presented his son with an asbestos pocket-book stuffed with money. “Remember, you are always welcome here,” he said. “You can be sure, boy, that we’ll keep the home fires burning.” “I know,” answered John huskily. “Don’t forget who you are and where you come from,” continued his father proudly, “and you can do nothing to harm you. You are an Unger – from Hades.”

So the old man and the young shook hands, and John walked away with tears streaming from his eyes. Ten minutes later he had passed outside the city limits and he stopped to glance back for the last time. Over the gates the old-fashioned Victorian motto seemed strangely attractive to him. His father had tried time and time again to have it changed to something with a little more push and verve about it, such as “Hades – Your Opportunity,” or else a plain “Welcome” sign set over a hearty handshake pricked out in electric lights. The old motto was a little depressing, Mr. Unger had thought – but now.

So John took his look and then set his face resolutely toward his destination. And, as he turned away, the lights of Hades against the sky seemed full of a warm and passionate beauty.

The tone of sentence “their darling and gifted son” can best be described as:

ANSWER: C

Explanation:

“sardonic.” is correct because the narrator’s praise of John as “their darling and gifted son” is deliberately tinged with dry, mocking irony. The surrounding description presents the Ungers’ pride as inflated and provincial: they regard Hades as incapable of containing John’s supposed distinction, while the narration has already portrayed the family’s accomplishments and social aspirations in exaggerated, comic terms. Calling John both “darling” and “gifted” echoes his parents’ adoring self-importance rather than providing a neutral endorsement of his exceptional qualities. This subtle ridicule is characteristic of a sardonic tone: it is amused, sharp, and skeptical rather than openly hostile. Fitzgerald reinforces the irony through the conspicuously symbolic place names Hades and St. Midas’s, as well as the family’s impractical status markers, which create a satirical portrait of wealth and social pretension. The phrase therefore lets readers hear a gap between what the parents believe about their son and what the narrator invites readers to recognize. The passage is from Fitzgerald’s “The Diamond as Big as the Ritz,” available through [Project Gutenberg](#). For guidance on analyzing how word choice establishes tone in SAT Reading and Writing, see the [College Board’s Reading and Writing overview](#).

QUESTION NO: 61

Although often confused with each other, global warming and ozone depletion are two separate problems threatening Earth’s ecosystem today. Global warming is caused by the build-up of heattrapping gases in the atmosphere. It was dubbed the “greenhouse effect” because it is similar to a greenhouse in that the sun’s rays are allowed into the greenhouse but the heat from these rays is unable to escape. Ozone depletion, however, is the destruction of the ozone layer. Chemicals such as chlorofluorocarbons and methyl bromide react with ozone, leaving a “hole” in the ozone layer that lets dangerous UV rays through. Both are serious threats to life on Earth. While the greenhouse effect maintains the appropriate temperature for life on Earth, problems are exacerbated when the quantity of greenhouse gases in the Earth’s atmosphere increases drastically. When this occurs, the amount of heat energy that is insulated within the Earth’s atmosphere increases correspondingly and results in a rise in global temperature.

An increase of a mere few degrees Celsius does not appear very threatening. However, numbers can be deceiving. When you consider that the Ice Age resulted from temperatures only slightly cooler than those today, it is obvious that even very subtle temperature changes can significantly impact global climate. Global warming threatens to desecrate the natural habitats of organisms on Earth and disturb the stability of our ecosystem. The climate changes that would result from global warming could trigger droughts, heat waves, floods, and other extreme weather events.

Like most other environmental problems, humans are the cause of global warming. The burning of fossil fuels is largely responsible for the increase in the concentration of carbon dioxide in the atmosphere. Every time someone drives a car or powers their home with energy derived from power plants that use coal, carbon dioxide is released into the atmosphere. The atmospheric concentrations of carbon dioxide and methane have risen meteorically since preindustrial times, mainly due to the contributions of factories, cars, and large-scale agriculture. Even if we immediately stopped emitting greenhouse gases, we would continue to see the effects of global warming for decades because of the damage we have already inflicted.

Despite the pessimistic outlook, there are things that can be done to reduce global warming. Although the problem may seem overwhelming, individuals can make a positive difference in combating global warming. Simple things like driving less, using public transportation, and conserving electricity generated by combustion of fossil fuels can help reduce the emissions of greenhouse gases. It is important to realize that it is not too late to make a difference. If everyone does what they can to

reduce their contributions of greenhouse gases to the atmosphere, the efforts of people around the world will act in concert to thwart the progression of global warming. If the effort is not made immediately, the delicate global ecosystem could be thrown irreversibly out of balance, and the future of life on Earth may be jeopardized.

The “greenhouse effect” is:

- A. global warming
- B. another term for the Ice Age
- C. ozone depletion
- D. a chemical that is harming Earth
- E. a type of gas

ANSWER: A

Explanation:

In the passage, “global warming” is the intended answer because the phrase “greenhouse effect” is introduced as the name given to the warming problem described immediately beforehand. The author first explains that global warming results from a buildup of heat-trapping gases in the atmosphere. The next sentence states that “It was dubbed the ‘greenhouse effect,’” using “It” to refer directly to global warming. The passage then develops that comparison: sunlight enters, while heat is retained, causing more heat energy to remain in Earth’s atmosphere and raising global temperatures. Thus, for this passage-based question, “greenhouse effect” functions as the label the author applies to global warming and its heat-trapping mechanism. This reading is supported by the later statement that greater quantities of greenhouse gases cause additional heat to be insulated within the atmosphere and produce a rise in global temperature. In scientific usage, the greenhouse effect is the process through which atmospheric gases retain heat, and increased greenhouse-gas concentrations drive warming; see [NASA’s explanation of the greenhouse effect](#) and the [U.S. EPA overview of climate-change basics](#). Because SAT reading questions ask for the meaning established by the passage, the passage’s explicit wording controls the answer.

QUESTION NO: 62

This passage discusses the work of Abe Kobo, a Japanese novelist of the twentieth century.

Abe Kobo is one of the great writers of postwar Japan. His literature is richer, less predictable, and wider-ranging than that of his famed contemporaries, Mishima Yukio and Nobel laureate Oe Kenzaburo. It is infused with the passion and strangeness of his experiences in Manchuria, which was a Japanese colony on mainland China before World War II.

Abe spent his childhood and much of his youth in Manchuria, and, as a result, the orbit of his work would be far less controlled by the oppressive gravitational pull of the themes of furusato (hometown) and the emperor than his contemporaries’.

Abe, like most of the sons of Japanese families living in Manchuria, did return to Japan for schooling. He entered medical school in Tokyo in 1944 – just in time to forge himself a medical certificate claiming ill health; this allowed him to avoid fighting in the war that Japan was already losing and return to Manchuria. When Japan lost the war, however, it also lost its Manchurian colony. The Japanese living there were attacked by the Soviet Army and various guerrilla bands. They suddenly found themselves refugees, desperate for food. Many unfit men were abandoned in the Manchurian desert. At this apocalyptic time, Abe lost his father to cholera.

He returned to mainland Japan once more, where the young were turning to Marxism as a rejection of the militarism of the war. After a brief, unsuccessful stint at medical school, he became part of a Marxist group of avant-garde artists. His work at this time was passionate and outspoken on political matters, adopting black humor as its mode of critique.

During this time, Abe worked in the genres of theater, music, and photography. Eventually, he mimeographed fifty copies of his first “published” literary work, entitled Anonymous Poems, in 1947. It was a politically charged set of poems dedicated to the memory of his father and friends who had died in Manchuria. Shortly thereafter, he published his first novel, *For a Signpost at the End of a Road*, which imagined another life for his best friend who had died in the Manchurian desert. Abe was also active in the Communist Party, organizing literary groups for workingmen.

Unfortunately, most of this radical early work is unknown outside Japan and underappreciated even in Japan. In early 1962, Abe was dismissed from the Japanese Liberalist Party. Four months later, he published the work that would blind us to his earlier oeuvre, *Woman in the Dunes*. It was director Teshigahara Hiroshi’s film adaptation of *Woman in the Dunes* that

brought Abe's work to the international stage. The movie's fame has wrongly led readers to view the novel as Abe's masterpiece. It would be more accurate to say that the novel simply marked a turning point in his career, when Abe turned away from the experimental and heavily political work of his earlier career. Fortunately, he did not then turn to furusato and the emperor after all, but rather began a somewhat more realistic exploration of his continuing obsession with homelessness and alienation. Not completely a stranger to his earlier commitment to Marxism, Abe turned his attention, beginning in the sixties, to the effects on the individual of Japan's rapidly urbanizing, growthdriven, increasingly corporate society.

The author of the passage is most likely a:

- A. film critic.
- B. literary critic.
- C. avant-garde artist.
- D. translator.
- E. novelist.

ANSWER: B

Explanation:

The author is most likely a literary critic. The passage does more than recount Abe Kobo's biography: it evaluates the scope, development, and reception of his writing. For example, it compares his literature with that of Mishima Yukio and Oe Kenzaburo; characterizes his early work as experimental, political, and marked by black humor; and argues that *Woman in the Dunes* should be understood as a career turning point rather than automatically treated as his masterpiece. This kind of interpretive judgment about an author's themes, artistic periods, influences, and reputation is central to literary criticism. The discussion also tracks persistent concerns in Abe's fiction, especially homelessness, alienation, and the consequences of modern corporate urban life, connecting these concerns to historical and personal experience. Such analysis reflects a critic's aim of helping readers understand both an individual writer's body of work and its place in postwar Japanese literature. Abe's international reputation is closely associated with *The Woman in the Dunes*, as noted by the [Encyclopaedia Britannica biography of Abe Kobo](#). The [New York Review of Books discussion of Kobo Abe](#) likewise illustrates the evaluative, contextual approach characteristic of literary criticism.

QUESTION NO: 63

Musical notes, like all sounds, are a result of the sound waves created by movement, like the rush of air through a trumpet. Musical notes are very regular sound waves. The qualities of these waves – how much they displace molecules, and how often they do so – give the note its particular sound. How much a sound wave displaces molecules affects the volume of the note. How frequently a sound wave reaches your ear determines whether the note is high or low pitched. When scientists describe how high or low a sound is, they use a numerical measurement of its frequency, such as “440 vibrations per second,” rather than the letters musicians use.

All of the following are true statements about pitch, according to the passage, EXCEPT:

- A. Nonmusical sounds cannot be referred to in terms of pitch.
- B. Pitch is solely determined by the frequency of the sound wave.
- C. Pitch is closely related to the vibration of molecules.
- D. Pitch cannot be accurately described with letter names.
- E. Humans' perception of pitch is not affected by the intensity of the sound wave.

ANSWER: D

Explanation:

“Pitch cannot be accurately described with letter names.” is the statement that is not supported by the passage. The passage explains that scientists use a numerical frequency measurement, such as “440 vibrations per second,” when describing how high or low a sound is. It contrasts that scientific convention with the letter names used by musicians; it does not say that

musicians' letter names are inaccurate. In fact, the wording acknowledges that musicians do use letters to identify notes, while scientists prefer numerical frequency because it states the measurable number of vibrations per second. The distinction is therefore between two systems of description and their purposes, not between an accurate system and an inaccurate one. In SAT reading questions, an answer to an "EXCEPT" prompt should be selected when it goes beyond, contradicts, or lacks support from the passage's claims. Here, the absolute assertion about inability to describe pitch accurately with letters adds a claim the passage never makes. For guidance on SAT Reading and Writing question conventions and evidence-based interpretation, see the [College Board's Reading and Writing overview](#) and its [SAT practice and preparation resources](#).

QUESTION NO: 64

DIRECTIONS: In the passage below, certain phrases are underlined and numbered . The question will present alternatives for the underlined part. In most cases, you are to choose the one that best expresses the idea, makes the statement appropriate for standard written English, or is worded most consistently with the style and tone of the passage as a whole. If you think the original version is the best, choose "NO CHANGE".

Read the passage and answer question <7>.

Rio de Janeiro

Rio de Janeiro, Brazil is a fantastic place to visit. It's alarming <1> that Rio is called the "Wonderful City." Beaches, mountains, and forests await its visitors, who can tour for days and still not experience everything the city has to offer. When I visit, I always have a great time with my boyfriend. <2> At the end of a busy day exploring nature, gloomy <3> travelers can unwind at one of the beachfront hotspots for coconut water and live samba music.

Rio's most famed attractions are Sugarloaf Mountain and Christ the Redeemer statue. However, <4> these destinations welcome over 2.8 million international tourists each year. Sugarloaf Mountain is located in the city's south zone right near to the vast Atlantic Ocean. <5> Its peak is at 1300 feet, and accessible by two cable cars that take less than five minutes to arrive. Visitors enjoy 360-degree panoramic views of Rio, and can shop or dine at several locations on the mountain.

