Practice Test 2

Reading Test

65 MINUTES, 52 QUESTIONS

Turn to Section 1 of your answer sheet to answer the questions in this section.

DIRECTIONS

Each passage or pair of passages below is followed by a number of questions. After reading each passage or pair, choose the best answer to each question based on what is stated or implied in the passage or passages and in any accompanying graphics (such as a table or graph).

Questions 1–10 are based on the following passage.

This passage is excerpted from *Two Little Savages* by Ernest Thompson Seton, originally published 1903. Yan, a twelve-year-old boy interested in the outdoors, is at home with his older brother, Rad. The narrator recounts a story about the two brothers' relationship.

Yan had many brothers, but only those next to him in age were important in his life. Rad was two years older—a strong boy, who prided himself on his "common sense." Though so much older, he was Yan's inferior at school. He resented this, and delighted in showing his muscular superiority at all opportunities. He was inclined to be religious, and was strictly proper in his life and speech. He never was known to smoke a cigarette, tell a lie, or say "gosh" or "darn." He was plucky and persevering, but he was cold and hard, without a human fiber or a drop of red blood in his make-up. Even as a boy he bragged that he had no enthusiasms, that he believed in common sense, that he called a spade a spade, and would not use two words where one would do. His intelligence was above the average, but he was so anxious to be thought a person of rare sagacity and smartness, unswayed by emotion, that nothing was too heartless for him to do if it seemed in line with his assumed character. He was not especially selfish, and yet he pretended to be so, simply that people should say of him significantly and admiringly: "Isn't he keen? Doesn't he know how to take care of himself?" What little human warmth there was in him died early, and he succeeded only in making himself increasingly detested as he grew up.

His relations to Yan may be seen in one incident.

Yan had been crawling about under the house in the low wide cobwebby space between the floor beams and the ground. The delightful sensation of being on an exploring expedition led him farther (and ultimately to a paternal thrashing for soiling his clothes), till he discovered a hollow place near one side, where he could nearly stand upright. He at once formed one of his schemes—to make a secret, or at least a private, workroom here. He knew that if he were to ask permission he would be refused, but if he and Rad together were to go it might receive favourable consideration on account of Rad's self-asserted reputation for common sense. For a wonder, Rad was impressed with the scheme, but was quite sure that they had "better not go together to ask Father." He "could manage that part better alone," and he did.

Then they set to work. The first thing was to deepen the hole from three feet to six feet everywhere, and get rid of the earth by working it back under the floor of the house. There were many days of labour in this, and Yan stuck to it each day after returning from school. There were always numerous reasons why Rad could not share in the labour. When the ten- by fourteen-foot hole was made, boards to line and floor it were needed. Lumber was very cheap—inferior, second-hand stuff was to be had for the asking—and Yan found and carried boards enough to make the workroom. Rad was an able carpenter and now took charge of the construction. They worked together evening after evening, Yan discussing all manner of

CONTINUE

plans with warmth and enthusiasm—what they would do in their workshop when finished—how they might get a jig-saw in time and saw picture frames, so as to make some money. Rad assented with grunts or an occasional Scripture text—that was his way. Each day he told Yan what to go on with while he was absent.

The walls were finished at length; a window placed in one side; a door made and fitted with lock and key. What joy! Yan glowed with pleasure and pride at the triumphant completion of his scheme. He swept up the floor for the finishing ceremony and sat down on the bench for a grand gloat, when Rad said abruptly:

"Going to lock up now." That sounded gratifyingly important. Yan stepped outside. Rad locked the door, put the key in his pocket, then turning, he said with cold, brutal emphasis:

"Now you keep out of my workshop from this on. *You* have nothing to do with it. It's mine. I got the permission to make it." All of which he could prove, and did.

1

Over the course of the passage, the main shift in focus is from

A) a history of rivalry to a series of events that led to a greater understanding between siblings.

B) a comparison of two children to an account of an incident that changed both for the worse.

C) an introduction of a protagonist to a dialogue about a shared experience.

D) a description of a character to a revealing interaction between two characters.

2

As used in line 10, "cold" most nearly means

A) frozen.

B) gloomy.

C) unfeeling.

D) unprepared.

3

It can reasonably be inferred from the passage that Yan initially asked for Rad's help because Yan believed that

A) Rad's carpentry skills would be helpful in building the workshop.

B) working together would bring them closer and end their rivalry.

C) he would need Rad's greater strength to complete the project.

D) their father perceived Rad as more practical than Yan.

4

The author's descriptions of Rad suggest that he is notable for his

A) unwillingness to do physical labor.

B) superior performance as a student.

C) seeming yet deceptive self-regard.

D) dedication to supporting his family.

5

Which situation is most similar to the one introduced in lines 35–42 ("He knew . . . did")?

A) A teacher spreads rumors about a coworker at their school.

B) A university passes over a qualified candidate and admits a less qualified applicant.

C) A principal attempts to settle a dispute between two students.

D) A colleague agrees to recommend a co-worker for a job but instead secretly applies for the job herself.

6

As used in line 38, "consideration" most nearly means

A) courtesy.

B) judgement.

C) reward.

D) generosity.

CONTINUE

7

Which choice best reflects Yan's perspective regarding the project he undertakes with his brother?

A) He is strongly optimistic, because he believes they will be successful and will continue working together.

B) He is falsely cheerful, because he foresees the potential for betrayal by his brother.

C) He is somewhat resentful, because Rad frequently leaves him to work alone.

D) He is doggedly hopeful, because he is certain he can break through his brother's cold demeanor.

8

Which choice provides the best evidence for the answer to the previous question?

A) Lines 1–2 ("Yan had . . . life")

B) Lines 15–19 ("His intelligence . . . character")

C) Lines 55–60 ("They worked . . . money")

D) Lines 61–62 ("Each day . . . absent")

9

Which choice best supports the conclusion that Yan does not anticipate what Rad will do when the workroom is finished?

A) Lines 33–35 ("He at . . . here")

B) Lines 60–61 ("Rad . . . way'")

C) Lines 65–66 ("What . . . scheme")

D) Lines 70–75 ("Rad . . . it")

10

The passage indicates that Rad viewed the idea to build a workroom as

A) an opportunity that he could use to his own advantage.

B) a way to demonstrate his muscular superiority over Yan.

C) a typical example of Yan's impractical schemes.

D) a sensible plan for a business partnership with his brother.

CONTINUE

Questions 11–20 are based on the following passage and supplementary material.

This passage is adapted from Nathan H. Lents, "In Humans and Animals, Social Learning Drives Intelligence." © 2018 by Sussex Publishers, LLC.

The human capacity to learn exceeds that of any other animal. Indeed, our massive memories and impressive computing power are the engines of all that makes us different from other animals, rooted mostly, but not entirely, in language. However, the way that humans and animals learn may not be as different as many people think.

We all know that humans do most of their learning socially, that is, we learn from others rather than discovering things ourselves through trial-and-error. Formal schooling is entirely based on social learning. Even so-called self-directed learning and discovery is actually social because when we discover information in a book, someone else put it there.

Because animals do not go to school, we often think of their learning as entirely different. When we see a bird building a nest, for example, we assume that birds must have a built-in instinct to build nests and then learn to do it through trial-and-error. That may be right, but there may also be a social component to animal learning.

It has long been known that most social animals that are reared artificially in captivity will be deficient in many skills that adult animals of that species are generally proficient at. For example, chimpanzees raised without adult chimpanzees do not know how to build nests or care for young when they become parents themselves. Ring-tailed lemurs raised artificially do not show the "normal" food preferences that wild lemurs display and instead will eat a larger variety of food.

Cross-fostering experiments, in which animals are raised by members of a different species, have also revealed the effects of social learning. For example, Frans de Waal and Denise Johanowicz allowed some young rhesus macaques, which don't normally engage in social reconciliation following a conflict, to spend five months of their young lives with stump-tailed macaques, which are much more prone to reconciling disputes peacefully. These fostered rhesus macaques learned the behavior of reconciliation, and it stuck with them even after they were placed back with other rhesus macaques. Surprisingly, this more conciliatory approach to conflict resolution remained even after other habits they had picked up faded.

The continuing discovery that birds and mammals do a great deal of their learning socially, rather than individually, has important implications for how human intelligence evolved. It is well known that the explosion of innovation and creativity in our lineage began well after our species had adopted our current anatomical form, including brain size, and is largely attributed to the acquisition of language and symbolic thinking around 65,000 years ago. From this point forward, each generation of humans inherited the collected knowledge of the previous generation, which was transmitted socially through language. This steady accumulation of knowledge led to the eventual development of agriculture and everything else flowed from that.

If we consider that our ape ancestors were already learning a great deal from each other, the evolutionary drive toward cognitive capacity was really just a drive for "more of the same." The great conundrum of language and symbolic thought is that humans had to have evolved the capacity for these skills before they were actually used. You can't do something until you have the means to do it. When it comes to language and symbolism and culture, it could be that the means to do it was social learning pure and simple. Over the last seven million years (and even going much further back than that, truth be told), the selective pressure was for increasing sociality, social cooperation, and social learning. If we view human evolution as a rising tide of social learning, the emergence of language seems almost inevitable.

Of course, natural selection is involved in shaping anything and everything about us, and of course some animals really do have genetically programmed behaviors that are complex, such as a beaver building a dam, a behavior that appears to be almost completely innate. But we are expecting too much of natural selection to think that all of the complex behaviors we see in animals are the product of pure genetics and "survival of the fittest."

Social learning resolves this conundrum. Animal species didn't have to sit around and wait for random mutation to give them the innate knowledge of where to find food. They learned from their parents and others. The role of evolution, then, was to continually select for better learners, and better social learners specifically, at least in some lineages.

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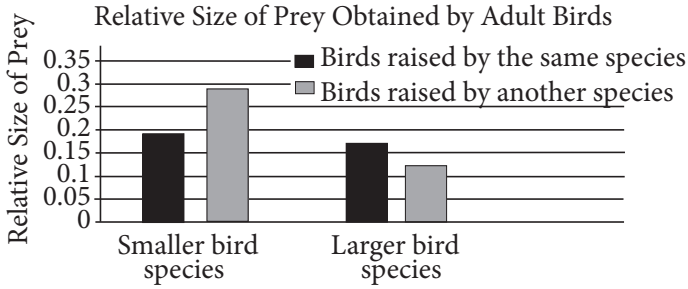


Adapted from Tore Slagsvold and Karen L. Wiebe, "Social learning in birds and its role in shaping a foraging niche." ©2011 by The Royal Society.

Birds were either raised by their own species or cross-fostered by another species. When the birds reached adulthood, researchers measured the size of prey obtained by the birds for their own offspring.

11

The main purpose of the passage is to

A) chronicle the evolution of human intelligence through social learning.

B) provide evidence from human and animal observations to help explain knowledge and skill development across generations.

C) propose that humans are more intelligent than animals due to the different ways they learn.

D) show how birds and mammals learn social behaviors that humans do not understand.

12

Which choice best represents the different meanings of "back" as used in line 42 and line 72?

A) In exchange; behind

B) Earlier; dishonestly

C) Incorrectly; formerly

D) Again; previously

13

Based on the passage, which choice best describes what happened when the rhesus macaques in de Waal and Johanowicz's experiment were raised by stump-tailed macaques?

A) The rhesus macaques developed a behavior their species does not normally demonstrate.

B) The rhesus macaques became more violent when dealing with conflicts between members of their group.

C) The rhesus macaques became indistinguishable from the stump-tailed macaques that raised them.

D) The rhesus macaques became more intelligent and creative with their learned behaviors.

14

Based on the passage, de Waal and Johanowicz's experiment most likely ruled out which potential claim about social learning?

A) Habits an animal learns from another species will last only as long as they remain in close contact with that other species.

B) Individuals that are better at learning behaviors socially are more likely to pass on their beneficial traits to the next generation of their species.

C) Individuals that are raised by a different species are more likely to be ostracized by members of their own species.

D) Animals that learn behaviors from their own or a different species can pass those behaviors on to their offspring in the next generation of their own species.

CONTINUE

15

Which choice provides the best evidence for the answer to the previous question?

A) Lines 22–25 ("It . . . proficient at")

B) Lines 43–45 ("Surprisingly, this . . . faded")

C) Lines 46–49 ("The continuing . . . evolved")

D) Lines 82–85 ("But we . . . fittest")

16

As presented in the passage, the author would most likely agree that human beings

A) have achieved the best methods of social learning possible by this time.

B) require a large brain size to retain their knowledge of learned behaviors.

C) are able to extend their creativity with the support of language.

D) should be learning behaviors from other species to improve their survival.

17

Which choice provides the best evidence for the answer to the previous question?

A) Lines 49–54 ("It is . . . ago")

B) Lines 54–57 ("From this . . . language")

C) Lines 64–67 ("The great . . . used")

D) Lines 77–82 ("Of course . . . innate")

18

The author uses the terms "random mutation" and "innate knowledge" in the last paragraph of the passage most likely to

A) bring attention to the importance of natural selection for species survival.

B) stress the uncertainty with which the author views the benefits of social learning.

C) reinforce the contrast between genetic traits and social learning.

D) convey a serious tone regarding the scientific nature of socially learned behaviors.

19

According to the graph, what was the relative size of prey caught by the smaller birds that were raised by another species?

A) More than 0.25 but less than 0.3

B) More than 0.2 but less than 0.25

C) More than 0.15 but less than 0.2

D) More than 0.1 but less than 0.15

20

Information about which of the following is presented in the graph but NOT discussed in the passage?

A) Social learning within a species

B) Social learning from another species

C) Cross-fostering birds

D) Animal feeding behaviors

CONTINUE

Questions 21–31 are based on the following passages.

