明志教育

2017年8月份新SAT北美卷

明志教育
MINGZHI EDUCATION

官方QQ交流群1：308463095
官方QQ交流群2：362066974
客服电话：010-86466630

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 from Paul Laurence Dunber, The Sport of the Gods. Originally published in 1901.

Then the work began. The man was indefatigable. He was like the spirit of energy. He was in every place about the stage at once, leading the chorus, showing
Line them steps, twisting some awkward girl into shape,
5 shouting, gesticulating, abusing the pianist.

"Now, now," he would shout. "the left foot on that beat. Bah, bah, stop! You walk like a lot of tin soldiers. Are your joints rusty? Do you want oil? Look here, Taylor, if I didn't know you, I 'd take you
10 for a truck. Pick up your feet, open your mouths, and move, move, move! Oh!" and he would drop his head in despair. "And to think that I've got to do something with these things in two weeks—two weeks!" Then he would turn to them again with a
15 sudden reaccession of eagerness. "Now, at it again, at it again! Hold that note, hold it! Now whirl, and on the left foot. Stop that music, stop it! Miss Coster, you'll learn that step in about a thousand years, and I've got nine hundred and ninety-nine years and fifty
20 weeks less time than that to spare. Come here and try that step with me. Don't be afraid to move. Step like a chicken on a hot griddle!" And some blushing girl would come forward and go through the step alone before all the rest.

25 Kitty contemplated the scene with a mind equally divided between fear and anger. What should she do if he should so speak to her? Like the others, no doubt, smile sheepishly and obey him. But she did not like to believe it. She felt that the independence
30 which she had known from babyhood would assert itself, and that she would talk back to him, even as Hattie Sterling did. She felt scared and discouraged, but every now and then her friend smiled encouragingly upon her across the ranks of moving
35 singers.

Finally, however, her thoughts were broken in uponby hearing Mr. Martin cry: "Oh, quit, quit, and go rest yourselves, you ancient pieces of hickory, and let me forget you for a minute before I go crazy.
40 Where's that new girl now?"

Kitty rose and went toward him, trembling so that she could hardly walk.

"What can you do?"

"I can sing," very faintly.

45 "Well, if that 's the voice you 're going to sing in, there won't be many that'll know whether it's good or bad. Well, let 's hear something. Do you know any of these?"

And he ran over the titles of several songs. She
50 knew some of them, and he selected one. "Try this. Here, Tom, play it for her."

It was an ordeal for the girl to go through. She had never sung before at anything more formidable than a church concert, where only her immediate
55 acquaintances and townspeople were present. Now to sing before all these strange people, themselves singers, made her feel faint and awkward. But the courage of desperation came to her, and she struck into the song. At the first her voice wavered and
60 threatened to fail her. It must not. She choked back her fright and forced the music from her lips.

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CONTINUE

1

When she was done, she was startled to hear Martin burst into a raucous laugh. Such humiliation! She had failed, and instead of telling her, he was bringing her to shame before the whole company. The tears came into her eyes, and she was about giving way when she caught a reassuring nod and smile from Hattie Sterling, and seized on this as a last hope.

"Haw, haw, haw!" laughed Martin, "haw, haw, haw! The little one was scared, see? She was scared, d' you understand? But did you see the grit she went at it with? Just took the bit in her teeth and got away. Haw, haw, haw! Now, that 's what I like. If all you girls had that spirit, we could do something in two weeks. Try another one, girl."

Kitty's heart had suddenly grown light. She sang the second one better because something within her was singing.

1

The passage suggests that Kitty feels Mr. Martin's treatment of the performers warrants which reaction?

A) Indignation at his scornful comments
B) Disdain for this tendency to complain
C) Resentment toward his unrealistic demands
D) Acknowledgment of the need for strict discipline

2

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

A) Lines 2–5 ("He was...pianist")
B) Lines 25–26 ("Kitty...anger")
C) Lines 26–27 ("What...her")
D) Lines 37–39 ("Oh, quit...crazy")

3

According to the passage, Kitty prefers to think of herself as the type of person who

A) obediently follows all instructions.
B) consistently maintains her composure.
C) directly defies attempts to intimidate her.
D) correctly estimates the limits of her skills.