(1) Christ the Redeemer stands on the Corcovado Mountain, recently named one of the new seven wonders of the world. (2) With arms outstretched, the concrete Christ was built between 1922 and 1931, to resemble embracing the people of Rio. (3) Millions of tourists recreate the attraction by taking photos on its pedestal with their own arms outstretched. (4) The statue's pedestal is over 26 feet high, while the statue itself is nearly 100 feet high. <6>

There are so many amazing sites to see! <7> Fort Copacabana is a military base and history museum that sits at the south end of Copacabana beach and divides the neighborhood from Ipanema. Visitors explored <8> galleries filled with original military memorabilia from the late nineteenth and early twentieth centuries. There are also exhibits featuring indigenous artwork from some of Brazil's 2000 native tribes. These relics are important for Brazilian history, and tourists are nevertheless blown away <9> at their historical significance.

Another great place to visit, and for learning about Brazilian history <10> is the Botanical Gardens, built in 1808 by King John VI of Portugal. Children especially enjoy this 346-acre park, which is home to 6500 species of plants and trees and 140 species of birds. Kid-friendly areas are designated for picnics and games, and monkeys that roam the grounds often entertain children by swinging from tree to tree or rummaging for leftover food in the park's trash bins. <11>

After a busy day of sightseeing Rio's natural settings, because <12> tourists sit at beachfront drink stands and enjoy coconut water sipped from the fruit. Local musicians wander the sands playing Brazilian samba music each night. The sounds of tamborims, surdos, and agogos delight visitors, who, dance <13> all night long to the sounds <14> under the Copacabana moonlight.

A. NO CHANGE

B. Tourists to Rio can do many engaging things.

C. In addition to natural attractions, Rio de Janeiro has tourist sites for discovering Brazil's historical legacy.

D. When I was in Brazil, my favorite places to visit were historical ones.

ANSWER: C

Explanation:

In addition to natural attractions, Rio de Janeiro has tourist sites for discovering Brazil's historical legacy. is the best revision because it creates a clear, logical bridge between the preceding discussion of Rio's natural landmarks—Sugarloaf Mountain and Christ the Redeemer—and the following paragraph about Fort Copacabana, a military site and history museum. The phrase “In addition to” signals that the passage is shifting to another category of attractions rather than simply continuing to list scenic destinations. Referring to “Brazil's historical legacy” also precisely introduces the paragraph's focus on military memorabilia, indigenous artwork, and the historical importance of these objects. This choice maintains the informative, travel-guide-like tone used throughout the passage and supplies the organizational transition readers need to understand why Fort Copacabana is being introduced at this point. Effective transitions clarify relationships between ideas and support the passage's overall coherence, a skill assessed in SAT Writing and Language revision questions. The College Board describes this domain as evaluating students' ability to improve a text's organization and logical flow. See the [College Board's overview of SAT Reading and Writing skills](#) and its [Digital SAT test specifications](#).

QUESTION NO: 65

Lenny's average score after 3 tests is 88. What score on the 4th test would bring Lenny's average up to exactly 90?

- A. 92
- B. 93
- C. 94
- D. 95
- E. 96

ANSWER: E

Explanation:

The correct score is 96. An average is found by dividing the total of all scores by the number of tests, so first convert Lenny's current average into a total. After 3 tests, an average of 88 means that his first three scores total $3 \times 88 = 264$. To have an average of exactly 90 after 4 tests, the combined total of all four scores must be $4 \times 90 = 360$. The fourth-test score must therefore supply the difference between the required total and the current total: $360 - 264 = 96$. Checking the result confirms it: adding 96 to 264 gives 360, and $360 \div 4 = 90$. This is the standard method for average problems when an additional value changes the mean: translate each average into its corresponding total, then find the needed additional amount. The College Board's SAT math resources include problem-solving with ratios, rates, and proportional relationships, which supports using arithmetic relationships such as totals and averages: [College Board SAT Math](#). For a definition of arithmetic mean as the sum of values divided by their count, see [Encyclopaedia Britannica: Mean](#).

QUESTION NO: 66

This passage is adapted from John Bohannon, “Why You Shouldn't Trust Internet Comments.” ©2013 by American Association for the Advancement of Science.

The “wisdom of crowds” has become a mantra of the Internet age. Need to choose a new vacuum cleaner? Check out the reviews on online merchant Amazon. But a new study suggests that such online scores don't always reveal the best choice. A massive controlled experiment of Web users finds that such ratings are highly susceptible to irrational “herd behavior” – and that the herd can be manipulated.

Sometimes the crowd really is wiser than you. The classic examples are guessing the weight of a bull or the number of gumballs in a jar. Your guess is probably going to be far from the mark, whereas the average of many people's choices is remarkably close to the true number.

But what happens when the goal is to judge something less tangible, such as the quality or worth of a product? According to one theory, the wisdom of the crowd still holds – measuring the aggregate of people's opinions produces a stable, reliable value. Skeptics, however, argue that people's opinions are easily swayed by those of others. So nudging a crowd early on by presenting contrary opinions – for example, exposing them to some very good or very bad attitudes – will steer the crowd in a different direction. To test which hypothesis is true, you would need to manipulate huge numbers of people, exposing them to false information and determining how it affects their opinions.

A team led by Sinan Aral, a network scientist at the Massachusetts Institute of Technology in Cambridge, did exactly that. Aral has been secretly working with a popular website that aggregates news stories. The website allows users to make comments about news stories and vote each other's comments up or down. The vote tallies are visible as a number next to each comment, and the position of the comments is chronological. (Stories on the site get an average of about ten comments and about three votes per comment.) It's a follow up to his experiment using people's ratings of movies to measure how much individual people influence each other online (answer: a lot). This time, he wanted to know how much the crowd influences the individual, and whether it can be controlled from outside.

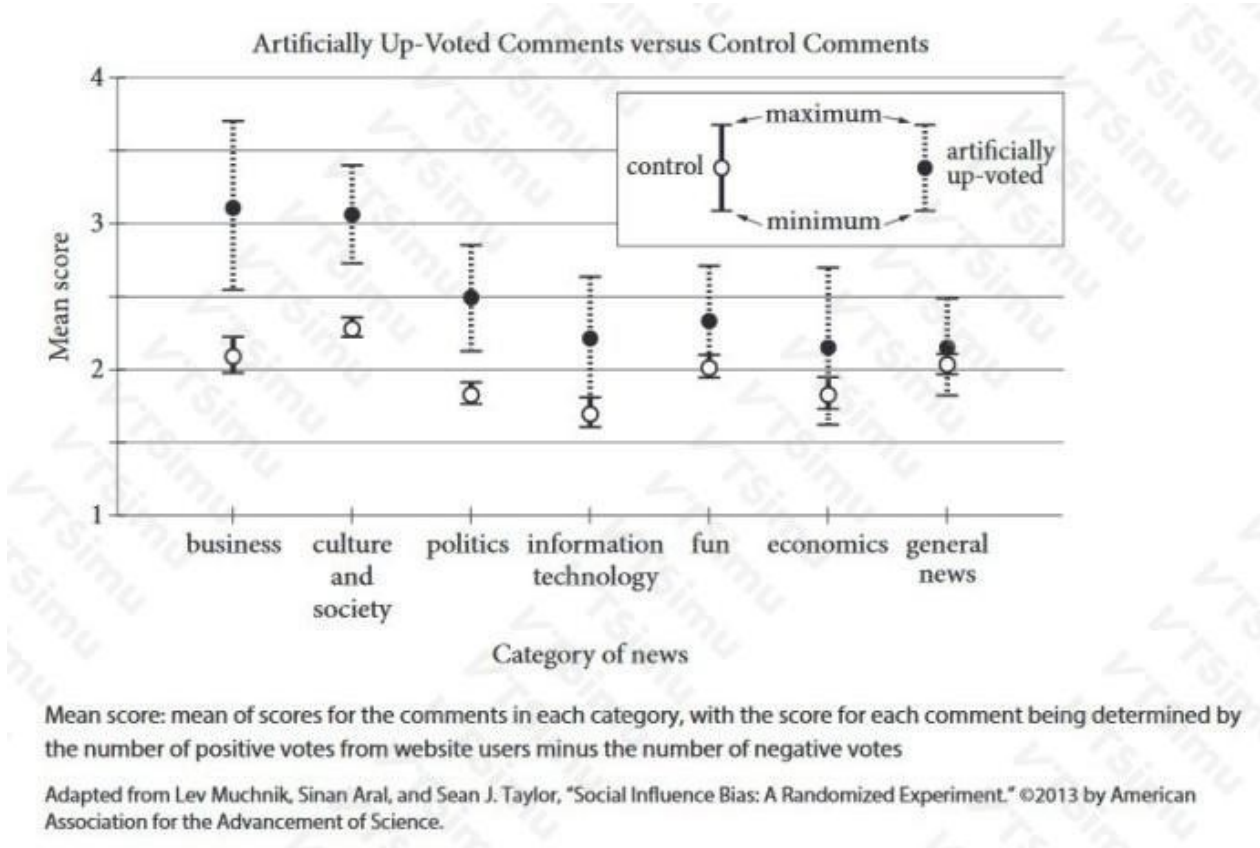
For five months, every comment submitted by a user randomly received an “up” vote (positive); a “down” vote (negative); or as a control, no vote at all. The team then observed how users rated those comments. The users generated more than 100,000 comments that were viewed more than 10 million times and rated more than 300,000 times by other users.

At least when it comes to comments on news sites, the crowd is more herdlike than wise. Comments that received fake positive votes from the researchers were 32% more likely to receive more positive votes compared with a control, the team reports. And those comments were no more likely than the control to be down voted by the next viewer to see them. By the end of the study, positively manipulated comments got an overall boost of about 25%. However, the same did not hold true for negative manipulation. The ratings of comments that got a fake down vote were usually negated by an up vote by the next user to see them.

“Our experiment does not reveal the psychology behind people’s decisions,” Aral says, “but an intuitive explanation is that people are more skeptical of negative social influence. They’re more willing to go along with positive opinions from other people.”

Duncan Watts, a network scientist at Microsoft Research in New York City, agrees with that conclusion. “[But] one question is whether the positive [herding] bias is specific to this site” or true in general, Watts says. He points out that the category of the news items in the experiment had a strong effect on how much people could be manipulated. “I would have thought that ‘business’ is pretty similar to ‘economics,’ yet they find a much stronger effect (almost 50% stronger) for the former than the latter. What explains this difference? If we’re going to apply these findings in the real world, we’ll need to know the answers.”

Will companies be able to boost their products by manipulating online ratings on a massive scale? “That is easier said than done,” Watts says. If people detect – or learn – that comments on a website are being manipulated, the herd may spook and leave entirely.



In the figure, which category of news has an artificially up voted mean score of 2.5?

A. Business

- B. Politics
- C. Fun
- D. General news

ANSWER: B

Explanation:

Politics is correct because the figure's data point for artificially up-voted comments in the politics news category aligns with a mean score of 2.5. To answer a graph-reading question like this one, locate the visual marker identified in the legend as representing the artificially up-voted condition, then trace horizontally from the politics-category marker to the score scale. Its position is exactly halfway between 2.0 and 3.0, yielding a mean score of 2.5. The question asks only for the category associated with that specific plotted value, rather than for an inference about the study's broader findings. This interpretation also fits the passage's description of the experiment: researchers randomly assigned an initial positive vote to some comments and then measured subsequent user ratings. The figure displays those resulting mean scores by news category, allowing a direct comparison of the experimental condition with the control condition. Careful use of labels, the legend, and axis values is a core evidence-based reading skill assessed on SAT-style questions. For guidance on interpreting graphs and integrating quantitative evidence in SAT reading contexts, see the [College Board's Reading and Writing overview](#) and the [Khan Academy SAT Reading and Writing practice resources](#).

QUESTION NO: 67

The following two passages deal with the political movements working for the woman's vote in America.

Passage 1

The first organized assertion of woman's rights in the United States was made at the Seneca Falls convention in 1848. The convention, though, had little immediate impact because of the national issues that would soon embroil the country. The contentious debates involving slavery and state's rights that preceded the Civil War soon took center stage in national debates. Thus woman's rights issues would have to wait until the war and its antecedent problems had been addressed before they would be addressed.

In 1869, two organizations were formed that would play important roles in securing the woman's right to vote. The first was the American Woman's Suffrage Association (AWSA). Leaving federal and constitutional issues aside, the AWSA focused their attention on state-level politics. They also restricted their ambitions to securing the woman's vote and downplayed discussion of women's full equality. Taking a different track, the National Woman's Suffrage Association (NWSA), led by Elizabeth Stanton and Susan

B. Anthony, believed that the only way to assure the long-term security of the woman's vote was to ground it in the constitution. The NWSA challenged the exclusion of woman from the Fifteenth Amendment, the amendment that extended the vote to AfricanAmerican men. Furthermore, the NWSA linked the fight for suffrage with other inequalities faced by woman, such as marriage laws, which greatly disadvantaged women.

By the late 1880s the differences that separated the two organizations had receded in importance as the women's movement had become a substantial and broad-based political force in the country. In 1890, the two organizations joined forces under the title of the National American Woman's Suffrage Association (NAWSA). The NAWSA would go on to play a vital role in the further fight to achieve the woman's vote.

Passage 2

In 1920, when Tennessee became the thirty-eighth state to approve the constitutional amendment securing the woman's right to vote, woman's suffrage became enshrined in the constitution. But woman's suffrage did not happen in one fell swoop. The success of the woman's suffrage movement was the story of a number of partial victories that led to the explicit endorsement of the woman's right to vote in the constitution.