Passage 1 is adapted from Nicholas Weiler, "Birth of New Neurons in the Human Hippocampus Ends in Childhood." © March 2018 by University of California San Francisco. Passage 2 is adapted from "Even Old Brains Can Make New Neurons." © April 2018 by Columbia University.

Passage 1

One of the liveliest debates in neuroscience over the past half century surrounds whether the human brain renews itself by producing new neurons throughout life, and whether it may be possible to rejuvenate the brain by boosting its innate regenerative capacity.

Now UC San Francisco scientists have shown that in the human hippocampus—a region essential for learning and memory and one of the key places where researchers have been seeking evidence that new neurons continue to be born throughout the lifespan—neurogenesis declines throughout childhood and is undetectable in adults.

The lab's new research, based on careful analysis of 59 samples of human hippocampus from UCSF and collaborators around the world, suggests new neurons may not be born in the adult human brain at all.

In the new study, Shawn Sorrells, PhD, a senior researcher in the Alvarez-Buylla lab, and Mercedes Paredes, PhD, a UCSF assistant professor of neurology, led a team that collected and analyzed samples of the human hippocampus.

The researchers found plentiful evidence of neurogenesis in the dentate gyrus during prenatal brain development and in newborns, observing an average of 1,618 young neurons per square millimeter of brain tissue at the time of birth. But the number of newborn cells sharply declined in samples obtained during early infancy.

"In young children, we were able to see that substantial numbers of new neurons continue to be made and integrated into the dentate gyrus, but neurogenesis fades away completely by early adolescence," Paredes said. "The fact that we could compare newborn brains, where new neurons were clearly present, to the adult, where we saw no evidence for young neurons, gave us added confidence that what we were seeing was correct."

The authors acknowledge that however comprehensively and carefully they searched, it would be impossible to definitively show that there are never any new neurons in the adult hippocampus.

The absence of neurogenesis in the human brain may not be a bad thing, the researchers point out, but instead point the way to understanding what makes the human brain distinct from other animals and set researchers on a better path to developing treatments for human brain diseases.

Passage 2

Previous studies of animal brains have led many neuroscientists to conclude that the capacity for neurogenesis, or the production of new neurons, declines with age and virtually ceases in the mature brain. "In mice, researchers have shown that neurogenesis drops pretty dramatically after middle age," said the study's lead author Maura Boldrini, MD, PhD, a research scientist in psychiatry and a member of the Columbia Stem Cell Initiative. A recent study of human brains was also unable to find new neurons in adult brains.

The brain's hippocampus, which is responsible for memory and learning, has been a major focus of studies on neurogenesis and stem cell biology. Although neuroimaging studies of humans show that continued growth in this structure occurs in adulthood, many scientists have argued that this represents existing neurons growing larger, or an expansion of blood vessels or other internal support structures, rather than the addition of new neurons. To address the question, investigators dissected and examined a representative sample of human hippocampi from healthy people of different ages after they died.

Scientists at Columbia were able to pursue this research by setting up a brain bank and collecting postmortem and extensive clinical information on the donors, said J. John Mann, MD, the senior author on the new paper.

In this new work, Boldrini and Mann's team used a combination of molecular probes and mathematical modeling to track neurogenesis in brains from 28 healthy donors ranging in age from 14 to 79 years old. Based on the prevailing view in the field, they expected to see neurogenesis decline with age. It didn't.

CONTINUE

"It does appear to be the case that neurogenesis in the hippocampus is remarkably preserved in human beings," said Mann.

"We found there were on the order of thousands of neuroprogenitor cells and immature neurons both in the youngest and the oldest people analyzed," said Boldrini. However, the analysis revealed that the older brains had less vascular development, and the neurons in older hippocampi expressed lower levels of proteins associated with plasticity, or the formation of new neural connections.

The results point to a new model of brain aging, in which older brains retain the ability to make new neurons but may become less able to form new connections between them and keep them supplied with oxygen.

21

According to Paredes in Passage 1, the researchers had further confidence in their findings because they were able to

A) collect brain samples from around the world.

B) prove no neurons are ever developed in the adult hippocampus.

C) compare the brains of newborns to the brains of adults.

D) observe 1,618 young neurons per square millimeter.

22

The authors of the study in Passage 1 concede to which shortcoming in their study?

A) They failed to measure a specific trait in all humans.

B) They could not completely rule out the presence of a certain biological structure.

C) Their sample size was smaller than it should have been for completely accurate results.

D) The lab conditions were not representative of the natural world.

23

Which choice provides the best evidence for the answer to the previous question?

A) Lines 1–4 ("One of . . . life")

B) Lines 11–12 ("neurogenesis declines . . . adults")

C) Lines 22–26 ("The researchers . . . birth")

D) Lines 39–41 ("it would . . . hippocampus")

24

Which choice best supports the idea that the study discussed in Passage 1 may have implications beyond showing whether or not new neurons form later in life?

A) Lines 13–16 ("The lab's . . . all")

B) Lines 26–28 ("But the . . . infancy")

C) Lines 29–33 ("In young . . . adolescence")

D) Lines 42–47 ("The absence . . . diseases")

25

Based on Passage 2, Boldrini would most likely agree with which of the following statements about the brains of mice?

A) Age is negatively correlated with neuron development in mice brains.

B) Studying mice brains can eliminate the need to study human brains.

C) The cells of mice brains are different from those of other animal brains.

D) The cells in mice brains deteriorate more rapidly than those in human brains.

CONTINUE

26

In Passage 2, the phrase "prevailing view" (line 81) mainly serves to

A) indicate the results of the study were as expected.

B) contrast the expected results of the study with the actual results.

C) provide an example of a previous study for comparison.

D) present the results retrieved from a majority of the specimens.

27

When Boldrini describes finding neurogenesis "both in the youngest and the oldest people analyzed," (lines 87–88), she is most likely suggesting that

A) new neurons form in the brains of only the very young and the very old.

B) the study focused on individuals at the beginning or end of their lives.

C) the research sample was incomplete.

D) researchers found new neurons in a wide range of ages.

28

In Passage 2, lines 89–93 ("However . . . connections") mainly serve to

A) suggest that previous research about neuron development was incomplete.

B) prove the hippocampus is less able to form neurons as it ages.

C) present a new explanation for the negative effects of aging on the brain

D) offer a way to prevent the loss of neural development in older age.

29

The primary purpose of both passages is to discuss studies that

A) examine whether or not human brains continue to create certain cells as they age.

B) describe the way the human brain creates new cells.

C) provide evidence to contradict current beliefs.

D) compare the brain activity of newborns to the brain activity of older adults.

30

Based on the description of Paredes's study in Passage 1 and that of Boldrini's study in Passage 2, with which claim would both authors most likely agree?

A) There is no clear answer as to whether or not adult brains develop new neurons.

B) Comparing the brains of the very young with the brains of the aging is an effective way to study brain development.

C) Improved vascular health and increased protein intake can help adult brains continue to produce neurons.

D) Learning about neuron development can help spur advancements in other areas of brain health and disease.

31

In the passages, Paredes and Boldrini support their conclusions with

A) experiments that replicate conditions in the human body.

B) data gathered from various textbooks and journals.

C) observations of human behavior in controlled settings.

D) scientific analysis of human tissue.

CONTINUE

Questions 32–42 are based on the following passage.

This passage is from Washington Irving, *The Sketchbook of Geoffrey Crayon, Gent.* Originally published in 1819. "John Bull" is a satirical figure used to personify England, particularly the English middle class.

A stranger who wishes to study English peculiarities may gather much valuable information from the innumerable portraits of John Bull, as exhibited in the windows of the caricature-shops. I cannot resist the temptation to give a slight sketch of him, such as he has met my eye.

John Bull, to all appearance, is a plain downright matter-of-fact fellow, with much less of poetry about him than rich prose. There is little of romance in his nature, but a vast deal of strong natural feeling. He excels in humor more than in wit; is jolly rather than gay; melancholy rather than morose. He is a boon companion, and he will stand by a friend in a quarrel, with life and purse, however soundly he may be cudgeled[1]. In this last respect, he has a propensity to be somewhat too ready. He is a busy-minded personage, who thinks not merely for himself and family but for all the country round, and is most generously disposed to be everybody's champion. He is continually volunteering his services to settle his neighbors' affairs. Though really a good-hearted, good-tempered old fellow, he is singularly fond of being in the midst of contention.

The secret of the matter is that John has a great disposition to protect and patronize. He thinks it indispensable to the dignity of an ancient and honorable family, to be bounteous in its appointments and eaten up by dependents. The consequence is that like many other venerable family establishments, his manor is encumbered by old retainers whom he cannot turn off, and an old style which he cannot lay down. Owls have taken possession of the dovecote, but they are hereditary owls, and must not be disturbed. In short, John has such a reverence for everything that has been long in the family that he will not hear even of abuses being reformed, because they are good old family abuses.

All those whims and habits have concurred woefully to drain the old gentleman's purse. What is worst of all is the effect which these pecuniary embarrassments have had on the poor man himself. Instead of strutting about as formerly, with his three-cornered hat on one side, flourishing his cudgel, he now goes about whistling thoughtfully to himself, with his head drooping down, his cudgel tucked under his arm, and his hands thrust to the bottom of his breeches pockets, which are evidently empty.

Such is the plight of honest John Bull at present; yet for all this the old fellow's spirit is as tall and as gallant as ever. If you drop the least expression of sympathy or concern, he takes fire in an instant; swears that he is the richest and stoutest fellow in the country; and talks of laying out large sums to adorn his house or buy another estate with a valiant swagger and grasping of his cudgel.

I confess I cannot look upon John's situation without strong feelings of interest. He may not be so wonderfully fine a fellow as he thinks himself, but he is at least twice as good as his neighbors represent him. His virtues are all his own; all plain, homebred, and unaffected. His very faults smack of the raciness of his good qualities. His extravagance savors of his generosity; his quarrelsomeness of his courage; his credulity of his open faith; his vanity of his pride; and his bluntness of his sincerity. They are all the redundancies of a rich and liberal character. All that I wish is that John's present troubles may teach him more prudence in future. That he may cease to distress his mind about other people's affairs; that he may give up the fruitless attempt to promote the good of his neighbors and the peace and happiness of the world by dint of the cudgel; that he may remain quietly at home; that he gradually get his house into repair and long enjoy, on his paternal lands, a green, an honorable, and a merry old age.

[1] A cudgel is a club-like stick.

32

The author's descriptions of John Bull most directly support which larger claim?

A) Withdrawing from the public stage would only weaken an already threatened estate.

B) It is more difficult to abdicate a position of power than to safeguard it.

C) Financial stability is incompatible with ruling compassionately and maintaining shared traditions.

D) Having an overextended sphere of influence can jeopardize personal welfare.

CONTINUE

33

During the course of the passage, the central focus shifts from

A) describing a symbolic figure to sounding a call for caution and consideration regarding future conduct.

B) celebrating the merits of a relatable hero to denouncing that hero as a national embarrassment.

C) making light of a character's flaws to casting doubt on his ability to improve a situation.

D) condemning a character for his unwise familial attitudes to mourning his fall from prominence.

34

According to the passage, there is a distinct contrast between

A) having well-meaning intentions and acting in one's best interest.

B) the responsibility to protect family and the duty to volunteer for one's country.

C) growing up a part of the aristocracy and earning a position of influence.

D) respecting ancestral traditions and choosing to neglect one's modern obligations.

35

As used in line 5, "sketch" most nearly means

A) account.

B) farce.

C) cartoon.

D) impersonation.

36

Which choice provides the best evidence for the idea that John Bull's core values include caring for others?

A) Lines 9–10 ("There . . . feeling")

B) Lines 16–19 ("He . . . champion")

C) Lines 47–49 ("yet . . . ever")

D) Lines 59–60 ("His . . . unaffected")

37

As used in line 35 and line 36, "abuses" most nearly means

A) violations.

B) assaults.

C) invasions.

D) impositions.

38

The repeated references to a "cudgel" throughout the second half of the passage mainly emphasize John Bull's

A) physical stature and fortitude.

B) reputation of power and authority.

C) capacity for violence and retaliation.

D) renown as a champion of England.

39

As used in line 56, "interest" most nearly means

A) suspicion.

B) care.

C) amusement.

D) curiosity.

CONTINUE

40

It can reasonably be inferred that John Bull suffers financial hardship primarily because

A) his family members feel entitled to their extravagances and refuse to economize.

B) his pursuit of restoring his family's social standing leads him into bad investments.

C) his support of local charities and community groups outpaces his diminished resources.

D) his pride in his family's holdings compromises his ability to manage them well.

41

Which choice provides the best evidence for the answer to the previous question?

A) Lines 12–16 ("He . . . ready")

B) Lines 27–31 ("The . . . down)

C) Lines 42–46 ("he now . . . empty")

D) Lines 61–65 ("His extravagance . . . character")

42

The author would most likely describe the public's attitude toward John Bull as

A) bitterly disappointed that he could not maintain financial stability.

B) affectionately nostalgic over his generous service to their communities.

C) overly critical of his faults.

D) coolly indifferent to his success or failure.

CONTINUE

Questions 43–52 are based on the following passage and supplementary material.

This passage is adapted from Ed Yong, "Why We Sleep Badly on Our First Night in a New Place." © 2018 by The Atlantic Monthly Group.

When you check into a hotel room or stay with a friend, is your first night of sleep disturbed? Do you toss and turn, mind strangely alert, unable to shut down in the usual way? If so, you're in good company. This phenomenon is called the first-night effect, and scientists have known about it for over 50 years. "Even when you look at young and healthy people without chronic sleep problems, 99 percent of the time they show this first-night effect—this weird half-awake, half-asleep state," says Yuka Sasaki from Brown University.