4

The passage indicates that Hattie views Kitty as a friend who

A) deserves gentle teasing about her stage fright.
B) needs heartening attention to bolster her confidence.
C) requires incessant pampering to feel at ease.
D) seeks exemption from unreasonable demands.

5

Over the course of the passage, Mr. Martin's attitude shifts from

A) openly impatient to politely tolerant.
B) obviously dissatisfied to genuinely appreciative.
C) utterly scornful to completely dismayed.
D) bitterly resentful to seemingly hopeful.

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CONTINUE

1

6

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

A) uncommon.

B) peculiar.

C) unfamiliar.

D) awkward.

7

It can be most reasonably inferred from the passage that Kitty's initial understanding of Mr. Martin's reaction to her performance is

A) essentially sound, because she counters his sarcasm with hostility.

B) fundamentally unrealistic, because she is new to theatrical work.

C) largely mistaken, because she is distressed by an apparent insult.

D) somewhat flawed, because she expects an outright endorsement.

8

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

A) Lines 55–57 ("Now...awkward")

B) Lines 62–63 ("When...laugh")

C) Lines 66–69 ("The tears...hope")

D) Line 77 ("Kitty's...light")

9

Mr. Martin's evaluation of Kitty's performance focuses most directly on Kitty's

A) pleasing voice.

B) resolve to perform onstage.

C) ability to engage the audience.

D) sense of personal dignity.

10

The reference to "singing" in line 79 main

A) signal a puzzling change in Kitty's mood.

B) reveal the motivation for performing her discovers.

C) echo the inspirational tone of Kitty's song.

D) emphasize the unexpected happiness Kitty feels.

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1

Questions 11-21 are based on the following passage.

Passages 1, by James Kent, and passage 2, by David Buel, are adapted from speeches delivered to the New York Constitutional Convention in 1821. Both address the requirement in the New York State Constitution that only property-owning rules should be granted suffrage the right to vote.

Passage1

The tendency of universal suffrage, is to jeopardize the rights of property and principles of liberty...Who can undertake to calculator with any precision, how many millions of people, this great state will contain in the course of this and the next century, and who can estimate the future extent and magnitude of our commercial ports? The disproportion between the men of property, and the men of no property, will be in every society in a ratio to its commerce, wealth, and population. We are no longer to remain plain and simple republics of farmers, like the New England colonists, or the Dutch settlements in the Hudson. We are fast becoming a great nation, with great commerce, manufactures, population, wealth, luxuries, and with the vises and miseries that they engender. One seventh of the population of city of Paris at this day subsists on charity, and one third of the inhabitants of that city die in hospitals; what would become of such a city with universal suffrage?

...The notion that every man that works a day on the road, or serves an idle hour in the militia, is entitled as of right to an equal participation in the whole power of the government, is most unreasonable, and has no foundation in justice...

Liberty, rightly understood, is an inestimable blessing, but liberty without wisdom, and without justice, is no better than wild and savage licentiousness. The danger which we have hereafter to apprehend, is not the want, but the abuse, of liberty...A stable senate, exempted from the influence of universal suffrage, will powerfully check these dangerous propensities, and such a check becomes the more necessary, since the Convention has already determined to withdraw the watchful eye of the judicial department from the passage of laws.

Passage 2

The farmers in this country will always out number all other portions of our population. Admitting that the increase of our cities, and especially of our commercial metropolis, will be as great as it has been hitherto; it is not to be doubted that the agricultural population will increase in the same proportion. The city population will never be able to depress that of the country. New York has always contained about a tenth part of the population of the state, and will probably always bear a similar proportion. Can she, with such a population, under any circumstances, render the property of the vast population of the country insecure? It may be that mobs will occasionally be collected, and commit depredations in a great city, but, can the mobs traverse our immense territory, and invade the farms, and despoil the property of the landholders? And if such a state of things were possible, would a senate, elected by freeholders, afford any security?