As early as the 1870s and 1880s, women had begun to win the right to vote in local affairs such as municipal elections, school board elections, or prohibition measures. These "partial suffrages" demonstrated that women could in fact responsibly and reasonably participate in a representative democracy (at least as voters). Once such successes were achieved and maintained over a period of time, restricting the full voting rights of woman became more and more suspect. If women were helping decide who was on the local school board, why should they not also have a voice in deciding who was president of

the country? Such questions became more difficult for non-suffragists to answer, and thus the logic of restricting the woman's vote began to crumble.

Which of the following questions is NOT addressed in either passage?

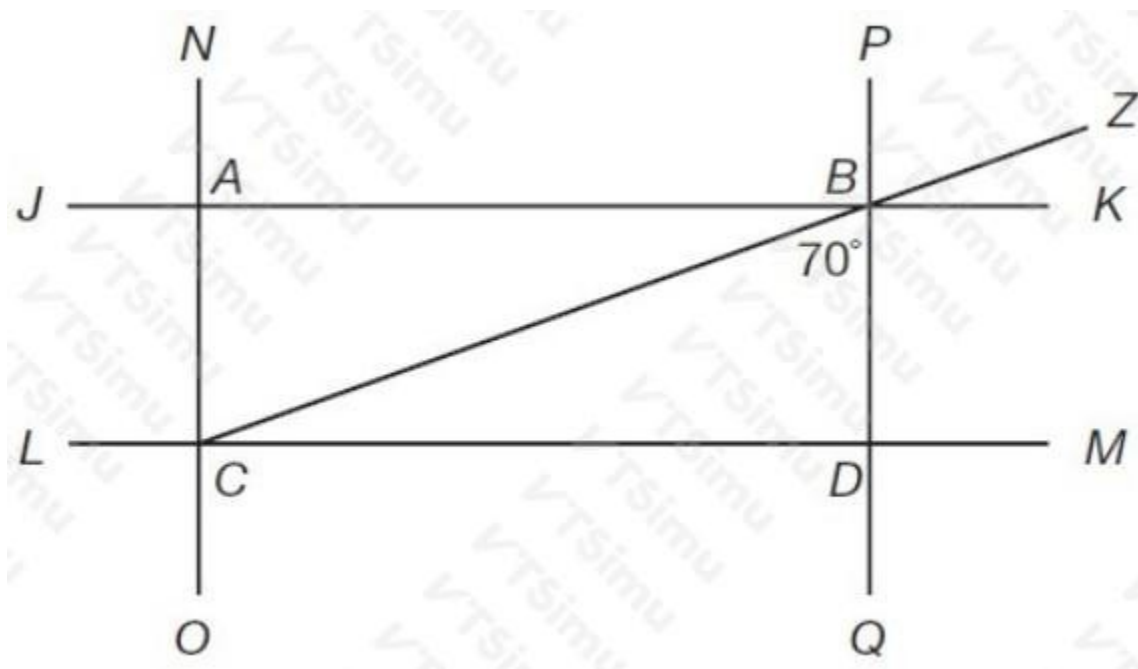
- A. When did the woman's right to vote become a constitutional amendment?
- B. What effect did the Civil War have on the woman's suffrage movement?
- C. What are the names of two leaders of the National Woman's Suffrage Association?
- D. What are "partial suffrages?"
- E. Which constitutional amendment gave women the vote?

ANSWER: E

Explanation:

Which constitutional amendment gave women the vote? is correct because neither passage identifies the amendment by number. Passage 2 states that, in 1920, Tennessee became the thirty-eighth state to approve a constitutional amendment securing women's right to vote. This provides the amendment's subject, ratification context, and date, but it never names the amendment as the Nineteenth Amendment. Passage 1 does mention a numbered amendment—the Fifteenth Amendment—but only in connection with voting rights for African American men and the National Woman's Suffrage Association's objection to women's exclusion from it. That reference does not supply the number of the later amendment that constitutionally protected women's suffrage. Thus, answering the question would require historical knowledge beyond the information stated in the passages. The relevant amendment is the Nineteenth Amendment, which prohibits denying or abridging U.S. citizens' right to vote on account of sex. The National Archives confirms that the amendment was ratified on August 18, 1920, after Tennessee provided the decisive thirty-sixth state ratification required at that time. See the [National Archives' Nineteenth Amendment record](#) and its [women's suffrage educational materials](#).

QUESTION NO: 68



In the diagram above, lines NO and PQ are parallel to each other and perpendicular to lines JK and LM. Line JK is parallel to line LM. If angle CBD is 70 degrees, what is the measure of angle

ZBK?

- A. 10°
- B. 20°

- C. 70°
- D. 90°
- E. 110°

ANSWER: B

Explanation:

The measure of 20° follows from the parallel-line and perpendicular-line relationships in the diagram. Since lines NO and PQ are parallel, line JK acts as a transversal. The given 70° angle, $\angle CBD$, and $\angle PBZ$ occupy corresponding alternate positions formed by that transversal and the parallel lines, so $\angle PBZ$ also measures 70° .

Line PQ is perpendicular to line JK. Therefore, the angle formed by ray BP, which lies on PQ, and ray BK, which lies on JK, is a right angle: $\angle PBK = 90^\circ$. Ray BZ lies inside that right angle, splitting it into $\angle PBZ$ and $\angle ZBK$. Thus their measures add to 90° :

$$\begin{aligned}\angle PBZ + \angle ZBK &= 90^\circ \\ 70^\circ + \angle ZBK &= 90^\circ \\ \angle ZBK &= 20^\circ.\end{aligned}$$

This uses the standard geometry facts that alternate interior angles formed when a transversal crosses parallel lines are congruent and that perpendicular lines form right angles. For additional review, see [Khan Academy's overview of angles and parallel lines](#) and [Math Is Fun's parallel-lines guide](#).

QUESTION NO: 69

DIRECTIONS: In the passage below, certain phrases are underlined and numbered . The question will present alternatives for the underlined part. In most cases, you are to choose the one that best expresses the idea, makes the statement appropriate for standard written English, or is worded most consistently with the style and tone of the passage as a whole. If you think the original version is the best, choose "NO CHANGE".

Read the passage and answer question <13>.

Rio de Janeiro

Rio de Janeiro, Brazil is a fantastic place to visit. It's alarming <1> that Rio is called the "Wonderful City." Beaches, mountains, and forests await its visitors, who can tour for days and still not experience everything the city has to offer. When I visit, I always have a great time with my boyfriend. <2> At the end of a busy day exploring nature, gloomy <3> travelers can unwind at one of the beachfront hotspots for coconut water and live samba music.

Rio's most famed attractions are Sugarloaf Mountain and Christ the Redeemer statue. However, <4> these destinations welcome over 2.8 million international tourists each year. Sugarloaf Mountain is located in the city's south zone right near to the vast Atlantic Ocean. <5> Its peak is at 1300 feet, and accessible by two cable cars that take less than five minutes to arrive. Visitors enjoy 360-degree panoramic views of Rio, and can shop or dine at several locations on the mountain.

(1) Christ the Redeemer stands on the Corcovado Mountain, recently named one of the new seven wonders of the world. (2) With arms outstretched, the concrete Christ was built between 1922 and 1931, to resemble embracing the people of Rio. (3) Millions of tourists recreate the attraction by taking photos on its pedestal with their own arms outstretched. (4) The statue's pedestal is over 26 feet high, while the statue itself is nearly 100 feet high. <6>

There are so many amazing sites to see! <7> Fort Copacabana is a military base and history museum that sits at the south end of Copacabana beach and divides the neighborhood from Ipanema. Visitors explored <8> galleries filled with original military memorabilia from the late nineteenth and early twentieth centuries. There are also exhibits featuring indigenous artwork from some of Brazil's 2000 native tribes. These relics are important for Brazilian history, and tourists are nevertheless blown away <9> at their historical significance.

Another great place to visit, and for learning about Brazilian history <10> is the Botanical Gardens, built in 1808 by King John VI of Portugal. Children especially enjoy this 346-acre park, which is home to 6500 species of plants and trees and 140 species of birds. Kid-friendly areas are designated for picnics and games, and monkeys that roam the grounds often entertain children by swinging from tree to tree or rummaging for leftover food in the park's trash bins. <11>

After a busy day of sightseeing Rio's natural settings, because <12> tourists sit at beachfront drink stands and enjoy coconut water sipped from the fruit. Local musicians wander the sands playing Brazilian samba music each night. The sounds of tamborims, surdos, and agogos delight visitors, who, dance <13> all night long to the sounds <14> under the Copacabana moonlight.

- A. NO CHANGE
- B. visitors: who dance
- C. visitors who dance,
- D. visitors, who dance

ANSWER: D

Explanation:

The correct revision is *visitors, who dance*. The clause beginning with “who” supplies additional information about the visitors’ response to the music: it tells readers that the visitors dance all night long. It is not needed to identify a particular subset of visitors, because the preceding independent clause already refers broadly to all visitors delighted by the instruments’ sounds. Therefore, the clause is nonessential, or nonrestrictive, and standard punctuation sets it off with commas. The comma immediately before “who” marks the beginning of that supplementary description, while the existing comma after “visitors” is unnecessary because it incorrectly separates the subject “visitors” from the verb “dance.” The resulting wording is fluent and preserves the intended meaning: the musical sounds delight visitors, and those visitors dance throughout the night. This choice also maintains clear subject-verb agreement, since the plural noun “visitors” correctly takes the plural verb “dance.” SAT Reading and Writing questions assess conventions of standard written English, including appropriate punctuation for clauses and sentence boundaries. For guidance on restrictive and nonrestrictive relative clauses, see [Purdue OWL’s relative-pronoun guidance](#) and the [College Board SAT Reading and Writing overview](#).

QUESTION NO: 70

Also the Emperor became more and more excited with curiosity, and with great suspense one awaited the hour, when according to mask-law, each masked guest must make himself known. This moment came, but although all other unmasked; the secret knight still refused to allow his features to be seen, till at last the Queen driven by curiosity, and vexed at the obstinate refusal; commanded him to open his Vizier.

He opened it, and none of the high ladies and knights knew him. But from the crowded spectators, two officials advanced, who recognized the black dancer, and horror and terror spread in the saloon, as they said who the supposed knight was. It was the executioner of Bergen. But glowing with rage, the King commanded to seize the criminal and lead him to death, who had ventured to dance, with the queen; so disgraced the Empress, and insulted the crown. The culpable threw himself at the Emperor, and said:

“Indeed I have heavily sinned against all noble guests assembled here, but most heavily against you my sovereign and my queen. The Queen is insulted by my haughtiness equal to treason, but no punishment even blood, will not be able to wash out the disgrace, which you have suffered by me. Therefore oh King! allow me to propose a remedy, to efface the shame, and to render it as if not done. Draw your sword and knight me, then I will throw down my gauntlet, to everyone who dares to speak disrespectfully of my king.”

In context, the word “culpable” (end of 2nd paragraph) is best represented by:

- A. faker.
- B. imposter.
- C. scoundrel.
- D. offender.
- E. criminal.

ANSWER: E

Explanation:

criminal. is the best contextual meaning of “culpable.” The passage first identifies the masked dancer as someone whose appearance at the royal event is treated as a serious offense: the King orders that he be seized and led to death, expressly calling him “the criminal.” The next sentence refers to that same person as “the culpable,” so the wording functions as a direct synonym for the person judged guilty of the offense. His own speech confirms that sense: he admits that he has “heavily sinned,” describes his conduct as an insult to the Queen and an act comparable to treason, and speaks of punishment and disgrace. Thus, “culpable” means guilty of wrongdoing and, in this passage’s legal and punitive context, a criminal. Dictionary definitions support this interpretation: Merriam-Webster defines “culpable” as “meriting condemnation or blame especially as wrong or harmful,” while Cambridge identifies it as deserving blame for something wrong. See [Merriam-Webster’s definition of culpable](#) and [Cambridge Dictionary’s definition of culpable](#).

QUESTION NO: 71

The following passage was written by John Janovec, an ecologist who has worked in the Los Amigos watershed in Peru.

The Amazonian wilderness harbors the greatest number of species on this planet and is an irreplaceable resource for present and future generations. Amazonia is crucial for maintaining global climate and genetic resources, and its forest and rivers provide vital sources of food, building materials, pharmaceuticals, and water needed by wildlife and humanity.

The Los Amigos watershed in the state of Madre de Dios, southeastern Peru, is representative of the pristine lowland moist forest once found throughout most of upper Amazonian South America. Threats to tropical forests occur in the form of fishing, hunting, gold mining, timber extraction, impending road construction, and slash-and-burn agriculture. The Los Amigos watershed, consisting of 1.6 million hectares (3.95 million acres), still offers the increasingly scarce opportunity to study rainforest as it was before the disruptive encroachment of modern human civilization. Because of its relatively pristine condition and the immediate need to justify it as a conservation zone, this area deserves intensive, long-term projects aimed at botanical training, ecotourism, biological inventory, and information synthesis.