Other animals can straddle the boundaries between sleeping and wakefulness. Whales, dolphins, and many birds can sleep with just one half of their brains at a time, while the other half stays awake and its corresponding eye stays open. In this way, a bottlenose dolphin can stay awake and alert for at least five days straight, and possibly many more.

Sasaki wondered if humans do something similar, albeit to a less dramatic degree. Maybe when we enter a new environment, one half of our brain stays more awake than the other, so we can better respond to unusual sounds or smells or signs of danger. Maybe our first night in a new place is disturbed because half our brain is pulling an extra shift as a night watchman. "It was a bit of a hunch," she says. "Maybe we'd find something interesting."

She invited 11 volunteers to spend a few nights at her laboratory. They slept in a hulking medical scanner that measured their brain activity, while electrodes on their heads and hands measured their brain waves, eye movements, heart rate, and more.

While they snoozed, team members Masako Tamaki and Ji Won Bang measured their slow-wave activity—a slow and synchronous pulsing of neurons that's associated with deep sleep. They found that this slow activity was significantly weaker in the left half of the volunteers' brains, but only on their first night. And the stronger this asymmetry, the longer the volunteers took to fall asleep.

The team didn't find this slow-wave asymmetry over the entire left hemisphere. It wasn't noticeable in regions involved in vision, movement, or attention. Instead, it only affected the default mode network—a group of brain regions that's associated with spontaneous unfocused mental activity, like daydreaming or mind-wandering. These results fit with the idea of the first-night brain as a night watchman, in which the left default mode network is more responsive than usual.

To test this idea, Sasaki asked more volunteers to sleep in a normal bed with a pair of headphones. Throughout the sessions, the team piped small beeps into one ear or the other, either steadily or infrequently. They found that the participants' left hemispheres (but not the right) were more responsive to the infrequent beeps (but not the steady ones) on the first night (but not the second). The recruits were also better and quicker at waking up in response to the beeps when the sounds were processed by their left hemispheres.

This shows how dynamic sleep can be, and how attuned it is to the environment. The same applies to many animals. In 1999, Niels Rattenborg from the Max Planck Institute for Ornithology found that ducks at the edge of a flock sleep more asymmetrically than those in the safer center. "In this way, sleeping ducks avoid becoming sitting ducks," he says.

Lino Nobili from Niguarda Hospital in Milan adds that these results fit with a "relatively new view of sleep" as a patchwork process, rather than a global one that involves the whole brain. Recent studies suggest that some parts can sleep more deeply than others, or even temporarily wake up. This might explain not only the first-night effect but also other weird phenomena like sleepwalking or paradoxical insomnia, where people think they're getting much less sleep than they actually are.

To confirm the night watch hypothesis, Sasaki now wants to use weak electric currents to shut down the left default mode network to see if people sleep faster in new environments. That would certainly support her idea that this region is behind the first night effect.

It won't help people sleep better in new places, though. To do that, Sasaki tries to stay in the same hotel when she travels, or at least in the same chain. "I'm flying to England tomorrow and staying at a Marriott," she says. "It's not a completely novel environment, so maybe my brain will be a little more at ease."

CONTINUE

Mean brain response to deviant sounds during slow-wave sleep

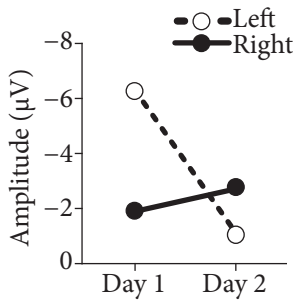


Figure 1

Response to deviant sounds during slow-wave sleep over time

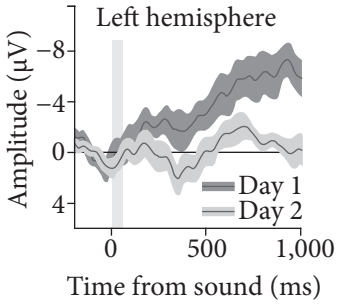


Figure 2

Figures adapted from Tamaki Masako, Ji Won Bang, Takeo Watanabe, and Yuka Sasaki, "Night Watch in One Brain Hemisphere during Sleep Associated with the First-Night Effect in Humans." ©2016 by Elsevier Ltd.

43

The primary purpose of the passage is to

A) describe a study on how slow-wave sleep activity causes sleep disorders.

B) analyze the neural underpinnings of slow-wave sleep activity.

C) propose solutions for difficulties sleeping in new places.

D) discuss research on a common phenomenon in sleep.

44

In the third paragraph (lines 19–27), the author uses the words "wondered" and "hunch" primarily to suggest that Sasaki and her colleagues

A) believed that the first-night effect would be most apparent in people who had greater awareness of their surroundings when going to sleep.

B) had not previously discovered evidence that part of the human brain responds to environmental stimuli when sleeping in a new place.

C) questioned whether the link between animal sleep patterns and the first-night effect in humans was related to similarities in their environment.

D) did not predict that slow-wave brain activity would have such a great influence on quality of sleep in various locations.

45

Which statement regarding subjects who had weaker left hemisphere slow-wave activity during the first night in the medical scanner can be most reasonably inferred from the passage?

A) They are more wakeful when presented with environmental stimuli while sleeping in a new place.

B) They are more restless sleepers overall and have trouble falling asleep in places other than their homes.

C) They are more likely to suffer from afflictions such as sleepwalking or paradoxical insomnia.

D) They are not able to sleep through the night unless the surroundings are silent.

46

Which choice provides the best evidence for the answer to the previous question?

A) Lines 38–40 ("And the . . . asleep")

B) Lines 58–61 ("The recruits . . . hemispheres")

C) Lines 74–78 ("This might . . . are")

D) Lines 79–82 ("To confirm . . . environments")

CONTINUE

47

According to the passage, which statement best explains the hypothesis that Sasaki's group tested in their experiment with headphones?

A) Reducing left default mode network activity using an electric current can help individuals fall asleep.

B) Slow-wave brain activity during sleep depends on the ability to fall asleep quickly in a new place.

C) Brain activity in the left hemisphere default mode network is related to sleep disturbances during the first night in a new place.

D) Slow-wave asymmetry in the left default mode network only enhances neural responses to auditory stimuli.

48

The main purpose of the last paragraph is to

A) emphasize that the scientists could not provide useful applications for their sleep research.

B) suggest that people might be able to influence the severity of the first-night effect.

C) urge individuals to consider sleeping only in familiar places when they travel.

D) question the general significance of the first-night effect with regard to the new findings.

49

As used in line 84, "new" most nearly means

A) pristine.

B) singular.

C) inventive.

D) unfamiliar.

50

According to figure 1, the mean amplitude of brain responses to deviant sounds in the right hemisphere on Day 1 was closest to which value?

A) −8

B) −6

C) −4

D) −2

51

Figure 2 supports which statement about the relative amplitudes of left hemisphere brain responses to deviant sounds on Days 1 and 2?

A) They reached their most negative points 1,000 ms after sound onset.

B) They began to be increasingly negative 700 ms after sound onset.

C) They returned to their previous levels 1,000 ms after sound onset.

D) They became more negative between 400 ms and 700 ms after sound onset.

52

Based on the passage and figures 1 and 2, how would the plotted points in figure 1 most likely change if the left hemisphere data was focused on responses 400ms after sound onset?

A) The point for the left hemisphere on Day 1 only would be more positive.

B) The points for the right hemisphere would be more negative.

C) The points for the left hemisphere would be more positive.

D) The points on Day 2 would be greater than zero.

STOP

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

Writing and Language Test

35 MINUTES, 44 QUESTIONS

Turn to Section 2 of your answer sheet to answer the questions in this section.

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.

Questions 1–11 are based on the following passage.

The Dirt on Growing Plants Without Soil

With an average annual increase of approximately 83 million people, the current global population of over 7.5 billion represents a severe strain on the finite resources available on the planet. According to Jacques 1 Diouf, former Director-General of the United Nations' Food and Agriculture Organization, by 2050, the world will need to produce 70% more food to feed the additional 2.3 billion people expected by that year. And yet, this increase in food production could come at a great cost: conventional agriculture is one of the top contributors to water scarcity. One solution to this 2 more or less important issue is hydroponics, a method of growing plants without the use of soil.

1

A) NO CHANGE
B) Diouf former Director-General
C) Diouf former Director-General,
D) Diouf, former Director-General,

2

A) NO CHANGE
B) pressing
C) unusually significant
D) constantly thought about

CONTINUE

Hydroponic systems use up to 10 times less water than conventional methods. When crops are planted in fields, the water **3** of the plants runs off into the environment, whereas in hydroponic systems, the water is captured and used again. Hydroponic systems come in several varieties, including ones in which the plant roots are submerged in nutrient-filled water and others in which a wick or pump provides water to the roots. **4**

[1] In addition to being stingy with water, hydroponic systems provide other benefits. [2] These systems use space more efficiently than do crop fields, so they can produce more fruits and vegetables per square foot and can even be built in cities. [3] Furthermore, indoor hydroponic systems can be used in almost any climate to grow plants year-round, which enhances access to fresh, local produce for people living in colder climates. [4] An added bonus is that since **5** there grown without soil, these plants are more visually appealing. [5] This reduces the environmental impact of transporting fruits and vegetables across the country from warmer regions. **6**

3

A) NO CHANGE
B) for the plants runs
C) from the plants running
D) within the plants runs

4

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

> Lettuces, endives, and fresh herbs are a few types of produce that grow well with the use of hydroponics.

Should the writer make this addition here?

A) Yes, because it provides examples that support the previous point.
B) Yes, because it contradicts a statement made earlier in the passage.
C) No, because the information is given elsewhere in the passage.
D) No, because it is not relevant to the main point of the paragraph.

5

A) NO CHANGE
B) their
C) they're
D) its

6

To make this paragraph most logical, sentence 5 should be placed

A) where it is now.
B) after sentence 1.
C) after sentence 2.
D) after sentence 3.

CONTINUE

Although a few companies have had success producing and marketing hydroponic foods, the method still accounts for only a small part of American produce. Even though these systems **7** used less space, that space is more expensive in cities as compared to the relatively cheap farmland available in rural areas. And because the plants are grown in water with added nutrients instead of soil, some in the organic food industry **8** criticize hydroponics for being "unnatural" and claim that hydroponic produce has an inferior taste as compared to **9** conventional farms. Hydroponic operations can also be more energy intensive, **10** requiring specific types of building materials. Nonetheless, seeing as water scarcity was listed by the World Economic Forum in 2015 as the largest global risk over the next decade, **11** hydroponics farmers will likely fight to maintain the organic status of their produce.

7

A) NO CHANGE
B) are using
C) had used
D) use

8

A) NO CHANGE
B) criticize and condemn
C) criticize and also condemn
D) criticize and complain about

9

A) NO CHANGE
B) produce from conventional places.
C) farms that use soil.
D) conventionally-grown produce.

10

Which choice most effectively supports the idea in the first part of the sentence?

A) NO CHANGE
B) since indoor systems may require a great deal of electricity for artificial lighting.
C) allowing different types of produce to grow in the same building.
D) since urban zoning laws may not allow for their construction.

11

The writer wants to conclude the passage by restating its main idea. Which choice best accomplishes this goal?

A) NO CHANGE
B) scientists will adjust the nutrients added to the water to create produce with a better taste.
C) the savings in water alone make hydroponics worthy of strong consideration.
D) experts predict that there may even be a world war related to the use of water.

CONTINUE

Questions 12–22 are based on the following passage.

Singing for Justice

In early 1939, Marian Anderson, a well-known African American singer, was invited by Howard University to come to Washington, D.C. and **12** have performed as part of the university's concert series. Because Anderson was so popular, the university attempted to hold the performance at Constitution Hall, the largest auditorium in the city, with a **13** volume of 4,000. This venue was owned by the Daughters of the American Revolution (DAR), an organization of female descendants of those involved in the Revolutionary War. The DAR refused to allow an African American artist to perform at the venue, **14** thrusting Anderson into the spotlight in the struggle against racial prejudice.

12

A) NO CHANGE
B) will perform
C) perform
D) performing

13

A) NO CHANGE
B) size
C) quantity
D) capacity

14

The writer wants to introduce one of the main ideas of the passage. Which choice best accomplishes this goal?

A) NO CHANGE
B) despite the fact that the organization would have earned money from the performance.
C) even though Anderson had just completed a very successful European tour.
D) which is something that unfortunately had happened to Anderson before.

CONTINUE

15 Furthermore, First Lady and DAR member Eleanor Roosevelt, who had previously invited Anderson to sing at the White **16** House resigned from the organization in protest of its refusal to host Anderson. Thousands of other DAR members followed suit, but the group did not relent. Roosevelt, along with the President and others, **17** are able to arrange for the concert to be held on the steps of the Lincoln Memorial on Easter Sunday.

18 Anderson was a modest and quiet person who valued community and wanted to bring people together. She believed that her pride and talent as a singer could eliminate prejudice. However, the change to an outdoor venue, as well as the publicity generated by the controversy, meant that Anderson would be performing for a much larger crowd than she had ever sung for before. Terrified, she even called her manager the night before, asking **19** did she really have to go through with the performance.

15

A) NO CHANGE
B) Nevertheless,
C) In addition,
D) DELETE the underlined portion.

16

A) NO CHANGE
B) House:
C) House—
D) House,

17

A) NO CHANGE
B) were
C) was
D) have been

18

The writer is considering deleting the underlined sentence. Should the sentence be kept or deleted?