...I contend that by the true principle of our government, property, as such, is not the basis of representation. Our community is an association of persons-of human beings-not a partnership founded on property. The declared object of the people of this state in associating, was, to "establish such a government as they deemed best calculated to secure the rights and liberties of the good people of the state, and most conducive to their happiness and safety."Property, it is admitted, is one of the rights to be protected and secured; and although the protection of life and liberty is the highest object of attention, it is certainly true, that the security of property is a most interesting and important object in every free government. Property is essential to our temporal happiness; and is necessarily one of the most interesting subjects of legislation. The desire of acquiring property is a universal passion...To property we are indebted for most of our comforts, and for much of our temporal happiness. The numerous religious, moral, and benevolent institutions which are every where established, owe their existence to wealth; and it is wealth which enables us to make those great internal improvement which we have undertaken. Property is only one of the incidental rights of the person who possesses it; and, as such, it must be made secure, but it does not follow, that it must therefore be represented specifically in any branch of the government.

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1

11

Which choice best states the central idea of Passage 1?

A) The economy's increasing reliance on industry and manufacturing will benefit the nation.

B) The growth of the country's population will increase both its wealth and its problems.

C) Allowing everyone to vote would destabilize a growing nation.

D) The judicial branch of government should remain involved in passage of laws.

12

In Passage 1, Kent states that those men who work on the roads and serve in the militia are

A) deserving of praise for their industry and initiative.

B) helping to preserve and protect American property.

C) not qualified to have the same rights as land owners.

D) generally unreasonable and unjust in their behavior.

13

Which choice best supports the idea that Kent believes that freedom is not an absolute good?

A) Lines7–10 ("The disproportion...population)

B) Lines 17–19 ("One seventh...hospitals")

C) Lines 19–20 ("what...suffrage")

D) Lines 26–29 ("Liberty...licentiousness")

14

What is Buel's central claim in Passage 2?

A) The existence of important social and religious institutions depends heavily on financial support from citizens.

B) The high proportion of farmers in the country should afford their elected representatives a major role in government.

C) The income and landholdings of all citizens must be carefully protected by any new legislation.

D) Property ownership should not be the factor that determines whether or not citizens can elect their political representatives.

15

Buel includes the series of questions in the first paragraph of Passage 2 most likely to

A) address issues related to the perceived dangers of universal suffrage.

B) inject a note of skepticism into the discussion about economic prosperity.

C) cast doubt on the willingness of legislation to protect farmers.

D) express disbelief at the unilateral actions of his political opponents.

16

As used in line 60, "object" most nearly means

A) perception.

B) entity.

C) disagreement.

D) goal.

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CONTINUE

17

According to Buel, what importance does property have with regard to human existence in general?

A) It is commonly desired by people because it contributes to their comfort and happiness.

B) Its possession defines what it is that makes humans morally and spiritually distinctive.

C) Its relentless pursuit has made America into the successful nation that it has become.

D) Its ownership is of greater value to most people than is the pursuit of safety and liberty.

18

As used in line 82,"made secure" most nearly means

A) stabilized.

B) reassured.

C) balanced.

D) protected.

19

How would Buel most likely respond to Kent's statement in lines 1–3 ("The tendency...liberty")?

A) With resignation, because the nation's chief concern will inevitably shift from universal justice to individual wealth.

B) With disapproval, because the nation was founded to serve and protect all people regardless of their landholdings.

C) With amusement, because universal suffrage actually insulates property owners against financial losses.

D) With anger, because efforts to achieve universal suffrage undermine the fundamental principles of the nation.

20

Which statement describes how Kent would most likely react to Buel's remarks in lines 39–43 ("Admitting...proportion")?

A) Kent would argue that farmers are too often out of touch with the nation's rapidly changing commercial needs.

B) Kent would complain that people who perform pert-time labor drain the government's limited pool of resources and should not be allowed to run for office.

C) Kent would asset that, regardless of the number of farmers, the nonagricultural economy will now define the character of the nation.

D) Kent would point out that, because the nation's founders were wealthy, the principles they supported naturally favor professions that are more lucrative than agriculture.

21

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

A) Lines 2–6 ("Who...century")

B) Lines 10–16 ("We are...engender")

C) Lines 21–25 ("The notion...justice")

D) Lines 29–31 ("The danger...liberty")

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Questions 22-32 are based on the following passage and supplementary material.

This passage is a adapted from P.H, "Memory in Plants." 2014 by The Economist Newspaper Limited.

When Britain's Prince Charles once claimed that he talked to his plants—and that they responded—critics chalked it up as one more reason why he should never become king. With tongue more firmly in cheek, the prince says that these days he merely "instructs" his leafy subjects. But do they listen to, learn from, or remember his royal commands?