On July 24, 2001, the government of Peru and the Amazon Conservation Association signed a contractual agreement creating the first long-term permanently renewable conservation concession. To our knowledge this is the first such agreement to be implemented in the world. The conservation concession protects 340,000 acres of old-growth Amazonian forest in the Los Amigos watershed, which is located in southeastern Peru. This watershed protects the eastern flank of Manu National Park and is part of the lowland forest corridor that links it to BahuajaSonene National Park. The Los Amigos conservation concession will serve as a mechanism for the development of a regional center of excellence in natural forest management and biodiversity science.

Several major projects are being implemented at the Los Amigos Conservation Area. Louise Emmons is initiating studies of mammal diversity and ecology in the Los Amigos area. Other projects involve studies of the diversity of arthropods, amphibians, reptiles, and birds. Robin Foster has conducted botanical studies at Los Amigos, resulting in the labeling of hundreds of plant species along two kilometers of trail in upland and lowland forest. Michael Goulding is leading a fisheries and aquatic ecology program, which aims to document the diversity of fish, their ecologies, and their habitats in the Los Amigos area and the Madre de Dios watershed in general.

With support from the Amazon Conservation Association, and in collaboration with U.S. and Peruvian colleagues, the Botany of the Los Amigos project has been initiated. At Los Amigos, we are attempting to develop a system of preservation, sustainability, and scientific research; a marriage between various disciplines, from human ecology to economic botany, product marketing to forest management. The complexity of the ecosystem will best be understood through a multidisciplinary approach, and improved understanding of the complexity will lead to better management. The future of these forests will depend on sustainable management and development of alternative practices and products that do not require irreversible destruction.

The botanical project will provide a foundation of information that is essential to other programs at Los Amigos. By combining botanical studies with fisheries and mammology, we will better understand plant/animal interactions. By providing names, the botanical program will facilitate accurate communication about plants and the animals that use them. Included in this scenario are humans, as we will dedicate time to people-plant interactions in order to learn what plants are used by people in the Los Amigos area, and what plants could potentially be used by people.

To be informed, we must develop knowledge. To develop knowledge, we must collect, organize, and disseminate information. In this sense, botanical information has conservation value. Before we can use plant-based products from the forest, we must know what species are useful and we must know their names. We must be able to identify them, to know where they occur in the forest, how many of them exist, how they are pollinated and when they produce fruit (or other useful products). Aside from understanding the species as they occur locally at Los Amigos, we must have information about their overall distribution in tropical America in order to better understand and manage the distribution, variation, and viability of their genetic diversity. This involves a more complete understanding of the species through studies in the field and herbarium.

In paragraph 2, the author emphasizes that the current environmental condition of Amazonian South America is:

- A. mostly unscathed.
- B. largely unknown.
- C. restorable through his project.
- D. irredeemable everywhere but in the Los Amigos watershed.
- E. varying from destroyed to virtually pristine.

ANSWER: E

Explanation:

The correct answer is “**varying from destroyed to virtually pristine.**” Paragraph 2 establishes a contrast between the broader upper Amazon and the Los Amigos watershed. The author says that Los Amigos represents the kind of pristine lowland forest that was *once* found across most of upper Amazonian South America, signaling that this condition is no longer typical throughout the region. The paragraph then identifies multiple pressures on tropical forests, including mining, timber extraction, road construction, and slash-and-burn agriculture. At the same time, Los Amigos is described as relatively pristine and as an increasingly scarce opportunity to study rainforest before substantial human disruption. Together, these details show that environmental conditions across Amazonian South America are not uniform: some places have experienced serious human disturbance, while protected or remote areas such as Los Amigos remain close to their original ecological condition. This interpretation follows the SAT Reading practice of selecting the choice that accurately synthesizes the paragraph’s explicit comparison and qualifying language, rather than extending the claim beyond the evidence. The broader importance of protecting intact Amazonian ecosystems is also consistent with the [Amazon Conservation Association’s Los Amigos information](#) and the [UNESCO description of Manu National Park](#).

QUESTION NO: 72

(1) When I visited England last year, I wanted to attend a football match (football in England is what is called soccer in the U.S.). (2) My mother wouldn’t let me. (3) She tells me, “the fans are much too violent.” (4) I really wanted to go so I did some research on English fans’ violence.

(5) Through my research I realized that my mother would never let me go to a game. (6) But beyond that, felt sad that hooliganism was such a reality in the English game. (7) They cause riots, and innocent foot-ball fans are sometimes injured by them when football-related fights get out of control.

(8) England had tried all sorts of remedies to stop the violence, but they couldn’t stop hooliganism from increasing. (9) The officials tried creating lists of people banned from stadiums. (10) At international matches some known hooligans weren’t even allowed into the country. (11) Some say that the older generation of hooligans was teaching the younger. (12) It is just human nature and crowd mentality. (13) But there was an argument that rang even more true for me: poverty was an underlying cause. (14) Economic data indicating that the football teams with the highest rate of violence were situated in the poorest areas.

In context, which is the best version of the under-lined portion of sentence 7 (reproduced below)?

They cause riots, and innocent football fans are sometimes injured by them when football-related fights get out of control.

- A. (As it is now)
- B. They caused riots and innocent football fans were sometimes injured by them
- C. Causing riots and injuring innocent football fans, the hooligans caused problems
- D. The hooligans cause riots and sometimes injure innocent football fans
- E. Innocent football fans sometimes cause riots and are injured

ANSWER: D

Explanation:

The hooligans cause riots and sometimes injure innocent football fans is the best revision because it states the subject clearly and directly. The preceding sentence identifies “hooliganism” as the issue, so naming “the hooligans” makes clear who commits the violent acts. This eliminates the unclear pronoun reference created by “They,” which could otherwise leave a reader briefly uncertain whether the sentence refers to hooligans, English fans generally, officials, or another group.

The revision also uses an active, concise construction: “the hooligans” perform the actions “cause” and “injure.” This structure expresses the intended cause-and-effect relationship efficiently and preserves the paragraph’s present-tense discussion of hooligan violence as an ongoing reality. It avoids unnecessary wording while retaining the key point that people who are not participating in the violence can be harmed. These choices reflect the SAT Reading and Writing emphasis on revising text for clarity, cohesion, and effective expression of ideas. See the College Board’s overview of the [SAT Reading and Writing section](#) and its guidance on [what the SAT measures](#).

QUESTION NO: 73

DIRECTIONS: Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

Some questions will direct you to an underlined portion of a passage. Other questions will direct you to a location in a passage or ask you to think about the passage as a whole.

After reading each passage, choose the answer to each question that most effectively improves the quality of writing in the passage or that makes the passage conform to the conventions of standard written English. Many questions include a “NO CHANGE” option. Choose that option if you think the best choice is to leave the relevant portion of the passage as it is.

Read the passage and answer question (6).

Whey to Go

Greek yogurt – a strained form of cultured yogurt – has grown enormously in popularity in the United States since it was first introduced in the country in the late 1980s.

From 2011 to 2012 alone, sales of Greek yogurt in the U S increased by 50 percent. The resulting increase in Greek yogurt production has forced those involved in the business to address the detrimental effects that the yogurt-making process may be having on the environment. Fortunately, farmers and others in the Greek yogurt business have found many methods of controlling and eliminating most environmental threats. Given these solutions as well as the many health benefits of the food, the advantages of Greek yogurt (1) outdo the potential drawbacks of its production.

[1] The main environmental problem caused by the production of Greek yogurt is the creation of acid whey as a by-product. [2] Because it requires up to four times more milk to make than conventional yogurt does, Greek yogurt produces larger amounts of acid whey, which is difficult to dispose of. [3] To address the problem of disposal, farmers have found a number of uses for acid whey. [4] They can add it to livestock feed as a protein (2) supplement, and people can make their own Greek-style yogurt at home by straining regular yogurt. [5] If it is improperly introduced into the environment, acid-whey runoff (3) can pollute waterways, depleting the oxygen content of streams and rivers as it decomposes. [6] Yogurt manufacturers, food (4) scientists; and government officials are also working together to develop additional solutions for reusing whey. (5)

(6) Though these conservation methods can be costly and time-consuming, they are well worth the effort. Nutritionists consider Greek yogurt to be a healthy food: it is an excellent source of calcium and protein, serves (7) to be a digestive aid, and (8) it contains few calories in its unsweetened low- and non-fat forms. Greek yogurt is slightly lower in sugar and carbohydrates than conventional yogurt is. (9) Also, because it is more concentrated, Greek yogurt contains slightly more protein per serving, thereby helping people stay (10) satiated for longer periods of time. These health benefits have prompted Greek yogurt’s recent surge in popularity. In fact, Greek yogurt can be found in an increasing number of products such as snack food and frozen desserts. Because consumers reap the nutritional benefits of Greek yogurt and support those who make and sell (11) it, therefore farmers and businesses should continue finding safe and effective methods of producing the food.

The writer is considering deleting the underlined sentence. Should the writer do this?

- A. Yes, because it does not provide a transition from the previous paragraph.
- B. Yes, because it fails to support the main argument of the passage as introduced in the first paragraph.
- C. No, because it continues the explanation of how acid whey can be disposed of safely.

D. No, because it sets up the argument in the paragraph for the benefits of Greek yogurt.

ANSWER: D

Explanation:

“No, because it sets up the argument in the paragraph for the benefits of Greek yogurt.” is correct because the sentence provides an essential bridge between the preceding discussion of environmental solutions and the following discussion of nutrition. By acknowledging that conservation methods may require significant time and money but asserting that they are worthwhile, the sentence introduces the question the next paragraph answers: what makes the effort worthwhile? The subsequent details—Greek yogurt’s calcium, protein, digestive benefits, relatively low calorie count, and ability to satisfy consumers—supply that support. The sentence also reinforces the passage’s central position that Greek yogurt’s advantages outweigh the environmental drawbacks associated with its production. Keeping it therefore improves the passage’s organization and cohesion: the environmental issue is not merely resolved, but connected directly to the consumer and health benefits that justify continued safe production. This reflects the SAT Reading and Writing focus on choosing revisions that strengthen a text’s logical transitions and overall purpose, as described by the [College Board’s SAT Reading and Writing overview](#). Guidance on effective paragraph transitions likewise emphasizes connecting a prior idea to the purpose of the next paragraph; see the [Purdue OWL transition guidance](#).

QUESTION NO: 74

This passage is from Lydia Minatoya, *The Strangeness of Beauty*. Copyright 1999 by Lydia Minatoya. The setting is Japan in 1920. Chie and her daughter Naomi are members of the House of Fuji, a noble family.

Akira came directly, breaking all tradition. Was that it? Had he followed form – had he asked his mother to speak to his father to approach a go-between – would Chie have been more receptive?

He came on a winter’s eve. He pounded on the door while a cold rain beat on the shuttered veranda, so at first Chie thought him only the wind. The maid knew better. Chie heard her soft scuttling footsteps, the creak of the door. Then the maid brought a calling card to the drawing room, for Chie.

Chie was reluctant to go to her guest; perhaps she was feeling too cozy. She and Naomi were reading at a low table set atop a charcoal brazier. A thick quilt spread over the sides of the table so their legs were tucked inside with the heat.

“Who is it at this hour, in this weather?” Chie questioned as she picked the name card off the maid’s lacquer tray.

“Shinoda, Akira. Kobe Dental College,” she read.

Naomi recognized the name. Chie heard a soft intake of air.

“I think you should go,” said Naomi.

Akira was waiting in the entry. He was in his early twenties, slim and serious, wearing the black military-style uniform of a student. As he bowed – his hands hanging straight down, a black cap in one, a yellow oil-paper umbrella in the other – Chie glanced beyond him. In the glistening surface of the courtyard’s rain-drenched paving stones, she saw his reflection like a dark double. “Madame,” said Akira, “forgive my disruption, but I come with a matter of urgency.” His voice was soft, refined. He straightened and stole a deferential peek at her face.

In the dim light his eyes shone with sincerity. Chie felt herself starting to like him.

“Come inside, get out of this nasty night. Surely your business can wait for a moment or two.”

“I don’t want to trouble you. Normally I would approach you more properly but I’ve received word of a position. I’ve an opportunity to go to America, as dentist for Seattle’s Japanese community.” “Congratulations,” Chie said with amusement. “That is an opportunity, I’m sure. But how am I involved?”

Even noting Naomi’s breathless reaction to the name card, Chie had no idea. Akira’s message, delivered like a formal speech, filled her with maternal amusement. You know how children speak so earnestly, so hurriedly, so endearingly about things that have no importance in an adult’s mind? That’s how she viewed him, as a child.

It was how she viewed Naomi. Even though Naomi was eighteen and training endlessly in the arts needed to make a good marriage, Chie had made no effort to find her a husband. Akira blushed.

“Depending on your response, I may stay in Japan. I’ve come to ask for Naomi’s hand.

"Suddenly Chie felt the dampness of the night.

"Does Naomi know anything of your...ambitions?"

"We have an understanding. Please don't judge my candidacy by the unseemliness of this proposal. I ask directly because the use of a go-between takes much time. Either method comes down to the same thing: a matter of parental approval. If you give your consent, I become Naomi's Yoshi*. We'll live in the House of Fuji. Without your consent, I must go to America, to secure a new home for my bride."