A) Kept, because it supports the other claims made in the paragraph.
B) Kept, because it introduces an idea that the author later refutes.
C) Deleted, because it contradicts the author's claim that Anderson was a talented singer.
D) Deleted, because it provides information that is not relevant to the main idea of the paragraph.

19

A) NO CHANGE
B) whether she really had to go through with the performance.
C) did she really have to go through with the performance?
D) whether she really had to go through with the performance?

CONTINUE

On the day of the concert, the crowd numbered over 75,000 and reached from the Lincoln Memorial all the way to the Washington Monument. Despite her fears, Anderson went ahead with the concert, which included a patriotic song, two classical **20** songs; and several spirituals. Her performance was highly **21** acclaimed. She was praised for her rich and beautiful voice and for her powerful stand representing all those who faced racial discrimination.

Not wanting to take attention away from Anderson, Eleanor Roosevelt chose not to be publicly affiliated with the concert and in fact did not attend it due to other obligations. However, the two remained friends throughout their lives. Anderson's performance made her an international celebrity, and she is hailed for her role in cutting down barriers for African American performers. Later, the DAR changed its rules and apologized, and Anderson did eventually perform at Constitution Hall. **22**

20

A) NO CHANGE

B) songs and,

C) songs, and

D) songs, and,

21

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

A) acclaimed; she was praised for her

B) acclaimed, both for her

C) acclaimed, having a

D) acclaimed, being praised by her

22

The writer wants to add a conclusion that reinforces the idea that Anderson focused on her singing as a way to fight intolerance. Which choice best accomplishes this goal?

A) She rarely spoke of her Lincoln Memorial performance and didn't express anger toward the injustice she had experienced that day and throughout her life, preferring to influence people through the power of her singing.

B) As a result of her 1939 performance, Anderson won the Spingarn Medal for outstanding achievement by an African American and later sang the National Anthem at President Kennedy's inauguration.

C) She paved the way for and inspired other African American artists such as singers Leontyne Price and Jessye Norman, the latter of whom performed at an anniversary concert in Anderson's honor in 2014.

D) She was a contralto, which is a type of classical singing voice that uses the lowest female vocal range, and while she was a talented singer even as a child, she did not have formal lessons until age fifteen.

CONTINUE

Questions 23–33 are based on the following passage and supplementary material.

Good Counsel for Now and Later

23 Specialists who combine counseling training with financial planning acumen, a credit counselor can advise about issues such as student loans, mortgage payments, small business operations, and bankruptcy. Struggles with debt are common in American 24 society—the 2018 Consumer Financial Literacy Survey, revealed that one in four Americans admits to not paying all of his or her bills on time, while eight percent of respondents now have debts in collection. While a credit counselor's primary task may be to advise a client about resources that 25 mite help eliminate personal debt, this feedback can still involve many aspects of the client's life.

23

A) NO CHANGE
B) Acting as a specialist who combines
C) They who are specialists who combine
D) A specialist who combines

24

A) NO CHANGE
B) society: the 2018 Consumer Financial Literacy Survey
C) society, the 2018 Consumer Financial Literacy Survey,
D) society; the 2018 Consumer Financial Literacy Survey,

25

A) NO CHANGE
B) might help eliminate
C) mite help illuminate
D) might help illuminate

CONTINUE

26 Academic research provides insights into how people develop difficulties with debt. For example, some individuals struggle to make regular house or car payments while also trying to repay longstanding credit card or student loan debts. Credit counselors work with these individuals to assess their current situations, create budgets, and strategize about paying off existing debts. When individuals with more than one source of financial concern "come to credit counseling early in that process, there are more options at their disposal," explains Peter Klipa, vice president of creditor relations at the National Foundation for Credit Counseling. A counselor may propose 27 explanations that include a debt management plan, which involves paying a certain monthly amount toward the total sum owed.

Evidence suggests that when individuals go through financial counseling, the experience can affect both 28 resolutions of current debt crises and the habit's shaping future spending and credit use. For example, a 2016 study that analyzed the financial health outcomes associated with financial counseling indicates that those who don't receive credit counseling end up making their bad financial habits worse over time. The participants who

26

Which choice provides the best introduction to the main idea of the paragraph?

A) NO CHANGE

B) Struggles with debt can arise for people from all socioeconomic backgrounds.

C) It is particularly important for people to find a credit counselor who won't take advantage of their financial vulnerabilities.

A) Credit counseling can be particularly effective when people face multiple complicated financial situations at the same time.

27

A) NO CHANGE

B) answers

C) solutions

D) insights

28

A) NO CHANGE

B) resolution's of current debt crises and the habit's

C) resolutions of current debt crises and the habits

D) resolution's of current debt crises and the habits

CONTINUE

didn't receive counseling had, on average, not just failed to decrease their debt but had instead increased their overall debt levels 29 by $2,808 during the same period. 30 Despite the possible stigma of seeking counseling, clients who received counseling had, on average, decreased their total debt by almost $9,000 in the eighteen months after receiving that counseling. While both counseled and non-counseled individuals experienced an increase in their so-called open credit ratio, which measures how easily a person can pay off current debt obligations using currently available assets, the study found that people who received counseling experienced a greater bump: 31 on average, their final open credit ratio was 0.48.

Financial Outcomes for Clients
Who Did and Did Not Receive
"Sharpen Your Financial Focus" Counseling

Study Group + Financial Situation	Pre-Counseling (at the beginning of the study)	18 Months Later (at the end of the study)	Change
Counseled Individuals' Open Credit Ratio	0.31	0.57	+0.26
Non-Counseled Individuals' Open Credit Ratio	0.30	0.48	+0.18
Counseled Individuals' Total Debt	$81,059	$72,526	–$8,533
Non-Counseled Individuals' Total Debt	$84,130	$86,938	+$2,808

*Adapted from "Evaluation of Outcomes: The NFCC's Sharpen Your Financial Focus Program," National Foundation for Credit Counseling, 2018.

29

Which choice provides accurate information from the table to support the point made in the sentence?

A) NO CHANGE
B) by a ratio of 0.26
C) to a total of $72,526
D) by more than $8,533

30

Which choice provides the best transition from the previous sentence?

A) NO CHANGE
B) Although such counseling is not always successful,
D) Because personal finances are so complicated,
D) As proof of the success of credit counseling programs,

31

Which choice best uses information from the table to illustrate the claim made earlier in the sentence?

A) NO CHANGE
B) these clients' open credit ratio increased by 0.26.
C) there was an overall debt decrease of $8,533.
D) their pre-counseling ratio was already higher than that of the non-counseled group.

CONTINUE

While a credit counselor may not be able to resolve an individual's financial difficulties 32 overnight; nevertheless, financial counseling provides valuable insights for people struggling with monetary commitments. Beyond helping individuals get out of 33 close-up financial distress, counselors also advise people on more sustainable budgeting and spending strategies for the future. That combination results in higher financial literacy and greater confidence moving forward.

32

A) NO CHANGE
B) overnight, but
C) overnight,
D) overnight; instead,

33

A) NO CHANGE
B) cutting
D) immediate
D) fierce

CONTINUE

Questions 34–44 are based on the following passage and supplementary material.

Protecting the People

In 1976, Congress passed the Toxic Substances Control Act (TSCA), which gave the Environmental Protection Agency (EPA) authority to regulate the manufacture and sale of chemicals for the purpose of preventing "unreasonable risk to human health or the environment." The act has **34** instituted and begun regulation of six dangerous chemicals since its inception, but this number is tiny in comparison to the more than 82,000 chemicals currently on the EPA chemical registry. Testing chemicals for toxicity is an expensive process, the burden of which is currently placed on the EPA rather than on the chemical manufacturers, and the EPA has extremely limited resources for testing. If the TSCA is to truly protect US citizens from toxic chemicals, **35** and remove dangerous substances from the environment, the EPA must be provided with additional resources to ensure that chemicals are adequately tested for potential risk.

A company that manufactures new chemicals **36** are required only to register the chemicals with the EPA. Registration includes basic information about a new chemical, but toxicity data is only required if it is already known; companies are not required to make such studies. **37** Critics of the TSCA say that companies should be required to test new chemicals before they can be approved; in order to do so, it has only 90 days to perform extensive testing. As a result, the EPA has very little practical power to regulate any chemicals.

34

A) NO CHANGE
B) instituted
C) begun the institution
D) instituted by enacting

35

A) NO CHANGE
B) however,
C) for example,
D) DELETE the underlined portion.

36

A) NO CHANGE
B) have been
C) being
D) is

37

Which choice best introduces the topic of this sentence?

A) NO CHANGE
B) The EPA can only regulate a new chemical if it can prove that the chemical poses "unreasonable risk," but
C) Because there is controversy over which tests can best determine whether a chemical is safe,
D) It's hard to know whether the lack of regulation is more the fault of the TSCA, or the EPA itself needs reform, and

CONTINUE

Many states in the US, frustrated by the federal government's lack of action on toxic chemicals, have **38** passed stricter legislation that specifically targets chemicals in products designed for vulnerable populations, such as children and pregnant women. For example, the EPA regulates lead-based paints but does not place any restrictions on the use of lead **39** in other products. Such products might include toys or children's jewelry. Seventeen **40** states' have passed additional restriction's on lead to further reduce children's exposure. In what could be seen as evidence that there should be a federal policy regarding toxic chemicals, **41** over half of the fifty states have existing or pending legislation regulating the use of mercury.

Chemicals regulated by US states beyond TSCA guidelines

	US states with regulatory policies	US states with pending policies	US states without regulatory policies
Mercury	24	6	20
Lead	14	3	33
Fire Retardants	12	4	34
Bisphenol-A (BPA)	11	5	34
Cadmium	7	3	40
Phthalates	3	4	43
Formaldehyde	1	3	46
Triclosan	1	2	47

38

A) NO CHANGE
B) passed on
C) had a passing of
D) passed by

39

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

A) in other products, such as
B) in other products:
C) in
D) in products such as

40

A) NO CHANGE
B) states have passed additional restrictions'
C) states have passed additional restrictions
D) states' have passed additional restrictions

41

Which information from the table provides the strongest evidence in support of the paragraph's main point?

A) NO CHANGE
B) ten states have existing or pending legislation regulating cadmium.
C) forty-six states have not yet taken any action to regulate formaldehyde.
D) at least eight chemicals are more strictly regulated by states than at the federal level.

CONTINUE

The TSCA could be strengthened by 42 additional funding. The California Environmental Protection Agency (CalEPA), a state agency established in 43 1991 has created a Green Chemistry Initiative that combines the efforts of lawmakers, the people of California, and the chemistry industry to create a market in which all products are evaluated for their impact on human health and the environment. The US government could 44 become a trendsetter in environmental regulation by creating a similar, preemptive national initiative, rather than waiting for a substance to be proven toxic before restricting its use.

42

Which choice best introduces the discussion in the rest of the paragraph?

A) NO CHANGE
B) employing a cooperative model.
C) a reorganization of the EPA.
D) more rigorous chemical testing.

43

A) NO CHANGE
B) 1991,
C) 1991;
D) 1991—

44

Which choice best introduces the argument made in the final sentence of the paragraph?

A) NO CHANGE
B) appease state regulatory agencies
C) better protect its citizens and environment from toxic chemicals
D) save valuable taxpayer funds

STOP

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

Math Test – No Calculator

25 MINUTES, 20 QUESTIONS

Turn to Section 3 of your answer sheet to answer the questions in this section.

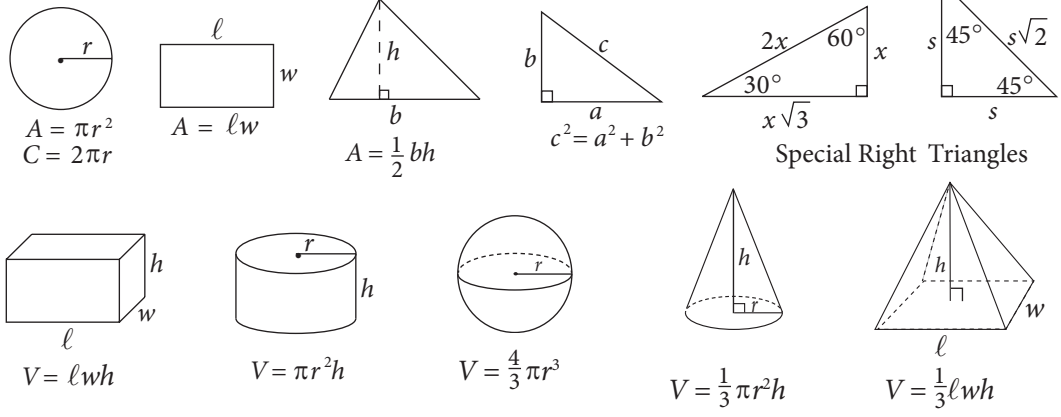
DIRECTIONS

For questions 1–15, solve each problem, choose the best answer from the choices provided, and fill in the corresponding circle on your answer sheet. **For questions 16–20**, solve the problem and enter your answer in the grid on the answer sheet. Please refer to the directions before question 16 on how to enter your answers in the grid. You may use any available space in your test booklet for scratch work.

NOTES

1. The use of a calculator **is not permitted**.
2. All variables and expressions used represent real numbers unless otherwise indicated.
3. Figures provided in this test are drawn to scale unless otherwise indicated.
4. All figures lie in a plane unless otherwise indicated.
5. Unless otherwise indicated, the domain of a given function f is the set of all real numbers x for which $f(x)$ is a real number.

REFERENCE



The number of degrees of arc in a circle is 360.
The number of radians of arc in a circle is 2π.
The sum of the measures in degrees of the angles of a triangle is 180.