More than a century ago Bengali polymath Sir Jagadish Chandra Bose posited that plants could feel, learn and remember, and more recent studies have confirmed they can store and recall biological data. But research by Monica Gagliano of the University of Western Australia (UWA) and three fellow scientists goes much further. This study, published in *Oecologia* ,offers proof that plants not only learn from experience, but remember what they have learned over relatively long periods.

Dr. Gagliano and collaborators Michael Renton, Martial Depczynski (all from UWA) and Stefano Mancuso (of Florence University) chose as their subject the herb *Mimosa pudica*, often known as the touch–me–not because its leaves fold swiftly inwards when disturbed—a mechanism designed to defend it against predators.

The team devised an apparatus that suspend each potted mimosa on a vertical rail above a foam base, then dropped it 15cm by allowing it to slide down the rail—a significant physical shocks, but ultimately not a threat to the plant's well–being. Their goal was to discover if mimosas could adaptively learn to ignore such stimuli, a process known as habituation. The plants were variously grown in low-light (LL) and high–light (HL) environments, with the expectation that the LL plants would "learn" more quickly given their greater need to keep their leaves open for photosynthesis.

Mimosas subjected to a single drop quickly closed their leaves, and did so again when the experiment was repeated eight hours later —clearly they still considered the experience threatening. A large group of plants was then trained with a series of 60 consecutive drops a few seconds apart, repeated seven times within a single day. These plants habituated rapidly, keeping their leaves open after the first four to six initial drops and ,towards the end of the day's training, not closing their leaves at all (as expected, the LL plants leaves re–opened more widely). To ensure that all this was not simply a case of "fall–fatigue," a different kind of shock (on a 250–rpm "shaker plate") was administered after the sixth training. The mimosas closed their leaves.

What is most remarkable, however, is that the plants remembered their training. Some mimosas that were subjected to single series of 60 drops six days later did not close their leaves at all, while those that did react stopped doing so after only two or three drops. A number of plants were then switched from LL to HL (and vice versa), left undisturbed for 28 days, and "re–tested" by being given the full day's training again. Intriguingly, the HL–to–LL plants not only remembered that the stimulus was harmless, but also opened their leaves more widely, showing that they had adapted what they had learned to their new LL environment. Overall, both groups displayed more pronounced and consistent responses than before, demonstrating that they still recall what they were taught four weeks earlier.

Dr. Gagliano and her colleagues admit that they do not conclusively know how plants—lacking brains or neutral tissue—learn and remember. Calcium–based cellular signalling is one possible explanation, as is the processing of information by cells via ion flows—plants have well–established pathways to transmit information via electrical signals.

All of which suggests that Prince Charles may yet be vindicted.