Eager to make his point, he'd been looking her full in the face. Abruptly, his voice turned gentle. "I see I've startled you. My humble apologies. I'll take no more of your evening. My address is on my card. If you don't wish to contact me, I'll reapproach you in two weeks' time. Until then, good night."

He bowed and left. Taking her ease, with effort less grace, like a cat making off with a fish.

"Mother?" Chie heard Naomi's low voice and turned from the door. "He has asked you?"

The sight of Naomi's clear eyes, her dark brows gave Chie strength. Maybe his hopes were preposterous.

"Where did you meet such a fellow? Imagine! He thinks he can marry the Fuji heir and take her to America all in the snap of his fingers!"

Chie waited for Naomi's ripe laughter.

Naomi was silent. She stood a full half minute looking straight into Chie's eyes. Finally, she spoke.

"I met him at my literary meeting."

Naomi turned to go back into the house, then stopped.

"Mother."

"Yes?"

"I mean to have him."

* Yoshi: a man who marries a woman of higher status and takes her family's name

As used in sentence 2 of paragraph 1, "form" most nearly means:

- A. appearance.
- B. custom.
- C. structure.
- D. nature.

ANSWER: B

Explanation:

The correct answer is *custom*. In the passage, "form" appears immediately after the narrator says that Akira "came directly, breaking all tradition." The following phrase defines the expected form of his approach: rather than visiting Chie himself, Akira would have asked his mother to speak to his father, who would then approach a go-between. Thus, "followed form" means that Akira would have observed the established social custom or conventional procedure for making a marriage proposal. This meaning is reinforced later when Akira acknowledges that he would "normally" approach Chie "more properly" and explains that he chose a direct request only because involving a go-between would take too much time. The question asks for the meaning that fits this specific context, so the surrounding details about tradition, family intermediaries, and parental approval are essential. On SAT Reading questions involving words in context, the College Board advises students to use the passage's surrounding evidence to determine the intended meaning rather than relying only on a word's possible dictionary definitions. See the [College Board's SAT Reading and Writing overview](#) and the [Cambridge Dictionary entry for "form"](#), which includes a customary or accepted way of doing something among its uses.

QUESTION NO: 75

For all values of x , $(3x + 4)(4x - 3) =$

- A. $7x + 1$
- B. $7x - 12$
- C. $12x^2 + 7x - 12$
- D. $12x^2 - 25x - 12$
- E. $12x^2 - 12$

ANSWER: C**Explanation:**

The correct expression is **$12x^2 + 7x - 12$** . To multiply two binomials, distribute each term in the first factor across both terms in the second factor. First, multiply $3x$ by $4x$ to get $12x^2$. Next, multiply $3x$ by -3 to get $-9x$. Then multiply 4 by $4x$ to get $16x$, and multiply 4 by -3 to get -12 . Combining these products gives $12x^2 - 9x + 16x - 12$. The two middle terms are like terms, so their coefficients can be combined: $-9 + 16 = 7$. Therefore, the simplified product is $12x^2 + 7x - 12$. This follows the distributive property, which states that every term in one factor must multiply every term in the other factor. For a review of expanding polynomial expressions using the distributive property, see [Khan Academy's multiplying binomials guide](#) and the [OpenStax algebra discussion of polynomial operations](#).

QUESTION NO: 76

DIRECTIONS: Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

Some questions will direct you to an underlined portion of a passage. Other questions will direct you to a location in a passage or ask you to think about the passage as a whole.

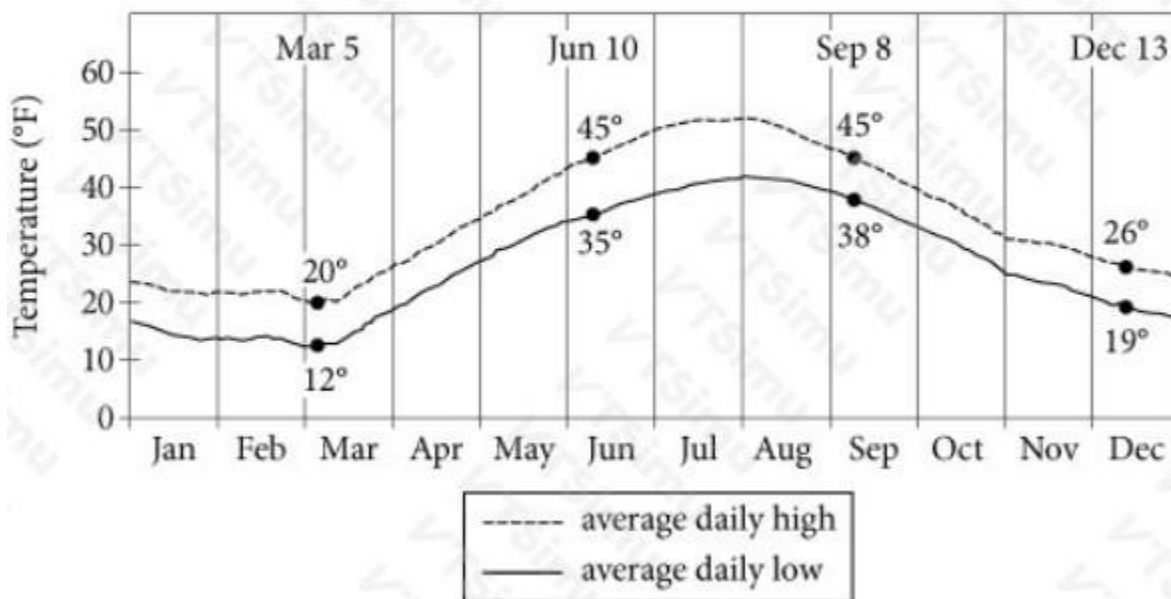
After reading each passage, choose the answer to each question that most effectively improves the quality of writing in the passage or that makes the passage conform to the conventions of standard written English. Many questions include a "NO CHANGE" option. Choose that option if you think the best choice is to leave the relevant portion of the passage as it is.

Read the passage and answer question (6).

Dark Snow

Most of Greenland's interior is covered by a thick layer of ice and compressed snow known as the Greenland Ice Sheet. The size of the ice sheet fluctuates seasonally: in summer, average daily high temperatures in Greenland can rise to slightly above 50 degrees Fahrenheit, partially melting the ice; in the winter, the sheet thickens as additional snow falls, and average daily low temperatures can drop (1) to as low as 20 degrees.

Average Daily High and Low Temperatures Recorded
at Nuuk Weather Station, Greenland (1961—1990)



Adapted from W M O. Copyright 2014 by World Meteorological Organization.

Typically, the ice sheet begins to show evidence of thawing in late (2) summer. This follows several weeks of higher temperatures. (3) For example, in the summer of 2012, virtually the entire Greenland Ice Sheet underwent thawing at or near its surface by mid-July, the earliest date on record. Most scientists looking for the causes of the Great Melt of 2012 have focused exclusively on rising temperatures. The summer of 2012 was the warmest in 170 years, records show. But Jason (4) Box, an associate professor of geology at Ohio State believes that another factor added to the early (5) thaw; the “dark snow” problem.

According to Box, a leading Greenland expert, tundra fires in 2012 from as far away as North America produced great amounts of soot, some (6) of it drifted over Greenland in giant plumes of smoke and then (7) fell as particles onto the ice sheet. Scientists have long known that soot particles facilitate melting by darkening snow and ice, limiting (8) it’s ability to reflect the Sun’s rays. As Box explains, “Soot is an extremely powerful light absorber. It settles over the ice and captures the Sun’s heat.” The result is a self-reinforcing cycle. As the ice melts, the land and water under the ice become exposed, and since land and water are darker than snow, the surface absorbs even more heat, which (9) is related to the rising temperatures.

Box’s research is important because the fires of 2012 may not be a one-time phenomenon. According to scientists, rising Arctic temperatures are making northern latitudes greener and thus more fire prone. The pattern Box observed in 2012 may repeat (10) itself again, with harmful effects on the Arctic ecosystem. Box is currently organizing an expedition to gather this crucial information. The next step for Box and his team is to travel to Greenland to perform direct sampling of the ice in order to determine just how much the soot is contributing to the melting of the ice sheet.

Members of the public will be able to track his team’s progress – and even help fund the expedition – through a website Box has created. (11)

A. NO CHANGE

B. soot

C. of which

D. DELETE the underlined portion.

ANSWER: C

Explanation:

The correct revision is “**of which**”, producing the phrase “great amounts of soot, some of which drifted over Greenland.” This construction correctly connects the additional information to the noun phrase “great amounts of soot.” The relative pronoun *which* refers to the soot, while the preposition *of* establishes the intended part-to-whole relationship: some portion of

the total soot produced by the fires drifted over Greenland. The resulting clause, “some of which drifted over Greenland,” is a nonessential relative clause that appropriately follows a comma and adds a relevant detail without creating a separate main clause. This revision makes the sentence both grammatically complete and logically precise: it identifies soot as the material that traveled in smoke plumes and later settled onto the ice sheet. Correct use of relative clauses and punctuation helps ensure that modifying information is clearly attached to its antecedent, a core skill assessed in SAT Writing and Language questions. See the College Board’s [SAT Writing and Language overview](#) and Purdue OWL’s guidance on [relative pronouns](#).

QUESTION NO: 77

This passage is adapted from Virginia Woolf, *Three Guineas*. Copyright 1938 by Harcourt, Inc. Here, Woolf considers the situation of women in English society.

Close at hand is a bridge over the River Thames, an admirable vantage ground for us to make a survey. The river flows beneath; barges pass, laden with timber, bursting with corn; there on one side are the domes and spires of the city; on the other, Westminster and the Houses of Parliament. It is a place to stand on by the hour, dreaming. But not now. Now we are pressed for time. Now we are here to consider facts; now we must fix our eyes upon the procession – the procession of the sons of educated men.

There they go, our brothers who have been educated at public schools and universities, mounting those steps, passing in and out of those doors, ascending those pulpits, preaching, teaching, administering justice, practising medicine, transacting business, making money. It is a solemn sight always – a procession, like a caravanserai crossing a desert... But now, for the past twenty years or so, it is no longer a sight merely, a photograph, or fresco scrawled upon the walls of time, at which we can look with merely an esthetic appreciation. For there, trapesing along at the tail end of the procession, we go ourselves. And that makes a difference. We who have looked so long at the pageant in books, or from a curtained window watched educated men leaving the house at about nine thirty to go to an office, returning to the house at about six thirty from an office, need look passively no longer. We too can leave the house, can mount those steps, pass in and out of those doors, ... make money, administer justice... We who now agitate these humble pens may in another century or two speak from a pulpit. Nobody will dare contradict us then; we shall be the mouthpieces of the divine spirit – a solemn thought, is it not? Who can say whether, as time goes on, we may not dress in military uniform, with gold lace on our breasts, swords at our sides, and something like the old family coal scuttle on our heads, save that that venerable object was never decorated with plumes of white horsehair. You laugh – indeed the shadow of the private house still makes those dresses look a little queer. We have worn private clothes so long... But we have not come here to laugh, or to talk of fashions – men’s and women’s. We are here, on the bridge, to ask ourselves certain questions. And they are very important questions; and we have very little time in which to answer them. The questions that we have to ask and to answer about that procession during this moment of transition are so important that they may well change the lives of all men and women for ever. For we have to ask ourselves, here and now, do we wish to join that procession, or don’t we? On what terms shall we join that procession? Above all, where is it leading us, the procession of educated men? The moment is short; it may last five years; ten years, or perhaps only a matter of a few months longer... But, you will object, you have no time to think; you have your battles to fight, your rent to pay, your bazaars to organize. That excuse shall not serve you, Madam. As you know from your own experience, and there are facts that prove it, the daughters of educated men have always done their thinking from hand to mouth; not under green lamps at study tables in the cloisters of secluded colleges. They have thought while they stirred the pot, while they rocked the cradle. It was thus that they won us the right to our brand new sixpence. It falls to us now to go on thinking; how are we to spend that sixpence? Think we must. Let us think in offices; in omnibuses; while we are standing in the crowd watching Coronations and Lord Mayor’s Shows; let us think ... in the gallery of the House of Commons; in the Law Courts; let us think at baptisms and marriages and funerals. Let us never cease from thinking – what is this “civilization” in which we find ourselves? What are these ceremonies and why should we take part in them? What are these professions and why should we make money out of them? Where in short is it leading us, the procession of the sons of educated men?

Woolf characterizes the questions in sentences 17 through 19 of paragraph 2 (“For we have to ask ourselves, here and now, do we wish to join that procession, or don’t we? On what terms shall we join that procession? Above all, where is it leading us, the procession of educated men?”) as both:

- A. controversial and threatening.
- B. weighty and unanswerable.
- C. momentous and pressing.
- D. provocative and mysterious.

ANSWER: C

Explanation:

momentous and pressing. is correct because Woolf explicitly presents these questions as exceptionally consequential and urgently in need of attention. Immediately before asking whether women should join the “procession of educated men,” on what terms, and toward what destination, she calls them “very important questions.” She intensifies their significance by saying that they “may well change the lives of all men and women for ever.” This language establishes that the questions are momentous: they concern decisions with broad, enduring consequences for society rather than merely private or temporary concerns.