CONTINUE

1

$$(3x^4 + 2x^3 - 7) + (4x^6 - 5x^3 + 9)$$

Which of the following expressions is equivalent to the expression above?

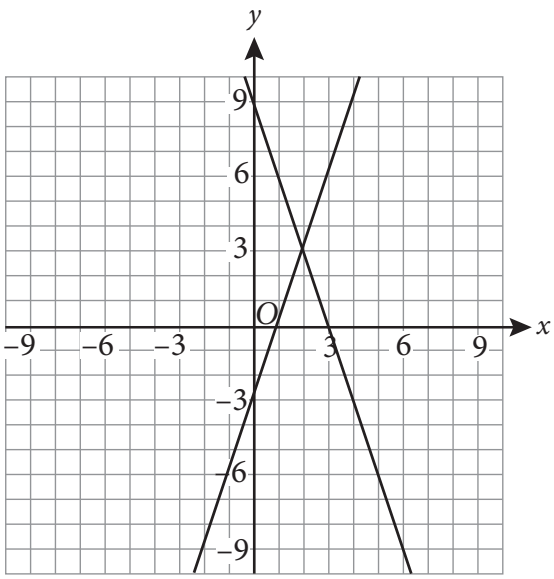
A) $4x^6 + 3x^4 - 3x^3 + 2$

B) $4x^6 + 3x^4 + 7x^3 + 2$

C) $4x^6 + 3x^4 - 5x^3 + 2$

D) $7x^{10} - 3x^3 + 2$

2



The lines graphed in the xy-plane above represent a system of two linear equations. What is the solution (x, y) to the system?

A) $(-1, -6)$

B) $(0, -3)$

C) $(2, 3)$

D) $(3, 0)$

3

Rosa has already eaten 10 pretzels from a bag that originally contained p pretzels. If Rosa is able to eat each remaining pretzel in 18 seconds, which of the following represents the amount of additional time, in seconds, needed for Rosa to eat all the pretzels in the bag?

A) $10(18 - p)$

B) $10(p - 18)$

C) $18(10 - p)$

D) $18(p - 10)$

4

$$0 = 7y - 5x + 9$$

What are the y-intercept and the slope of the line defined by the equation above?

A) The slope is $-\frac{5}{7}$, and the y-intercept is $-\frac{9}{7}$.

B) The slope is $-\frac{5}{7}$, and the y-intercept is $\frac{9}{7}$.

C) The slope is $\frac{5}{7}$, and the y-intercept is $-\frac{9}{7}$.

D) The slope is $\frac{5}{7}$, and the y-intercept is $\frac{9}{7}$.

CONTINUE

5

If $5+n=9-\frac{1}{3}n$, what is the value of n?

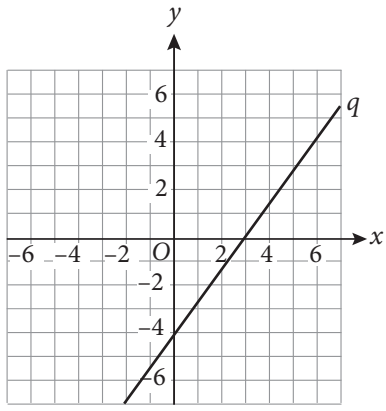
A) 3

B) 4

C) 6

D) $\frac{21}{2}$

6



Line p (not shown) is perpendicular to line q shown above and passes through the point (0, 4). Which of the following equations could represent line p?

A) $y=-\frac{4}{3}x+4$

B) $y=-\frac{3}{4}x+4$

C) $y=\frac{3}{4}x+4$

D) $y=\frac{4}{3}x+4$

7

$$(4+7i)-(6+2i)$$

What complex number is equivalent to the expression above if $i=\sqrt{-1}$?

A) 2

B) $2-5i$

C) $-2+5i$

D) $-10-9i$

8

$$\frac{4}{n-3}=\frac{5}{n+2}$$

Given the equation above, what is the value of n?

A) −7

B) −2

C) 8

D) 23

CONTINUE

9

What is the solution set to the equation $0 = (3a + 1)^2(a - 4)$?

A) $\left\{\frac{1}{3}, -4\right\}$

B) $\left\{-\frac{1}{3}, 4\right\}$

C) $\left\{-\frac{1}{3}, \frac{1}{3}, -4\right\}$

D) $\left\{-\frac{1}{3}, \frac{1}{3}, 4\right\}$

10

What is the solution set to the equation

$$\frac{2}{7-m} = \frac{4}{m} - \frac{5-m}{7-m}?$$

A) {4, 7}

B) {4, 5}

C) {1, 7}

D) {4}

11

If 3 is a root of the function $f(x) = x^2 + 13x + c$ and c is a constant, what is the value of c ?

A) –48

B) –3

C) 5

D) 48

12

$$\frac{7}{12b^3} - \frac{3}{4b^3}$$

The above expression is equivalent to which of the following expressions for all $b > 0$?

A) $-\frac{1}{6b^3}$

B) $-\frac{1}{4b^3}$

C) $\frac{1}{4b^3}$

D) $\frac{1}{6b^3}$

CONTINUE

13

$$y = x^2 + 3$$

$$y = 15x - 33$$

The system of equations shown above is graphed in the xy-plane. If system has two solutions, what is the product of the x-coordinates of the two solutions?

A) 36

B) 4

C) −4

D) −36

14

$$\left(-27a^{10}\right)^{\frac{3}{5}}$$

For all values of a, which of the following is equivalent to the expression above?

A) $3a^6\sqrt[5]{3}$

B) $-3a^6\sqrt[5]{81}$

C) $3a^5\sqrt[5]{81}$

D) $-3a^5\sqrt[5]{3}$

15

The amount of carbon-15 in a given sample decays exponentially with time. If the function $C(m) = 100\left(\frac{1}{2}\right)^{24m}$ models the amount of carbon-15 remaining in the sample after m minutes, which of the following must be true?

A) The amount of carbon in the sample halves every minute.

B) The amount of carbon in the sample halves every 24 minutes.

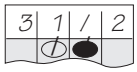
C) The amount of carbon in the sample halves 24 times every minute.

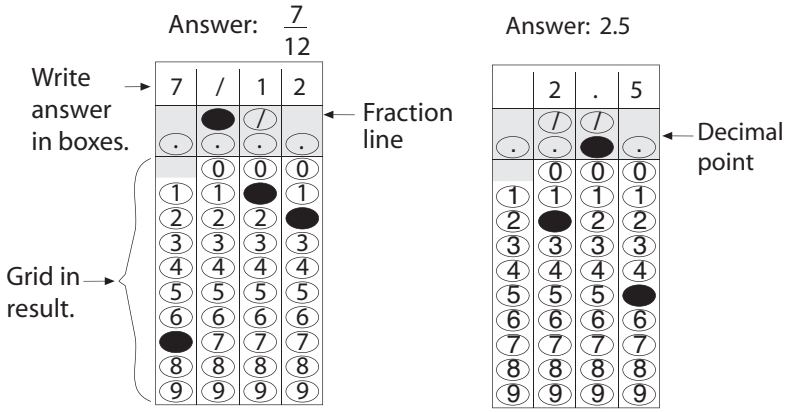
D) The amount of carbon in the sample reduces by a factor of 24 every 2 minutes.

CONTINUE

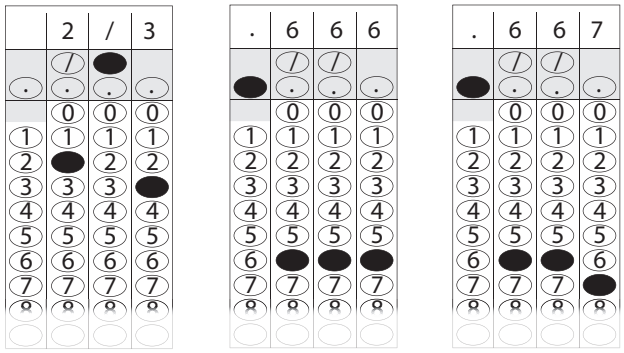
DIRECTIONS

For questions 16–20, solve the problem and enter your answer in the grid, as described below, on the answer sheet.

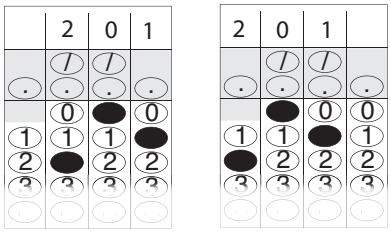
1. Although not required, it is suggested that you write your answer in the boxes at the top of the columns to help you fill in the circles accurately. You will receive credit only if the circles are filled in correctly.
2. Mark no more than one circle in any column.
3. No question has a negative answer.
4. Some problems may have more than one correct answer. In such cases, grid only one answer.
5. **Mixed numbers** such as $3\frac{1}{2}$ must be gridded as 3.5 or 7/2. (If  is entered into the grid, it will be interpreted as $\frac{31}{2}$, not as $3\frac{1}{2}$.)
6. **Decimal Answers:** If you obtain a decimal answer with more digits than the grid can accommodate, it may be either rounded or truncated, but it must fill the entire grid.



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



Answer: 201 – either position is correct



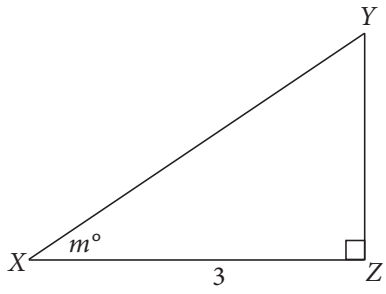
NOTE: You may start your answers in any column, space permitting. Columns you don't need to use should be left blank.

CONTINUE

16

If $0 = \frac{2}{n-2} - \frac{6}{n+1}$, what is the value of n?

17



In the figure above, triangle XYZ is a right triangle with $XZ = 3$. If $\tan m = \sqrt{3}$, what is YZ?

18

An angle in the xy-plane has measure 5π radians. What is the measure of the angle in degrees?

CONTINUE

19

Robert is selling televisions at an electronics store. The televisions normally cost $545 each but are being sold at an 8% discount. What is the minimum number of televisions Robert must sell if he wants to meet his quota of $100,000 in total sales?

20

The linear function $y = g(x)$ is graphed in the xy-plane. If $g(-3) = 4$ and $g(2) = 19$, what is the slope of line g ?

STOP

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

Math Test – Calculator

55 MINUTES, 38 QUESTIONS

Turn to Section 4 of your answer sheet to answer the questions in this section.

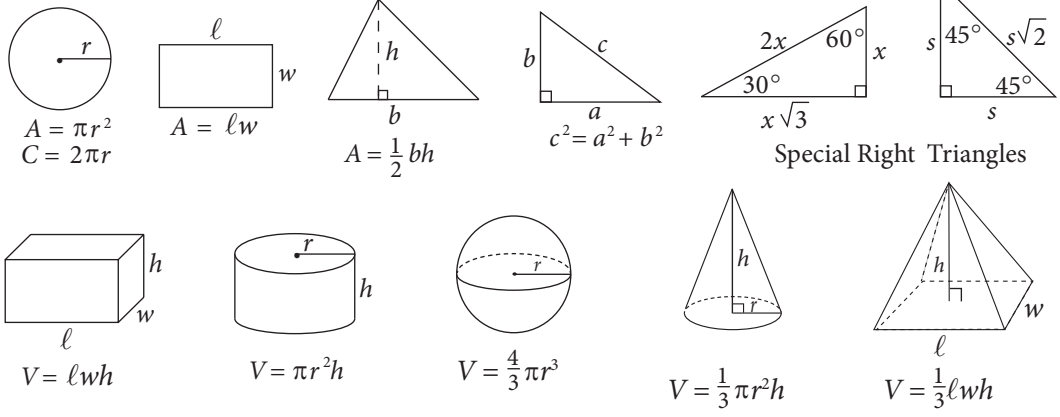
DIRECTIONS

For questions 1–30, solve each problem, choose the best answer from the choices provided, and fill in the corresponding circle on your answer sheet. **For questions 31–38**, solve the problem and enter your answer in the grid on the answer sheet. Please refer to the directions before question 31 on how to enter your answers in the grid. You may use any available space in your test booklet for scratch work.

NOTES

1. The use of a calculator **is permitted**.
2. All variables and expressions used represent real numbers unless otherwise indicated.
3. Figures provided in this test are drawn to scale unless otherwise indicated.
4. All figures lie in a plane unless otherwise indicated.
5. Unless otherwise indicated, the domain of a given function f is the set of all real numbers x for which $f(x)$ is a real number.

REFERENCE



The number of degrees of arc in a circle is 360.
The number of radians of arc in a circle is 2π.
The sum of the measures in degrees of the angles of a triangle is 180.

CONTINUE

1

If the function g is defined by $g(x) = 3x + 5$, what is the value of $g(-5)$?

A) -20

B) -10

C) 20

D) 60

2

Number of Lightbulbs Produced at Levington Lights in a Day

	Working	Defective	Total
60-Watt	1,230	127	1,357
100-Watt	2,384	271	2,655
Total	3,614	398	4,012

According to the table above, 100-Watt bulbs made up what fraction of the working lightbulbs?

A) $\frac{1,230}{3,614}$

B) $\frac{2,384}{3,614}$

C) $\frac{271}{398}$

D) $\frac{2,384}{2,655}$

3

The expression $(4n - 5)(5n - 4)$ is equivalent to which of the following?

A) $20n^2 - 41n + 20$

B) $20n^2 - 39n + 9$

C) $9n^2 - 41n + 20$

D) $4n^2 - 18n + 9$

4

The ratio of $\frac{2.7}{1.2}$ is equivalent to the ratio of $\frac{b}{4.8}$.