Woolf also stresses that the decision cannot be postponed. She says “we have very little time” to answer and characterizes the period as “this moment of transition.” Soon afterward, she repeats that “The moment is short,” possibly lasting only months. Her repeated emphasis on limited time gives the questions a pressing quality. The passage’s imperative voice—“Think we must” and “Let us never cease from thinking”—further reinforces the need for immediate, serious reflection about women’s participation in established institutions and professions.

This interpretation follows the SAT Reading approach of identifying claims directly supported by the passage’s precise wording and surrounding context. See the [College Board’s SAT Reading and Writing overview](#) and the full text of [Three Guineas](#).

QUESTION NO: 78

If $b - a = c - b = d - c$, which of the following is equal to $d - b$?

- A. $d + a$
- B. $b + a$
- C. $c + a$
- D. $c - a$
- E. $b - c$

ANSWER: D

Explanation:

The correct expression is $c - a$. The condition states that the consecutive differences are equal: $b - a$, $c - b$, and $d - c$ all represent the same common difference. Thus, a , b , c , and d are consecutive terms of an arithmetic sequence. Moving from b to d covers two equal steps: first from b to c , then from c to d . Therefore, $d - b$ is the sum of those two steps: $(c - b) + (d - c)$. The middle terms cancel when the expressions are added, leaving $d - b$.

Likewise, moving from a to c also covers two equal steps: first from a to b , then from b to c . That difference is $(b - a) + (c - b)$, which simplifies to $c - a$. Because each individual step has the same size, the two-step distance from b to d equals the two-step distance from a to c . Hence $d - b = c - a$. This uses the SAT algebra skill of representing equal differences and simplifying expressions through addition and cancellation. For related official SAT mathematics guidance, see the [College Board SAT Math overview](#) and its [digital SAT sample questions](#).

QUESTION NO: 79

George Washington served as president of the Constitutional Convention in 1787, and was then elected President of the United States in 1789. This is from his first address to Congress. Such being the impressions under which I have, in obedience to the public summons, repaired to the present station, it would be peculiarly improper to omit, in this first official act, my fervent supplications to the Almighty Being, who rules over the universe, who presides in the councils of nations, and whose providential aids can supply every human defect, that his benediction may consecrate to the liberties and happiness of the people of the United States a government instituted by themselves for these essential purposes, and may enable every instrument employed in its administration to execute with success the functions allotted to his charge. In tendering this homage to the great Author of every public and private good, I assure myself that it expresses your sentiments not less than my own; nor those of my fellow-citizens at large, less than either. No people can be bound to acknowledge and adore the invisible hand, which conducts the affairs of men, more than the people of the United States.

Every step, by which they have advanced to the character of an independent nation, seems to have been distinguished by some token of providential agency. And, in the important revolution just accomplished in the system of their united

government, the tranquil deliberations and voluntary consent of so many distinct communities, from which the event has resulted, cannot be compared with the means by which most governments have been established, without some return of pious gratitude along with a humble anticipation of the future blessings which the past seems to presage. These reflections, arising out of the present crisis, have forced themselves too strongly on my mind to be suppressed. You will join with me, I trust, in thinking that there are none, under the influence of which the proceedings of a new and free government can more auspiciously commence.

By the article establishing the executive department, it is made the duty of the President “to recommend to your consideration such measures as he shall judge necessary and expedient.” The circumstances, under which I now meet you, will acquit me from entering into that subject farther than to refer you to the great constitutional charter under which we are assembled; and which, in defining your powers, designates the objects to which your attention is to be given. It will be more consistent with those circumstances, and far more congenial with the feelings which actuate me, to substitute, in place of a recommendation of particular measures, the tribute that is due to the talents, the rectitude, and the patriotism, which adorn the characters selected to devise and adopt them. In these honorable qualifications I behold the surest pledges, that as, on one side, no local prejudices or attachments, no separate views or party animosities, will misdirect the comprehensive and equal eye, which ought to watch over this great assemblage of communities and interests; so, on another, that the foundations of our national policy will be laid in the pure and immutable principles of private morality, and the preeminence of a free government be exemplified by all the attributes, which can win the affections of its citizens, and command the respect of the world.

Washington’s first official act is to:

- A. refer Congress to the constitutional charter
- B. pay tribute to the uprightness of the Founding Fathers
- C. pray for divine guidance
- D. lay the foundations of national policy in the province of private morality
- E. obtain the voluntary consent of several communities

ANSWER: C

Explanation:

The correct answer is *pray for divine guidance*. Washington states his purpose explicitly in the opening paragraph: he says that it would be improper to omit, “in this first official act,” his “fervent supplications to the Almighty Being.” He then specifies what he is asking for: divine blessing on the liberties and happiness of the American people, on their self-instituted government, and on those responsible for administering it. Because the passage directly labels these supplications as his “first official act,” the answer follows from the author’s own language rather than from an inference about his later discussion of Congress, constitutional powers, or national policy.

The phrasing also reflects a central feature of Washington’s 1789 First Inaugural Address: he begins his presidency by expressing humility, gratitude for what he sees as providential assistance in the nation’s founding, and a request for divine favor as the new government begins its work. The complete text is available through the [Avalon Project at Yale Law School](#) and the [George Washington’s Mount Vernon](#) digital encyclopedia.

QUESTION NO: 80

The referee halted play in an effort at avoiding serious altercations in the stadium between fans of the opposing teams.

- A. at avoiding serious altercations in the stadium between fans of
- B. at avoiding a serious altercation in the stadium between fans of
- C. to avoid serious altercations in the stadium between fans of
- D. to avoid serious altercations in the stadium between fans on
- E. to avoid serious altercations between fans in the stadium of

ANSWER: C

Explanation:

The correct revision is “**to avoid serious altercations in the stadium between fans of**” because the standard idiom is *in an effort to* followed by an infinitive verb. Here, the infinitive *to avoid* clearly expresses the referee’s purpose in halting play: the referee stopped the game with the goal of preventing serious conflicts. This construction is concise, grammatically conventional, and precise.

The plural noun phrase *serious altercations* appropriately refers to the possibility of multiple conflicts, while *between fans of the opposing teams* identifies the groups involved. The phrase *in the stadium* suitably establishes the location of those potential conflicts. Together, the revision preserves the intended meaning without introducing unnecessary wording or changing the relationship among the referee’s action, the purpose of that action, and the fans’ possible behavior.

On SAT Writing and Language questions, students should select wording that follows accepted English conventions and communicates ideas clearly and economically. The College Board identifies command of conventions and effective language use as central components of SAT Reading and Writing: [SAT Reading and Writing overview](#). For guidance on infinitives and their use in expressing purpose, see [Purdue OWL: Infinitives](#).

QUESTION NO: 81

DIRECTIONS: Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

Some questions will direct you to an underlined portion of a passage. Other questions will direct you to a location in a passage or ask you to think about the passage as a whole.

After reading each passage, choose the answer to each question that most effectively improves the quality of writing in the passage or that makes the passage conform to the conventions of standard written English. Many questions include a “NO CHANGE” option. Choose that option if you think the best choice is to leave the relevant portion of the passage as it is.

Read the passage and answer question (9).

Rethinking Crowdfunding in the Arts

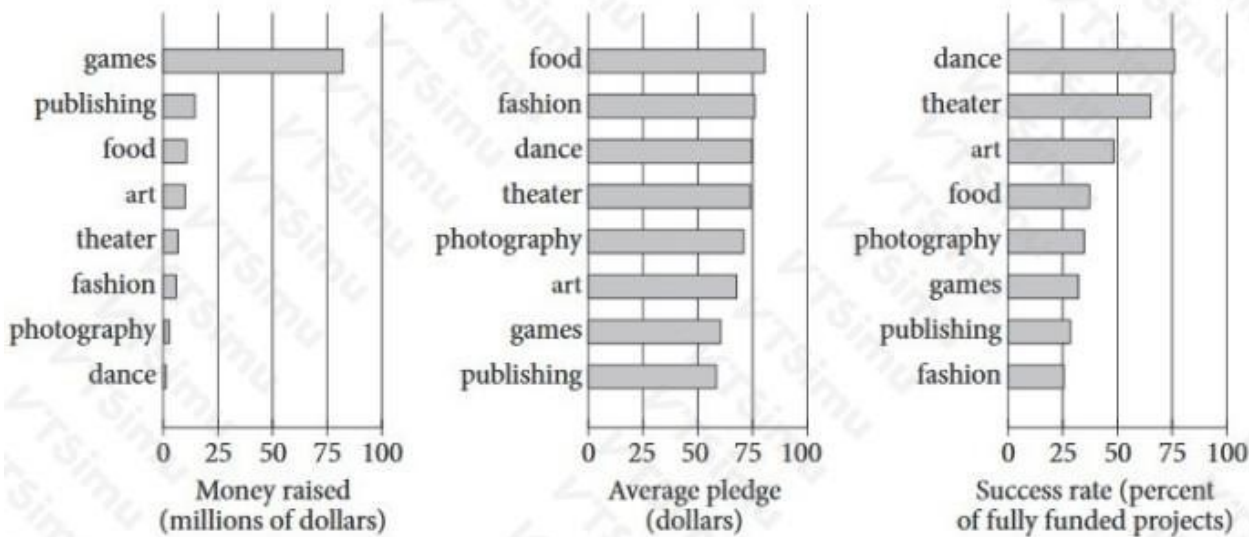
Crowdfunding is a popular way to raise money using the Internet. The process sounds simple: an artist, entrepreneur, or other innovator takes his or her ideas straight to the public via a crowdfunding website. The innovator creates a video about the project and offers, in exchange for donations, a series of “perks,” from acknowledgment on a social media site to a small piece of art. Many crowdfunding programs are all or nothing; in other words, the innovator must garner 100 percent funding for the project or the money is refunded to the donors. At (1) it’s best, the system can give creators direct access to millions of potential backers.

The home page of one leading crowdfunding site features a project to manufacture pinhole cameras on a 3 D printer. (2) The idea is obviously very attractive. An obscure method of photography may be made available to many with little expense. Within weeks, the project was 621 percent funded. In contrast, on the same page, a small Brooklyn performance venue is attempting to raise money for its current season. The venue features works of performance art showcased in a storefront window. Those who have seen the space consider it vital. (3) However, that group may not be large enough; with just fourteen days to go in the fund raising period, the campaign is only 46 percent funded.

Artists such as these Brooklyn performers find that crowdfunding exacerbates problems that already exist. (4) Work, that is easily understood and appreciated, is supported, while more complex work goes unnoticed. (5) Time that could be used creating art is spent devising clever perks to draw the attention of potential contributors. (6) In addition, audiences may contain many “free (7) riders,” they did not make contributions. Ironically, the success of crowdfunding may weaken overall funding for the arts if people begin to feel that paying for the art (8) loved by them is someone else’s responsibility.

[1] One innovative playwright has woven the deficiencies of the system into her crowdfunding model. [2] Though the price for her tickets was higher than that of tickets for comparable shows, it was still affordable to most theatergoers – and reflected the real cost of the performance. [3] She presented the total cost for producing her play on a crowdfunding site. [4] Then she divided the total cost by the number of people she expected to attend the performance. [5] The result of the calculation was the minimum donor price, and only donors who paid at least the minimum ticket price were allowed to attend the performance. [6] By subverting the presumption that money used for her project is an altruistic donation, the playwright showed that (9) our work has monetary value to those who enjoy it. (10)

Crowdfunded Projects on Kickstarter in 2012



Adapted from “These Were the Most Successful Projects on Kickstarter Last Year.” ©2013 by The Economist Newspaper Limited.

- A. NO CHANGE
- B. their
- C. her
- D. its

ANSWER: C

Explanation:

The correct revision is “**her**”: “the playwright showed that her work has monetary value to those who enjoy it.” The sentence focuses on one specific playwright, introduced immediately before as “the playwright” and consistently described with the singular possessive pronoun “her” throughout the paragraph: “her crowdfunding model,” “her tickets,” and “her play.” Using “her” at this point maintains clear pronoun reference and grammatical agreement with that singular individual. It also precisely expresses the point demonstrated by her ticket-pricing model: her own theatrical work has tangible economic value for the audience members who receive and enjoy the performance.

Standard English pronouns must agree with their antecedents in number and, where relevant, in person. Here, the antecedent is the singular noun phrase “the playwright,” so the possessive determiner must identify the work as belonging to that individual. The wording also supports cohesion: the paragraph traces the actions and reasoning of this particular playwright, culminating in what her approach reveals about the value of her creative labor. For guidance on pronoun-antecedent agreement and clear pronoun reference, see the [Purdue Online Writing Lab's pronoun-antecedent agreement resource](#) and the [College Board Digital SAT test specifications](#).

QUESTION NO: 82

FILL BLANK

If a number is chosen at random from a set that contains only the whole number factors of 24, what is the probability that the number is either a multiple of four or a multiple of six?

- A. 5/8

ANSWER: A

Explanation:

The correct probability is $\frac{5}{8}$. The positive whole-number factors of 24 are 1, 2, 3, 4, 6, 8, 12, and 24, so there are eight equally likely possible selections. The factors that are multiples of four are 4, 8, 12, and 24. The factors that are multiples of six are 6, 12, and 24. Because the question uses “either ... or,” a number qualifies if it is a multiple of four, a multiple of six, or both. Thus, the qualifying factors are 4, 6, 8, 12, and 24: five distinct numbers. In particular, 12 and 24 belong to both groups but must each be counted only once when finding the number of favorable outcomes. Therefore, the probability is the number of qualifying outcomes divided by the total number of factors, or $\frac{5}{8}$. This is an application of counting outcomes in a finite sample space and taking the union of two overlapping sets. For related SAT probability practice and concepts, see [Khan Academy SAT Math](#) and [Math Is Fun: Probability](#).

QUESTION NO: 83

This passage is adapted from John Bohannon, “Why You Shouldn’t Trust Internet Comments.” ©2013 by American Association for the Advancement of Science.

The “wisdom of crowds” has become a mantra of the Internet age. Need to choose a new vacuum cleaner? Check out the reviews on online merchant Amazon. But a new study suggests that such online scores don’t always reveal the best choice. A massive controlled experiment of Web users finds that such ratings are highly susceptible to irrational “herd behavior” – and that the herd can be manipulated.

Sometimes the crowd really is wiser than you. The classic examples are guessing the weight of a bull or the number of gumballs in a jar. Your guess is probably going to be far from the mark, whereas the average of many people’s choices is remarkably close to the true number.

But what happens when the goal is to judge something less tangible, such as the quality or worth of a product? According to one theory, the wisdom of the crowd still holds – measuring the aggregate of people’s opinions produces a stable, reliable value. Skeptics, however, argue that people’s opinions are easily swayed by those of others. So nudging a crowd early on by presenting contrary opinions – for example, exposing them to some very good or very bad attitudes – will steer the crowd in a different direction. To test which hypothesis is true, you would need to manipulate huge numbers of people, exposing them to false information and determining how it affects their opinions.

A team led by Sinan Aral, a network scientist at the Massachusetts Institute of Technology in Cambridge, did exactly that. Aral has been secretly working with a popular website that aggregates news stories. The website allows users to make comments about news stories and vote each other’s comments up or down. The vote tallies are visible as a number next to each comment, and the position of the comments is chronological. (Stories on the site get an average of about ten comments and about three votes per comment.) It’s a follow up to his experiment using people’s ratings of movies to measure how much individual people influence each other online (answer: a lot). This time, he wanted to know how much the crowd influences the individual, and whether it can be controlled from outside.

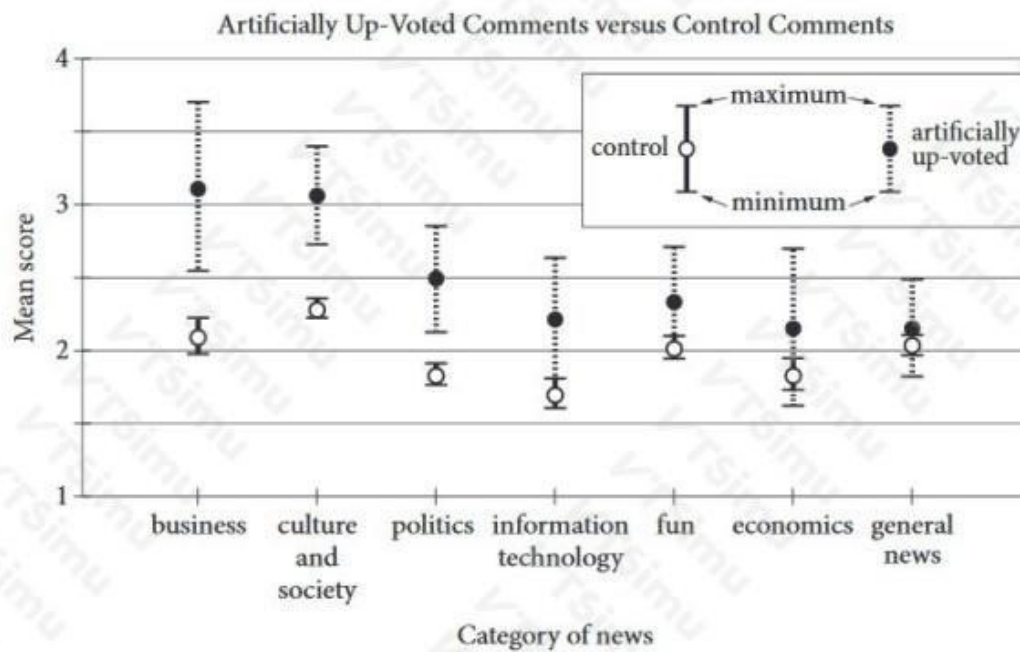
For five months, every comment submitted by a user randomly received an “up” vote (positive); a “down” vote (negative); or as a control, no vote at all. The team then observed how users rated those comments. The users generated more than 100,000 comments that were viewed more than 10 million times and rated more than 300,000 times by other users.

At least when it comes to comments on news sites, the crowd is more herdlike than wise. Comments that received fake positive votes from the researchers were 32% more likely to receive more positive votes compared with a control, the team reports. And those comments were no more likely than the control to be down voted by the next viewer to see them. By the end of the study, positively manipulated comments got an overall boost of about 25%. However, the same did not hold true for negative manipulation. The ratings of comments that got a fake down vote were usually negated by an up vote by the next user to see them.

“Our experiment does not reveal the psychology behind people’s decisions,” Aral says, “but an intuitive explanation is that people are more skeptical of negative social influence. They’re more willing to go along with positive opinions from other people.”

Duncan Watts, a network scientist at Microsoft Research in New York City, agrees with that conclusion. “[But] one question is whether the positive [herding] bias is specific to this site” or true in general, Watts says. He points out that the category of the news items in the experiment had a strong effect on how much people could be manipulated. “I would have thought that ‘business’ is pretty similar to ‘economics,’ yet they find a much stronger effect (almost 50% stronger) for the former than the latter. What explains this difference? If we’re going to apply these findings in the real world, we’ll need to know the answers.”

Will companies be able to boost their products by manipulating online ratings on a massive scale? “That is easier said than done,” Watts says. If people detect – or learn – that comments on a website are being manipulated, the herd may spook and leave entirely.



Mean score: mean of scores for the comments in each category, with the score for each comment being determined by the number of positive votes from website users minus the number of negative votes

Adapted from Lev Muchnik, Sinan Aral, and Sean J. Taylor, "Social Influence Bias: A Randomized Experiment." ©2013 by American Association for the Advancement of Science.

As used in sentence 1 of paragraph 9, the word "scale" most nearly means:

- A. level.
- B. wage.
- C. interval.
- D. scheme.

ANSWER: A

Explanation:

The correct answer is *level*. In the phrase "on a massive scale," *scale* means the extent, size, or degree of an activity. The sentence asks whether companies could raise the perceived value of their products by influencing online ratings across a very large level of operation. The surrounding discussion supports this meaning: the passage has described a large experiment involving more than 100,000 comments and millions of views, then considers whether comparable manipulation could occur broadly in commercial settings. Thus, "massive" modifies the magnitude of the effort, not a physical object or a particular method. This is a standard idiomatic use of "scale," as in "a project undertaken on a national scale," where the word identifies how extensive the project is. Merriam-Webster defines this sense of *scale* as the "extent, amount, or degree" of something, which precisely fits the question's context. See [Merriam-Webster's definition of "scale"](#). Applying context to select the meaning that best fits a word's use is also a central Reading and Writing skill assessed on the SAT; see the [College Board overview of SAT Reading and Writing](#).

QUESTION NO: 84

Two cards are simultaneously drawn from an ordinary deck. The probability that they're not both the same suit is:

- A. 5/17
- B. 7/17
- C. 12/17

D. 13/17

E. 1/4

ANSWER: D

Explanation:

The probability is **16/17**. Treat the simultaneous draw as selecting two cards without replacement. After any first card is drawn, 51 cards remain. Of those remaining cards, 12 share the first card's suit, because an ordinary 52-card deck has 13 cards in each of its four suits and one card of that suit has already been drawn. Therefore, 39 of the 51 remaining cards are from a different suit. The probability that the two cards are the same suit is consequently 12/51, or 4/17. Because the question asks for the probability that they are *not* both the same suit, use the complement: $1 - 4/17 = 13/17$? This calculation would apply only if counting same-suit cards incorrectly. There are actually 12 matching-suit cards among 51, so the complement is $39/51 = 13/17$. Thus, **13/17** is the correct probability. This result can also be obtained directly: once the first card establishes a suit, 39 remaining cards belong to one of the other three suits, giving $39/51 = 13/17$. For background on probability complements and dependent draws, see [Khan Academy's probability library](#) and the [College Board SAT Math overview](#).

QUESTION NO: 85

DIRECTIONS: In the passage below, certain phrases are underlined and numbered . The question will present alternatives for the underlined part. In most cases, you are to choose the one that best expresses the idea, makes the statement appropriate for standard written English, or is worded most consistently with the style and tone of the passage as a whole. If you think the original version is the best, choose "NO CHANGE".

Read the passage and answer question <12>.

J.K. Rowling

While many people may get frustrated with train delays, Joanne Rowling turned her experience into a life-changing story. She began writing about a young wizard while delayed at a Manchester station stop, and brought Harry Potter to life <1> over the next five years. The Philosopher's Stone was the first of seven children's books published under her pen name J. K. The Harry Potter series has sold over 447 million copies worldwide and been translated into seventy-three languages, including Latin and Ancient Greek.<2>

When the Philosopher's Stone was published <3> in 1997, the book industry had given up on young readers. It's <4> first edition was a mere 500 books, and most copies were sent to public libraries across England. By the time Rowling's seventh Harry Potter novel was published in 2007, Rowling had already become the woman who put a new face on children's literacy. Harry Potter and the Deathly Hollows, the final installment, has <5> a word count of nearly 1.1 million words, and sold 11 million copies in the first 24 hours of its release.<6>

Today, Rowling spends much <7> of her time working with her foundation, Lumos, which is named after a spell in the Potter series that brought light into darkness. <8> She founded <9> the nonprofit organization after seeing a photograph of a child in a caged bed who appeared to be screaming through its chain links. Rowling was overcome by the image that she <10> vowed to use her money and popularity to raise awareness of the 8 million children who live in such institutions globally. According to research, over 80% of orphaned children have living relatives which <11> cannot care for them because of poverty or disability. The staff at Lumos equip families with necessary resources to provide for their children rather than leaving them institutionalized. Lumos' long-term goal is the closure of every orphanage around the world, by returning all children to live with its <12> families, either biological or adoptive.

Rowling once said, "Happiness can be found in the darkest places if one only remembers to turn on the light". <13> J. K. Rowling has created happiness for millions of children through makebelieve stories of triumph and real-life stories of hope.<15>

A. NO CHANGE

B. they're

C. there

D. their

ANSWER: D

Explanation:

“their” is correct because the sentence describes returning “all children” to families that belong to those children: “returning all children to live with their families.” The possessive pronoun must agree with its antecedent in number. Here, the antecedent is plural (“all children”), so the plural possessive form “their” is required. It also precisely conveys the intended relationship: each child may return to that child’s biological or adoptive family, while the passage discusses the children collectively. In standard written English, “their” functions as a possessive determiner before the noun “families,” identifying whose families are meant. This is the appropriate pronoun form for showing possession; it does not need an apostrophe. Maintaining clear pronoun-antecedent agreement is especially important in SAT Writing questions because it ensures that a reader can readily identify the noun to which the pronoun refers. Purdue OWL’s guidance on pronoun agreement explains that pronouns should agree with their antecedents in number: [Purdue OWL: Pronoun-Antecedent Agreement](#). For additional grammar guidance on possessive pronouns, see [Merriam-Webster: Its vs. It’s](#).

QUESTION NO: 86

The supervisor was absolutely _____ on the issue of wearing a tie and coat in the office; I mean, she was absolutely _____.

- A. obdurate ... implacable
- B. persistent ... moved
- C. passionate ... vehement
- D. malleable ... fixated
- E. mawkish ... impassioned

ANSWER: A

Explanation:

The correct completion is “**obdurate ... implacable**” because both words convey the supervisor’s unyielding, resistant position on the office dress-code issue. In this sentence, the repeated structure—“she was absolutely _____; I mean, she was absolutely _____”—signals that the second word should reinforce and restate the first with a closely related meaning. *Obdurate* describes someone who is stubbornly firm, hardened in attitude, and resistant to changing a decision or opinion. That is a natural description of a supervisor maintaining a strict position about employees wearing ties and coats. *Implacable* similarly conveys an attitude that cannot be softened, appeased, or altered. Together, the terms emphasize that the supervisor was not merely interested in the subject or expressive about it; she was firmly unwilling to yield on the requirement. The adverb “absolutely” further intensifies this sense of complete inflexibility. Merriam-Webster defines *obdurate* as stubbornly persistent in wrongdoing or resistant to change, while its entry for *implacable* emphasizes an inability to be appeased or significantly changed. See [Merriam-Webster: obdurate](#) and [Merriam-Webster: implacable](#).