What is the value of b ?

A) 2.13

B) 4

C) 6.3

D) 10.8

CONTINUE

5

$$60 = 15mn + 20$$

What is the value of $3mn + 4$, according to the equation above?

A) 20

B) 15

C) 12

D) 4

6

A high school principal is seeking to determine the likelihood that students in Santana High School will attend the upcoming dance. Which of the following data collection methods is most likely to yield an accurate prediction by the principal?

A) Polling a randomly selected group of 1,500 teenagers in the town

B) Conducting a survey of 180 randomly selected students in the senior class at Santana High School

C) Polling a group of 250 randomly selected Santana High School students

D) Posting an internet poll on the school's website open only to Santana High School students

Questions 7–9 refer to the following information.

Thomas was hired for a new job in 1977, with a starting salary of $40,000. Beginning in 1978, Thomas received an annual raise, increasing his salary by $2,300 each year.

7

If Thomas retired at the end of 1999, what was his salary in his final year?

A) $90,600

B) $76,000

C) $54,600

D) $40,000

8

Which of the following must be true, given that Thomas's salary after y years was between $54,000 and $60,000 ?

A) $3 < y < 6$

B) $6 < y < 9$

C) $9 < y < 12$

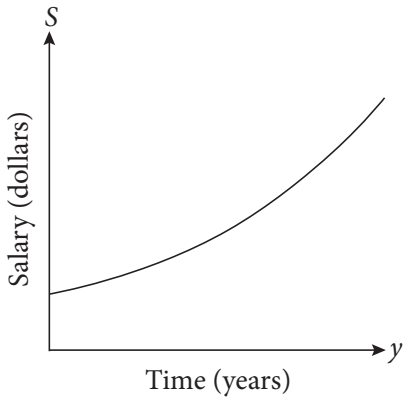
D) $y > 12$

CONTINUE

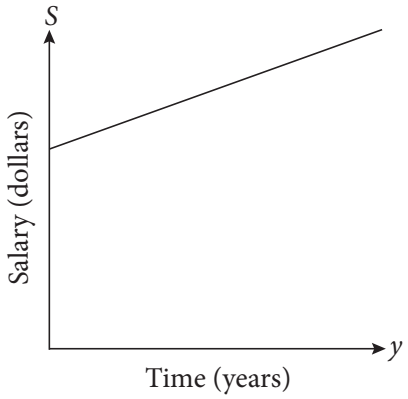
9

Which of the following graphs could represent Thomas's salary, *S*, in dollars, as a function of the number of years, *y*, after 1977 ?

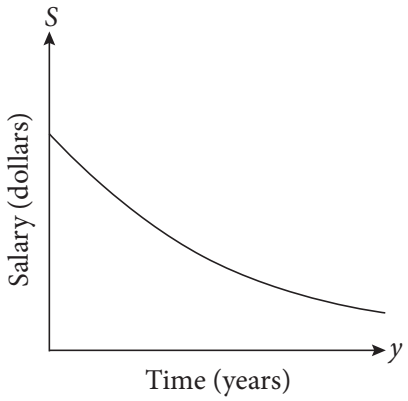
A)



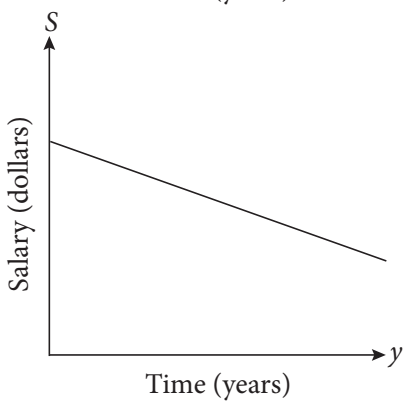
B)



C)



D)



10

An investor is deciding between two options for a short-term investment. One option has a return *R*, in dollars, *t* months after investment, and is modelled by the equation $R = 100(3^t)$. The other option has a return *R*, in dollars, *t* months after investment, and is modeled by the equation $R = 350t$. After 4 months, how much less is the return given by the linear model than the return given by the exponential model?

A) $1,400

B) $4,050

C) $6,700

D) $8,100

11

$$n - \sqrt{2n + 22} = 1$$

Given the equation above, which of the following is a possible value of *n* ?

I. 7

II. –3

III. –5

A) I only

B) III only

C) I and III only

D) II and III only

CONTINUE

12

$$3x - 6 = 5x - 2$$

Based on the equation above, what is the value of $2x - 4$?

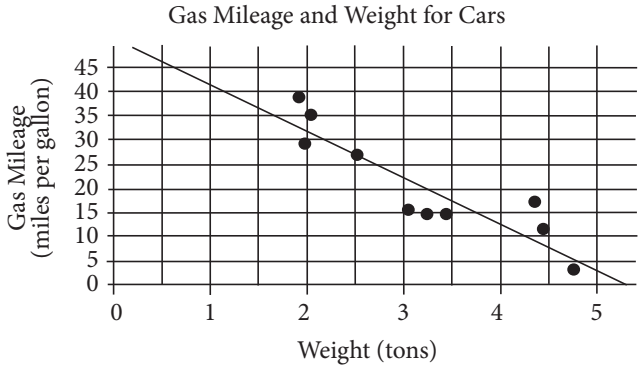
A) -8

B) -2

C) 2

D) 6

13



The scatterplot above shows the relationship between gas mileage, in miles per gallon, and weight, in tons, for 10 cars selected at random. The line of best fit models the gas mileage based on the weight of the car. What is the weight, in tons, of the car for which the actual gas mileage was closest to the predicted value?

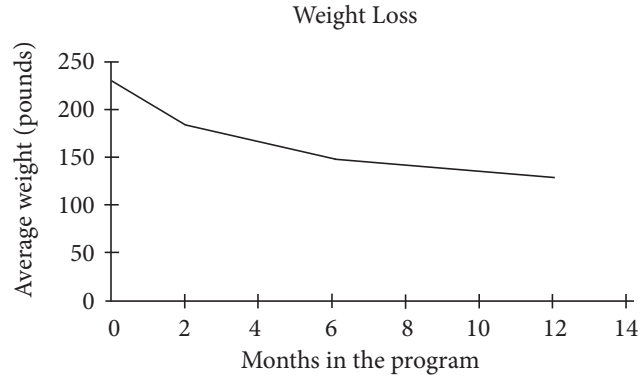
A) 2.5

B) 4.5

C) 15

D) 27

14



The graph above shows the average weight for the members of a weight loss program, for each month a member is in the program. According to the information in the graph, which of the following must be true?

A) The average weight loss per month is the same regardless of the number of months a member is in the program.

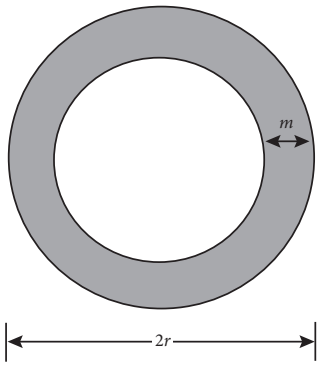
B) The average weight loss per month for members who are in the program more than 150 months is less than that for members who are in the program less than 150 months.

C) The average weight loss per month for members who are in the program more than 6 months is less than that for members who are in the program less than 6 months.

D) The average weight loss per month for members who are in the program more than 6 months is greater than that for members who are in the program less than 6 months.

CONTINUE

15



The figure above represents a circular lake with the walking path that is m meters wide. If the expression $\pi r^2 - \pi(r - m)^2$ represents the area of the walking path, in square meters, what does the quantity $(r - m)$ represent?

A) The radius of the lake

B) The combined radius of the lake and walking path

C) The combined area of the surface of the lake and walking path

D) The area of the surface of the lake

16

Kanaka took 8 tests for her social studies class. Each test has a maximum score of 100 and a minimum score of 0. On the 8 tests, Kanaka's mean score was 90. More than a quarter of her tests have scores less than 85. If the average of the remaining tests is x, which of the following must be true?

A) $x \leq 85$

B) $85 < x < 90$

C) $x = 90$

D) $x > 90$

17

A poll of 400 randomly selected likely voters in Seanoa City was taken to determine the support for the mayoral candidates in the upcoming election. Of the likely voters selected, 190 stated that they are likely to vote for Candidate A. If the conclusion is drawn that "approximately 3,120 voters are likely to vote for Candidate A," which of the following is closest to the number of likely voters in Seanoa City?

A) 1,482

B) 3,120

C) 4,741

D) 6,568

18

$$y^2 = 21 - x$$

$$x = 5$$

The solutions to the system of equation above are (a_1, b_1) and (a_2, b_2). What are the values of b_1 and b_2?

A) –4 and 4

B) $-\sqrt{21}$ and $\sqrt{21}$

C) –5 and 5

D) $-\sqrt{26}$ and $\sqrt{26}$

CONTINUE

19

The function p is defined as $p(x) = x^2 - 3x$. If the function q is defined as $q(x) = p(x) - 4$, what is the value of $q(10)$?

A) –30

B) 6

C) 66

D) 70

20

If $c > 0$ and m and n are positive integers, which of the following is equivalent to $c^{\frac{m}{n}}$?

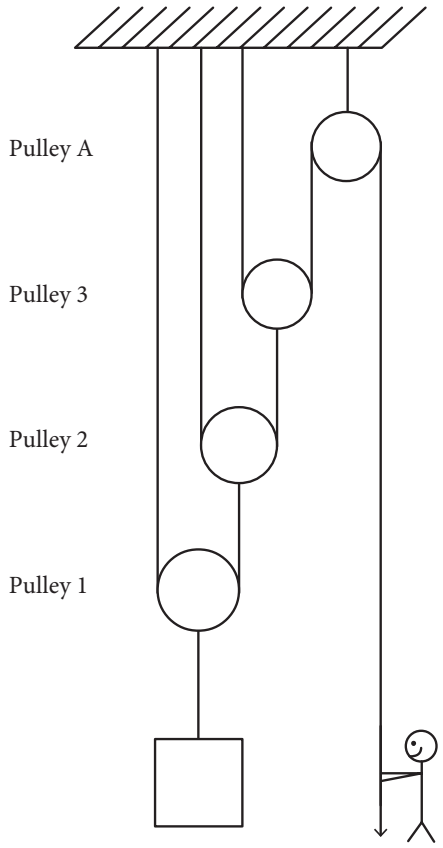
A) $\frac{c^m}{c^n}$

B) $cm - n$

C) $\left(\sqrt[m]{c}\right)^n$

D) $\left(\sqrt[n]{c}\right)^m$

21



In the figure above, each pulley added to the pulley system after Pulley A reduces the amount of force required to lift an object to 50% of the original amount. If the system has three additional pulleys, what would be the approximate force, in Newtons, that is exerted to lift a weight that normally requires 200 pounds of force to lift? (1 Newton = 0.224 pounds)

A) 5.6

B) 11.2

C) 111.6

D) 223.2

CONTINUE

22

$$Q = 17.6T$$

The equation above shows the heat energy, Q, in Joules that is absorbed by a 10 g block of wood as temperature, T, in degrees Celsius, increases. Which of the following best describes the meaning of the number 17.6 in this equation?

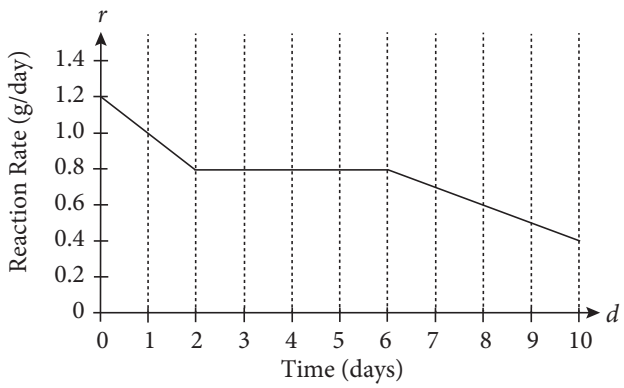
A) The heat energy absorbed by the block of wood at a constant temperature

B) The heat energy absorbed by the block of wood with a change in temperature of T°C

C) The heat energy absorbed by the block of wood with every increase in temperature of 1°C

D) The heat energy absorbed by the block of wood when the temperature reaches 0°

23



The graph above represents the reaction rate, r, at which an unfinished iron nail rusts in water during the first 10 days of an experiment, where d gives time measured in days. What was the total amount of rust produced from $d = 2$ to $d = 6$?

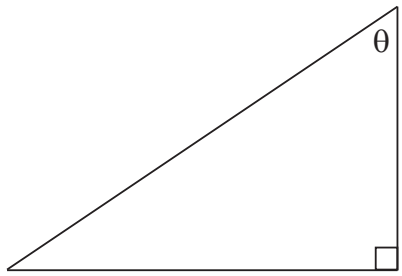
A) 0.8 grams

B) 1.6 grams

C) 2.4 grams

D) 3.2 grams

24



Note: Figure not drawn to scale

In the figure above, if $\cos\theta = \frac{3}{5}$, what is the value of $\cos(90 - \theta)$?

A) $\frac{3}{5}$

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

C) $\frac{4}{5}$

D) $\frac{5}{4}$

CONTINUE

25

$$x + 7y = -10$$
$$3x - 4y = k$$

In the system of equations above, k is a constant. If (a, b) is the solution to the system, what is the value of a, in terms of k ?

A) $\frac{-k-30}{25}$

B) $\frac{3k+10}{25}$

C) $\frac{6k-8}{25}$

D) $\frac{7k-40}{25}$

26

According to the U.S. Department of Labor, the unemployment rate in January of 2012 in the United States was 8.3%. According to the same department, the unemployment rate in January of 2016 was 4.9%. According to the U.S. Department of Labor, how did the unemployment rate change from January 2012 to January 2016 ?