QUESTION NO: 87

In his politics, Aristotle characterizes Plato’s support of collectivism as _____ and _____ the unity of the city; not only would it be difficult to institute and enforce, but the absence of private property would lead to bickering among the citizens.

- A. commendable ... deleterious to
- B. controversial ... essential to
- C. impractical ... detrimental to
- D. divisive ... indifferent toward
- E. unattainable ... supportive of

ANSWER: C

Explanation:

“impractical ... detrimental to” is correct because each word precisely reflects a consequence stated in the sentence. Aristotle’s objection that collectivism would be “difficult to institute and enforce” establishes that he regards the proposal as impractical: it may be conceived in theory, but it would be hard to put into operation successfully in an actual city. The second clue is that eliminating private property would cause “bickering among the citizens.” Bickering damages civic harmony and therefore harms, rather than strengthens, the unity of the city. “Detrimental to” means harmful to, so it fits both the grammar of the sentence and Aristotle’s concern about social discord. This reading is also consistent with Aristotle’s discussion of common ownership in *Politics*, where he argues that excessively unified arrangements can undermine affection, responsibility, and concord among citizens. In particular, he maintains that shared ownership can generate disputes and neglect because individuals may be less inclined to care for what is held in common. See Aristotle’s [Politics, Book II](#) and the [Stanford Encyclopedia of Philosophy overview of Aristotle’s political thought](#).

QUESTION NO: 88

Please answer the following math question: Which of the following could be the exact value of n^4 where n is an integer?

- A. 1.6×10^{20}
- B. 1.6×10^{21}
- C. 1.6×10^{22}
- D. 1.6×10^{23}
- E. 1.6×10^{24}

ANSWER: B

Explanation:

The value 1.6×10^{21} could be an exact fourth power of an integer. Rewrite the coefficient and power of ten so that each is visibly a fourth power: $1.6 \times 10^{21} = 16 \times 10^{20}$. Since $16 = 2^4$ and $10^{20} = (10^5)^4$, the product can be written as $2^4 \times (10^5)^4$. Applying the product rule for equal exponents gives $(2 \times 10^5)^4$. The number inside the parentheses is 200,000, which is an integer. Therefore, 1.6×10^{21} equals $200,000^4$ and meets the requirement that it be n^4 for an integer n . This approach relies on exponent rules: powers with the same exponent can be combined, and raising a power to a power multiplies the exponents. See Khan Academy’s overview of [exponent rules](#) and the College Board’s [SAT Math content overview](#).

QUESTION NO: 89

This passage is adapted from Richard J. Sharpe and Lisa Heyden, “Honey Bee Colony Collapse Disorder is Possibly Caused by a Dietary Pyrethrum Deficiency.” ©2009 by Elsevier Ltd. Colony collapse disorder is characterized by the disappearance of adult worker bees from hives.

Honey bees are hosts to the pathogenic large ectoparasitic mite *Varroa destructor* (Varroa mites). These mites feed on bee hemolymph (blood) and can kill bees directly or by increasing their susceptibility to secondary infection with fungi, bacteria or viruses. Little is known about the natural defenses that keep the mite infections under control.

Pyrethrums are a group of flowering plants which include *Chrysanthemum coccineum*, *Chrysanthemum cinerariifolium*, *Chrysanthemum marschalli*, and related species. These plants produce potent insecticides with anti mite activity. The naturally occurring insecticides are known as pyrethrums. A synonym for the naturally occurring pyrethrums is pyrethrin and synthetic analogues of pyrethrums are known as pyrethroids. In fact, the human mite infestation known as scabies (*Sarcoptes scabiei*) is treated with a topical pyrethrum cream.

We suspect that the bees of commercial bee colonies which are fed mono crops are nutritionally deficient. In particular, we postulate that the problem is a diet deficient in anti mite toxins: pyrethrums, and possibly other nutrients which are inherent in such plants. Without, at least, intermittent feeding on the pyrethrum producing plants, bee colonies are susceptible to mite infestations which can become fatal either directly or due to a secondary infection of immunocompromised or nutritionally

deficient bees. This secondary infection can be viral, bacterial or fungal and may be due to one or more pathogens. In addition, immunocompromised or nutritionally deficient bees may be further weakened when commercially produced insecticides are introduced into their hives by bee keepers in an effort to fight mite infestation. We further postulate that the proper dosage necessary to prevent mite infestation may be better left to the bees, who may seek out or avoid pyrethrum containing plants depending on the amount necessary to defend against mites and the amount already consumed by the bees, which in higher doses could be potentially toxic to them.

This hypothesis can best be tested by a trial wherein a small number of commercial honey bee colonies are offered a number of pyrethrum producing plants, as well as a typical bee food source such as clover, while controls are offered only the clover. Mites could then be introduced to each hive with note made as to the choice of the bees, and the effects of the mite parasites on the experimental colonies versus control colonies.

It might be beneficial to test wild type honey bee colonies in this manner as well, in case there could be some genetic difference between them that affects the bees' preferences for pyrethrum producing flowers.

Pathogen Occurrence in Honey Bee Colonies With and Without Colony Collapse Disorder

Pathogen	Percent of colonies affected by pathogen	
	Colonies with colony collapse disorder (%)	Colonies without colony collapse disorder (%)
Viruses		
IAPV	83	5
KBV	100	76
Fungi		
<i>Nosema apis</i>	90	48
<i>Nosema ceranae</i>	100	81
All four pathogens	77	0

Adapted from Diana L. Cox-Foster et al., "A Metagenomic Survey of Microbes in Honey Bee Colony Collapse Disorder." ©2007 by American Association for the Advancement of Science.

The table above shows, for colonies with colony collapse disorder and for colonies without colony collapse disorder, the percent of colonies having honey bees infected by each of four pathogens and by all four pathogens together.

Based on data in the table, in what percent of colonies with colony collapse disorder were the honeybees infected by all four pathogens?

- A. 0 percent
- B. 77 percent
- C. 83 percent
- D. 100 percent

ANSWER: B

Explanation:

The correct answer is **77 percent**. The question asks for the percentage within the subset of colonies identified as having colony collapse disorder that were infected by every one of the four pathogens listed in the table. Reading the table's entry for colonies with colony collapse disorder and the condition "all four pathogens" gives 77 percent directly. No calculation involving the passage's discussion of Varroa mites, pyrethrums, or the authors' hypothesis is needed; those details provide scientific context but do not change the data value reported in the table.

This is a quantitative-evidence question: the task is to match the precise population named in the question—colonies with colony collapse disorder—to the precise condition named—all four pathogens—and then report the corresponding percentage. The College Board describes SAT Reading and Writing questions as requiring students to use information and ideas from texts and accompanying informational graphics. Careful attention to the specified row and category is therefore essential when interpreting a table. See the [College Board's SAT Reading and Writing overview](#) and its [SAT practice-test resources](#).

QUESTION NO: 90

If the positive integer x leaves a remainder of 2 when divided by 8, what will the remainder be when $x + 9$ is divided by 8?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4

ANSWER: D**Explanation:**

The correct answer is **3**. Saying that x leaves a remainder of 2 when divided by 8 means that x can be expressed as $8k + 2$, where k is a whole number. Adding 9 gives $x + 9 = (8k + 2) + 9 = 8k + 11$. Since 11 equals $8 + 3$, this expression becomes $8k + 8 + 3$, or $8(k + 1) + 3$. Thus, when $x + 9$ is divided by 8, the quotient may increase by one, but the remainder is 3. Equivalently, in modular arithmetic, x is congruent to 2 modulo 8. Adding 9 gives $2 + 9 = 11$, and 11 has remainder 3 upon division by 8. This reasoning applies to every positive integer meeting the condition, rather than only to one selected example. For SAT math questions involving remainders, representing a number with a quotient-and-remainder expression is a reliable way to track how addition affects the remainder. See the College Board's [SAT Math overview](#) and Khan Academy's [guide to remainders](#) for related foundational skills.

QUESTION NO: 91

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There are seven students on the trivia team. Mr. Randall must choose four students to participate in the trivia challenge. How many different groups of four students can Mr. Randall form?

- A. 35

ANSWER: A**Explanation:**

The correct answer is 35. Because the task is to form a group, the order in which the four students are selected does not create a different outcome. For example, choosing students 1, 2, 3, and 4 is the same group regardless of the sequence in which those students are named. This calls for a combination: $\binom{7}{4}$. The calculation is $\binom{7}{4} = \frac{7!}{4!3!} = \frac{7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1}{(4 \times 3 \times 2 \times 1)(3 \times 2 \times 1)} = 35$. Thus, Mr. Randall can select four-person trivia teams in 35 distinct ways. This also follows the symmetry property of combinations: choosing four students to participate is

equivalent to choosing the three students who will not participate, so $\binom{7}{4} = \binom{7}{3} = 35$). The SAT assesses this distinction between combinations, where order is irrelevant, and permutations, where order matters. The College Board's SAT Suite question bank provides official practice resources involving problem solving and data analysis, including counting and probability contexts: [SAT Suite Question Bank](#). For a concise reference on combinations and the binomial-coefficient formula, see [OpenStax College Algebra: Combinations and the Binomial Theorem](#).

QUESTION NO: 92

DIRECTIONS: Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

Some questions will direct you to an underlined portion of a passage. Other questions will direct you to a location in a passage or ask you to think about the passage as a whole.

After reading each passage, choose the answer to each question that most effectively improves the quality of writing in the passage or that makes the passage conform to the conventions of standard written English. Many questions include a "NO CHANGE" option. Choose that option if you think the best choice is to leave the relevant portion of the passage as it is.

Read the passage and answer question (9).

Transforming the American West Through Food and Hospitality

Just as travelers taking road trips today may need to take a break for food at a rest area along the highway, settlers traversing the American West by train in the mid-1800s often found (1) themselves in need of refreshment. However, food available on rail lines was generally of terrible quality. (2) Despite having worked for railroad companies, Fred Harvey, an English-born (3) entrepreneur. He decided to open his own restaurant business to serve rail customers. Beginning in the 1870s, he opened dozens of restaurants in rail stations and dining cars. These Harvey Houses, which constituted the first restaurant chain in the United States, (4) was unique for its high standards of service and quality. The menu was modeled after those of fine restaurants, so the food was leagues beyond the (5) sinister fare travelers were accustomed to receiving in transit.

His restaurants were immediately successful, but Harvey was not content to follow conventional business practices. (6) Although women did not traditionally work in restaurants in the nineteenth century, Harvey decided to try employing women as waitstaff. In 1883, he placed an advertisement seeking educated, well-mannered, articulate young women between the ages of 18 and 30. (7) Response to the advertisement was overwhelming, even tremendous, and Harvey soon replaced the male servers at his restaurants with women. Those who were hired as "Harvey Girls" joined an elite group of workers, who were expected to complete a 30-day training program and follow a strict code of rules for conduct and curfews. In the workplace, the women donned identical black-and-white uniforms and carried out their duties with precision. Not only were such regulations meant to ensure the efficiency of the business and the safety of the workers, (8) but also helped to raise people's generally low opinion of the restaurant industry. In return for the servers' work, the position paid quite well for the time: \$17.50 a month, plus tips, meals, room and board, laundry service, and travel expenses. (9)

For as long as Harvey Houses served rail travelers through the mid-twentieth century, working there was a steady and lucrative position for women. Living independently and demonstrating an intense work (10) ethic; the Harvey Girls became known as a transformative force in the American (11) West. Advancing the roles of women in the restaurant industry and the American workforce as a whole, the Harvey Girls raised the standards for restaurants and blazed a trail in the fast-changing landscape of the western territories.

Which choice most logically follows the previous sentence?

- A. The growth of Harvey's business coincided with the expansion of the Santa Fe Railway, which served large sections of the American West.
- B. Harvey would end up opening dozens of restaurants and dining cars, plus 15 hotels, over his lucrative career.
- C. These benefits enabled the Harvey Girls to save money and build new and exciting lives for themselves in the so called Wild West.
- D. The compensation was considered excellent at the time, though it may not seem like much money by today's standards.

ANSWER: C

Explanation:

These benefits enabled the Harvey Girls to save money and build new and exciting lives for themselves in the so called Wild West. most logically follows because it directly develops the preceding sentence's specific list of compensation: wages, tips, meals, housing, laundry, and travel expenses. The phrase "These benefits" creates a clear reference to that list, and the remainder of the sentence explains the practical effect of this favorable compensation on the women employed by the Harvey Houses. It also provides an effective bridge to the following paragraph, which focuses on the steady, lucrative work available to women and on the Harvey Girls' independent, transformative role in the American West. Thus, the addition maintains a consistent focus on the workers rather than shifting attention back to the expansion of the business or repeating the claim that the pay was good. Historical accounts support this connection between Harvey House employment and women's mobility and independence: the National Park Service describes the Harvey Girls as women who traveled west for work and helped shape communities along the rail lines. The Kansas Historical Society likewise notes that the job provided wages, room and board, and opportunities that drew young women westward. See the [National Park Service's overview of the Harvey Girls](#) and the [Kansas Historical Society's Harvey Girls history](#).