A) It decreased by 79%.

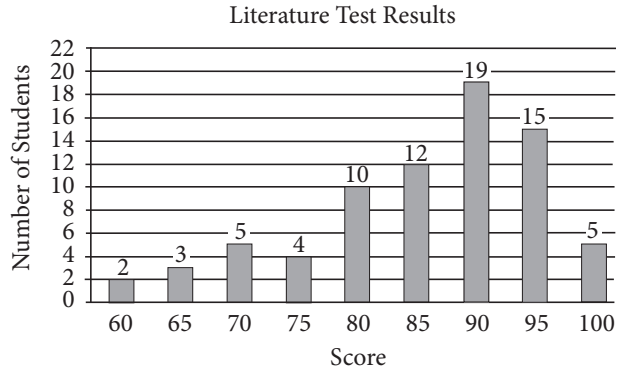
B) It decreased by 41%.

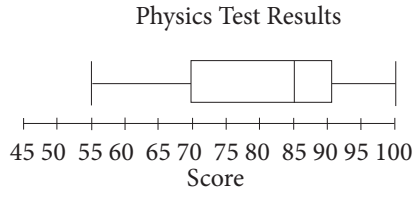
C) It decreased by 34%.

D) It increased by 41%.

Questions 27 and 28 refer to the following information.

In a particular college, the test scores of the most recent test given for a particular Physics class and a particular Literature class were studied. Both tests were scored from 0 to 100 and had a total of 20 questions, which were equally weighted with no partial credit. The Physics class had 128 students and the Literature class had 75 students. The test results are shown in the two graphs below.





27

The dean of the college is comparing the scores from the two classes and calculates the median for each class. If the dean labels the median score of the Physics class P and the median score of the Literature class L, what is the sum of P and L ?

A) 175

B) 170

C) 85

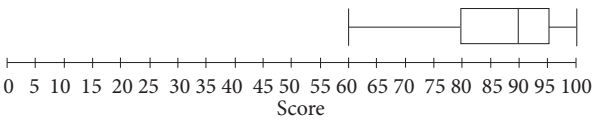
D) 80

CONTINUE

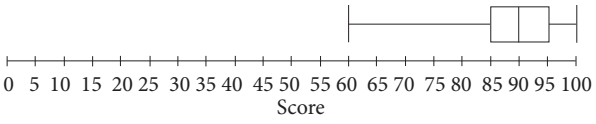
28

Which of the following box plots most accurately represents the result of the Literature test?

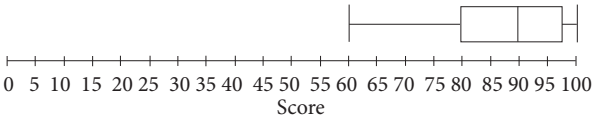
A)



B)



C)



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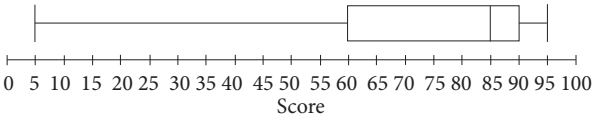
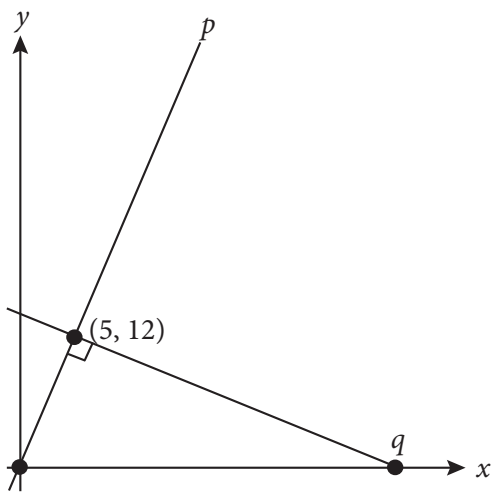


29



In the figure above, lines p and q are graphed on the xy-plane. What is the x-intercept of line q?

A) 24

B) 27.6

C) 33.8

D) 38.4

30

$$y = x^2 + 16x + 28$$

The equation above represents the graph of a parabola in the xy-plane. Which of the following represents an equivalent form of the equation that includes the minimum value of y as a constant?

A) $y - 28 = x(x + 16)$

B) $y = x^2 + 2(8x + 14)$

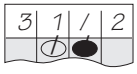
C) $y = x(x + 16) + 28$

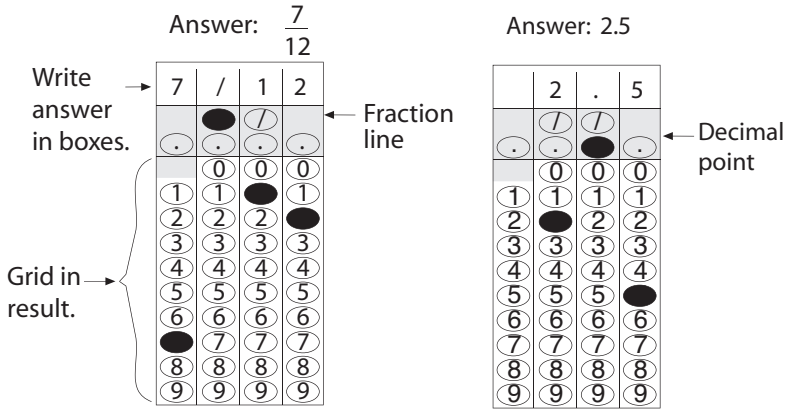
D) $y = (x + 8)^2 - 36$

CONTINUE

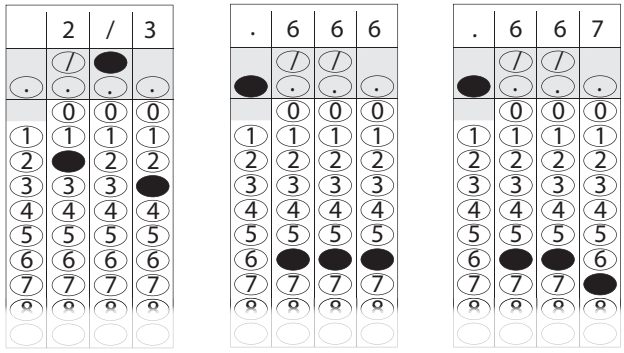
DIRECTIONS

For questions 31–38, solve the problem and enter your answer in the grid, as described below, on the answer sheet.

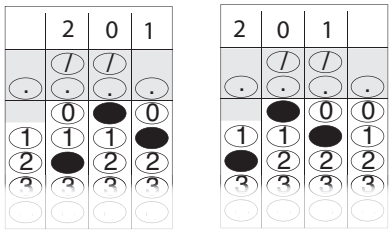
1. Although not required, it is suggested that you write your answer in the boxes at the top of the columns to help you fill in the circles accurately. You will receive credit only if the circles are filled in correctly.
2. Mark no more than one circle in any column.
3. No question has a negative answer.
4. Some problems may have more than one correct answer. In such cases, grid only one answer.
5. **Mixed numbers** such as $3\frac{1}{2}$ must be gridded as 3.5 or 7/2. (If  is entered into the grid, it will be interpreted as $\frac{31}{2}$, not as $3\frac{1}{2}$.)
6. **Decimal Answers:** If you obtain a decimal answer with more digits than the grid can accommodate, it may be either rounded or truncated, but it must fill the entire grid.



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



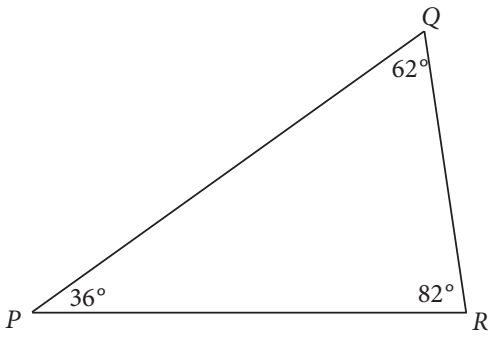
Answer: 201 – either position is correct



NOTE: You may start your answers in any column, space permitting. Columns you don't need to use should be left blank.

CONTINUE

31



In the figure above, triangle *PQR* is similar to triangle *XYZ* (not shown). If *PQ:XY* = *QR:YZ* = *PR:XZ* = 4:5, what is the measure, in degrees, of angle *Y* ?

32

A new homeowner drew a floor plan of her new house, in which 1 inch on the floor plan is equivalent to 18 inches on the actual floor. If the actual longest side of the floor in one of the bedrooms is 153 inches, what is the length of the longest side of the same bedroom in the floor plan?

33

What is the number of pallets, each with an area of 60 square yards, that would be needed to cover a field that is 3 acres in area? (1 acre = 4,840 square yards)

34

If $b+\frac{22}{25}=\frac{7}{5}b$, what is the value of b ?

CONTINUE

35

The point $(p, 0)$ lies on a circle in the xy-plane. The points (2, 3.5) and (–2, 0.5) are the endpoints of a diameter of the circle. If $p > 0$, what is the value of p ?

36

$$7y = 11x$$

$$\frac{1}{5}x - \frac{1}{4}y = -\frac{81}{80}$$

If (x, y) is the solution to the system of equations above, what is the value of $\frac{y}{x}$?

Questions 37 and 38 refer to the following information.

Sales Summary			
Day Number	Day	Daily Sales	Total Weekly Sales at the End of Each Day
1	Monday	$520	$520
2	Tuesday	$290	$810
3	Wednesday	$350	$1,160
4	Thursday	$810	$1,970
5	Friday	$480	$2,450

A salesperson recorded her sales during a particular 5-day work week, shown in the table above, in order to study her daily sales.

37

The salesperson wants to increase her average sales per day by 20% in the following week. Given the information in the chart above, what should her daily sales average be for the following week?

38

During her eight-hour shift on Wednesday, the salesperson sold items that had an average price of $8.10. To the nearest tenth of an item, what is the number of items she sold per hour on Wednesday?

STOP

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

SAT Essay

ESSAY BOOK

DIRECTIONS

The essay gives you an opportunity to show how effectively you can read and comprehend a passage and write an essay analyzing the passage. In your essay you should demonstrate that you have read the passage carefully, present a clear and logical analysis, and use language precisely.

Your essay must be written on the lines provided in your answer sheet booklet; except for the planning page of the answer booklet, you will receive no other paper on which to write. You will have enough space if you write on every line, avoid wide margins, and keep your handwriting to a reasonable size. Remember that people who are not familiar with your handwriting will read what you write. Try to write or print so that what you are writing is legible to those readers.

You have 50 minutes to read the passage and write an essay in response to the prompt provided inside this booklet.

REMINDER

— Do not write your essay in this booklet. Only what you write on the lined pages of your answer booklet will be evaluated.

— An off-topic essay will not be evaluated.

CONTINUE

As you read the passage below, consider how Robert Sterling Yard uses

- evidence, such as facts or examples, to support claims.
- reasoning to develop ideas and to connect claims and evidence.
- stylistic or persuasive elements, such as word choice or appeals to emotion, to add power to the ideas expressed.

Adapted from Robert Sterling Yard, "Making a Business of Scenery." © June 1916 by *The Nation's Business*.

1 Casting about for the cause of a business loving nation's impressive apathy toward its national parks, I find that it lies in an entire failure to perceive the hard-fisted reasons for their existence. Until recently—it is a matter of almost months—the incomparable scenery of this land has been commonly regarded as an aesthetic luxury.

2 That scenery, handled in a business way, has commercial value is, of course, a recognized fact; but that our national parks so handled, on a national scale, can be quickly turned into an economic asset of incalculable value to this nation is a new idea to the public, although by no means new to the group of earnest men behind the present administration of these great properties. The proposition is neither new nor untried. Its success is incontestably proved. Switzerland lives on her scenery.

3 The Swiss are a business people. They perceived that snow-covered peaks were as good as gold mines; that glaciers and precipices paid like factories; that lake shores were as profitable as ocean fronts. So they developed their properties. The State built fine roads and the people put their profits into hotels and chalets. When they over-developed their market the State sought increased custom abroad. It established tourist agencies in France and Germany and Russia and England; later, and extensively, in America. It spent good money in ever-increasing sums in advertising, testing each venture with its resulting increase of gross income, until Switzerland's scenery business became, previous to the present war, a great national business…

4 There are few Americans today who know, or hearing it, actually realize that American scenery in quality, variety, and quantity outclasses Switzerland's decisively. But recently another people in this hemisphere realized it. A few years ago Canada observed, heeded and acted. Canada has entered the scenery business energetically and thoroughly. She studied Swiss methods and improved upon them. She put business men in charge and gave them power. Having railroad prosperity and local business for her object, she planned carefully and executed boldly. Picking out the Lake Louise region as her point of first concentration, she set about the establishment of its trademark. She began to advertise extensively and well.

5 And the results?

CONTINUE

6 These countries, Switzerland and Canada, today share the scenic reputation of the world. It has been estimated that in normal times the Alps draw a hundred million American dollars a year. Abroad, the Canadian Rockies are supposed to be the only scenery in North America worth looking at, and before last summer (and perhaps today), it was the fixed belief of most Americans that they excelled anything in the United States…

7 But here are the facts:

8 The Swiss Alps may be offset by our Glacier National Park alone. Glory for glory, beauty for beauty, Glacier will match points and usually score. But who ever heard of the Glacier National Park? And, besides, we have the spectacular glaciers of Mount Rainier National Park, and the marvelous mountain scenery of our Sierra parks, to say nothing of the new Rocky Mountain National Park, less than fifty miles from Denver, whose average timberline is loftier than most of Switzerland's summits, and whose rocky peaks challenge the world for sheer beauty and accessibility. So much for the Alps…

9 The closing of Europe turned the eyes of this people upon its own land. The pacific expositions drew attention westward. The cry of "See America First" focused the national gaze. American scenery was discovered.

10 Since then the doctrine has spread with American rapidity. What this people wants, its Congress grants; and we want our national parks developed. We want roads and trails like Switzerland's. We want hotels of all prices from lowest to highest…We want adequate facilities and supplies for camping out at lowest prices. We want good fishing. We want our wild animal life conserved and developed. We want special facilities for nature study.

11 All these things this people wants and must have, but it does not want them at the expense of the United States Treasure. This is a business proposition and must be built up soundly. We have the biggest and finest stock of scenery in the world and there is an enormous market for it. We can sell it at a profit, and the profit will buy our development. The bigger the business grows the greater the reduction of costs and the lower the charges. When we are doing a national business on Switzerland's scale, we can match Switzerland's low prices.

12 There is the story in a paragraph. It is a business proposition.

Write an essay in which you explain how Robert Yard builds an argument to persuade his audience that the national parks should be run like a private business. In your essay, analyze how Yard uses one or more of the features listed in the box above (or features of your own choice) to strengthen the logic and persuasiveness of his argument. Be sure that your analysis focuses on the most relevant aspects of the passage.

Your essay should not explain whether you agree with Yard's claims, but rather explain how Yard builds an argument to persuade his audience.

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Completely darken bubbles with a No. 2 pencil. If you make a mistake, be sure to erase mark completely. Erase all stray marks.

1.

YOUR NAME: (Print) _____ (Last) _____ (First) _____ (M.I.)

SIGNATURE: _____ DATE: ___/___/___

HOME ADDRESS: (Print) _____ (Number and Street)

_____ (City) _____ (State) _____ (Zip Code)

PHONE NO.: (Print) _____

IMPORTANT: Please fill in these boxes exactly as shown on the back cover of your test book.

2. TEST FORM

3. TEST CODE

4. REGISTRATION NUMBER

6. DATE OF BIRTH

Month	Day		Year	
○ JAN				
○ FEB	0	0	0	0
○ MAR	1	1	1	1
○ APR	2	2	2	2
○ MAY	3	3	3	3
○ JUN		4	4	4
○ JUL		5	5	5
○ AUG		6	6	6
○ SEP		7	7	7
○ OCT		8	8	8
○ NOV		9	9	9
○ DEC				

7. SEX

○ MALE

○ FEMALE

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5. YOUR NAME

First 4 letters of last name					FIRST INIT	MID INIT
A	A	A	A		A	A
B	B	B	B		B	B
C	C	C	C		C	C
D	D	D	D		D	D
E	E	E	E		E	E
F	F	F	F		F	F
G	G	G	G		G	G
H	H	H	H		H	H
I	I	I	I		I	I
J	J	J	J		J	J
K	K	K	K		K	K
L	L	L	L		L	L
M	M	M	M		M	M
N	N	N	N		N	N
O	O	O	O		O	O
P	P	P	P		P	P
Q	Q	Q	Q		Q	Q
R	R	R	R		R	R
S	S	S	S		S	S
T	T	T	T		T	T
U	U	U	U		U	U
V	V	V	V		V	V
W	W	W	W		W	W
X	X	X	X		X	X
Y	Y	Y	Y		Y	Y
Z	Z	Z	Z		Z	Z

Test 2 Start with number 1 for each new section.
If a section has fewer questions than answer spaces, leave the extra answer spaces blank.

Section 1—Reading

1.	A	B	C	D	27.	A	B	C	D
2.	A	B	C	D	28.	A	B	C	D
3.	A	B	C	D	29.	A	B	C	D
4.	A	B	C	D	30.	A	B	C	D
5.	A	B	C	D	31.	A	B	C	D
6.	A	B	C	D	32.	A	B	C	D
7.	A	B	C	D	33.	A	B	C	D
8.	A	B	C	D	34.	A	B	C	D
9.	A	B	C	D	35.	A	B	C	D
10.	A	B	C	D	36.	A	B	C	D
11.	A	B	C	D	37.	A	B	C	D
12.	A	B	C	D	38.	A	B	C	D
13.	A	B	C	D	39.	A	B	C	D
14.	A	B	C	D	40.	A	B	C	D
15.	A	B	C	D	41.	A	B	C	D
16.	A	B	C	D	42.	A	B	C	D
17.	A	B	C	D	43.	A	B	C	D
18.	A	B	C	D	44.	A	B	C	D
19.	A	B	C	D	45.	A	B	C	D
20.	A	B	C	D	46.	A	B	C	D
21.	A	B	C	D	47.	A	B	C	D
22.	A	B	C	D	48.	A	B	C	D
23.	A	B	C	D	49.	A	B	C	D
24.	A	B	C	D	50.	A	B	C	D
25.	A	B	C	D	51.	A	B	C	D
26.	A	B	C	D	52.	A	B	C	D

Section 2—Writing and Language Skills

1.	A	B	C	D	23.	A	B	C	D
2.	A	B	C	D	24.	A	B	C	D
3.	A	B	C	D	25.	A	B	C	D
4.	A	B	C	D	26.	A	B	C	D
5.	A	B	C	D	27.	A	B	C	D
6.	A	B	C	D	28.	A	B	C	D
7.	A	B	C	D	29.	A	B	C	D
8.	A	B	C	D	30.	A	B	C	D
9.	A	B	C	D	31.	A	B	C	D
10.	A	B	C	D	32.	A	B	C	D
11.	A	B	C	D	33.	A	B	C	D
12.	A	B	C	D	34.	A	B	C	D
13.	A	B	C	D	35.	A	B	C	D
14.	A	B	C	D	36.	A	B	C	D
15.	A	B	C	D	37.	A	B	C	D
16.	A	B	C	D	38.	A	B	C	D
17.	A	B	C	D	39.	A	B	C	D
18.	A	B	C	D	40.	A	B	C	D
19.	A	B	C	D	41.	A	B	C	D
20.	A	B	C	D	42.	A	B	C	D
21.	A	B	C	D	43.	A	B	C	D
22.	A	B	C	D	44.	A	B	C	D

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Completely darken bubbles with a No. 2 pencil. If you make a mistake, be sure to erase mark completely. Erase all stray marks.

Test 2 Start with number 1 for each new section.
If a section has fewer questions than answer spaces, leave the extra answer spaces blank.

Section 3—Mathematics: No Calculator

1. (A) (B) (C) (D)
2. (A) (B) (C) (D)
3. (A) (B) (C) (D)
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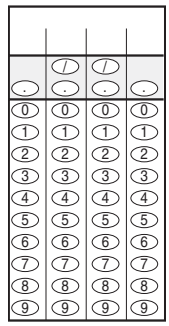

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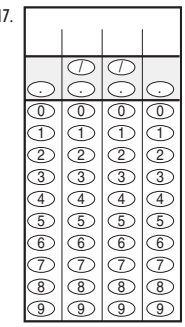

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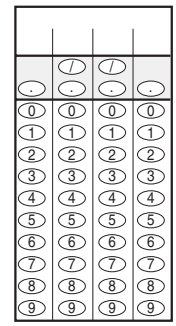

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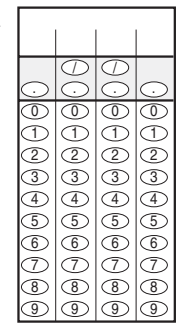

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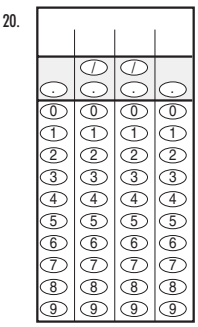

Section 4—Mathematics: Calculator

1. (A) (B) (C) (D)
2. (A) (B) (C) (D)
3. (A) (B) (C) (D)
4. (A) (B) (C) (D)
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24. (A) (B) (C) (D)
25. (A) (B) (C) (D)
26. (A) (B) (C) (D)
27. (A) (B) (C) (D)
28. (A) (B) (C) (D)
29. (A) (B) (C) (D)
30. (A) (B) (C) (D)

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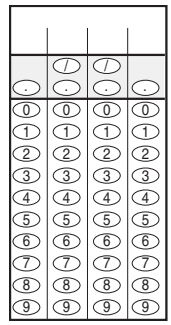

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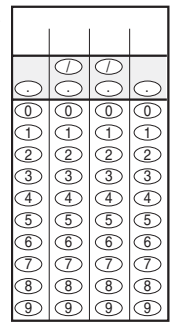

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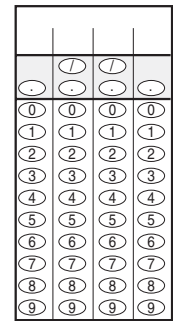

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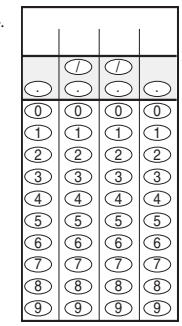

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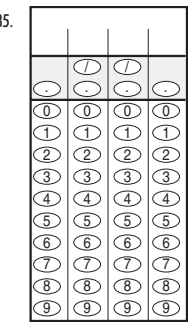

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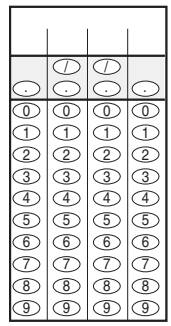
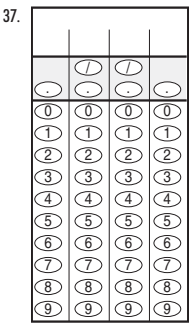
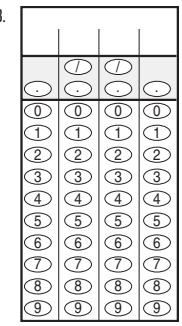


37.

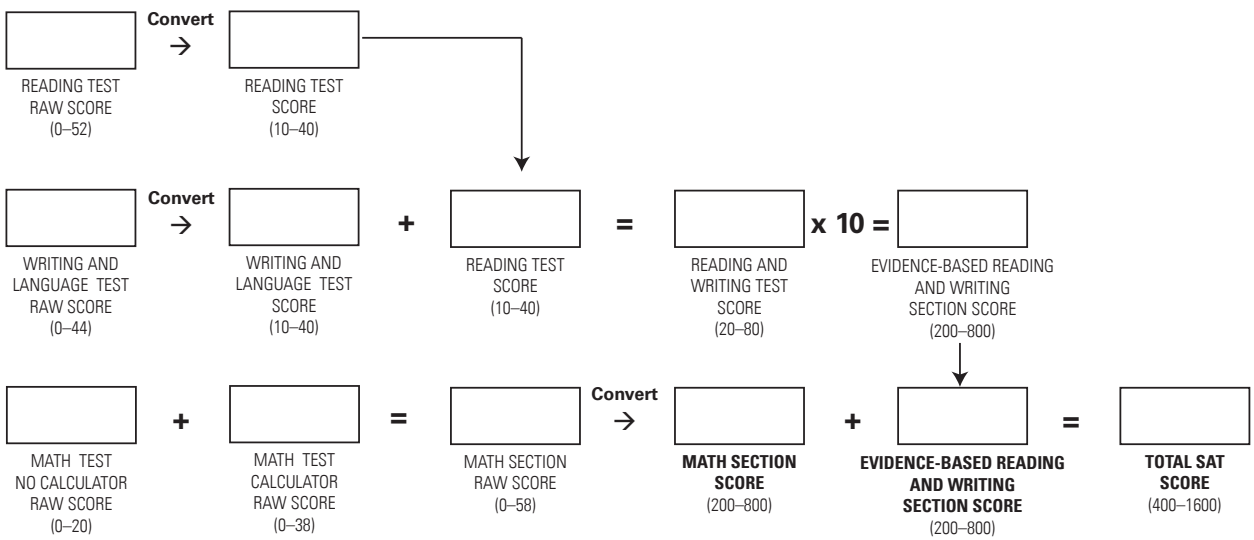


38.



RAW SCORE CONVERSION TABLE SECTION AND TEST SCORES

Raw Score *(# of correct answers)*	Math Section Score	Reading Test Score	Writing and Language Test Score
0	200	10	10
1	200	10	10
2	210	10	10
3	230	11	10
4	240	12	11
5	260	13	12
6	280	14	13
7	290	15	13
8	310	15	14
9	320	16	15
10	330	17	16
11	340	17	16
12	360	18	17
13	370	19	18
14	380	19	19
15	390	20	19
16	410	20	20
17	420	21	21
18	430	21	21
19	440	22	22
20	450	22	23
21	460	23	23
22	470	23	24
23	480	24	25
24	480	24	25
25	490	25	26
26	500	25	26
27	510	26	27
28	520	26	28
29	520	27	28
30	530	28	29
31	540	28	30
32	550	29	30
33	560	29	31
34	560	30	32
35	570	30	32
36	580	31	33
37	590	31	34
38	600	32	34
39	600	32	35
40	610	33	36
41	620	33	37
42	630	34	38
43	640	35	39
44	650	35	40
45	660	36	
46	670	37	
47	670	37	
48	680	38	
49	690	38	
50	700	39	
51	710	40	
52	730	40	
53	740		
54	750		
55	760		
56	780		
57	790		
58	800		

Please note that the numbers in the table may shift slightly depending on the SAT's scale from test to test; however, you can still use this table to get an idea of how your performance on the practice tests will translate to the actual SAT.

CONVERSION EQUATION SECTION AND TEST SCORES