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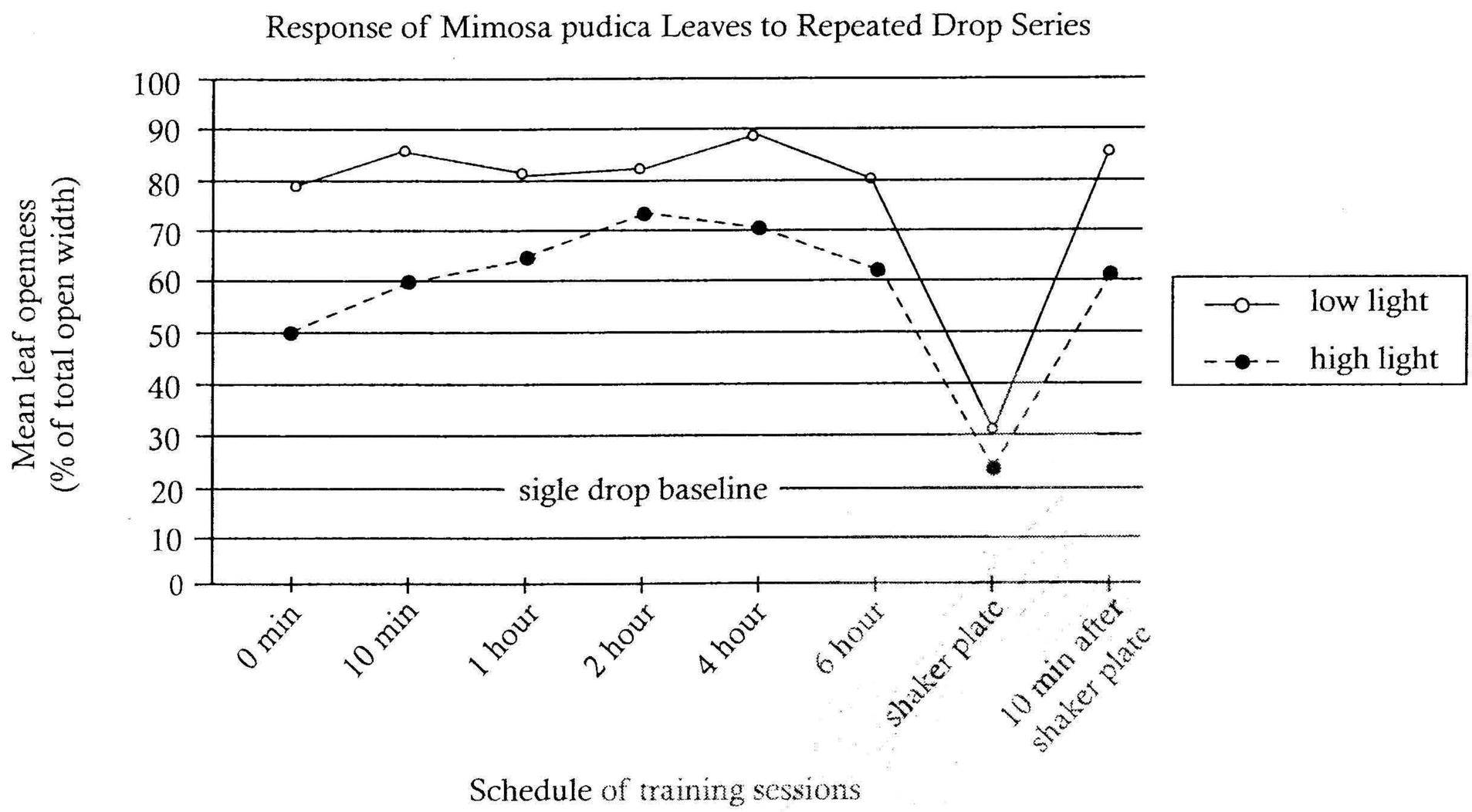

Adapted from Monica Gagliano et,al."Experience Teaches Plants to Learn Faster and Forget Slower in Envirionment Where it matters."©2014 by Springer-verlag Berfin Heidelborg.

22

The main purpose of the passage is to

A) compare the findings of a series of historic scientific experiments that show plants can recall learned responses.

B) discuss a scientific study that advances an earlier arguments about the capability of plants to learn and recall.

C) argue that a debunked hypothesis about how plants learn must be reconsidered in light of new evidence.

D) examine the means by which plants learn, retain, and transmit information.

23

As used in line 1, "claimed" most nearly means

A) demanded

B) gathered

C) presumed

D) maintained

24

The author implies that mimosas were particularly suitable for the study described in the passage because they

A) are exceptionally resilient.

B) learn new behaviors readily.

C) exhibit clear signs when distressed.

D) adapt easily to a variety of environments.

25

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

A) Line 8–11 ("more...data")

B) Lines 14–17 ("This ...periods")

C) Lines 18–24 ("Dr. Gagliano...predators")

D) Lines 32–36 ("The plants...photosynthesis")

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26

Which choice best supports the conclusions that mimosas may have the ability to generalize their learning to new circumstances?

A) Lines 37–40 ("Mimosas...threatening")
B) Line 48–51 ("To ensure... training")
C) Line 57–60 ("A number...again")
D) Line 60–64 ("Intriguingly... environment")

27

The author implies that the mimosas used in the study ultimately learned that

A) sliding down the rail was not a genuine danger to their survival.
B) protection from predators was not linked to the level of light in the environment.
C) their leaves needed to be left open for photosynthesis to occur.
D) partially closing their leaves could serve as a warning of potential threats.

28

The author suggests that Gagliano's team administered the shaker-plate shock to the mimosas after the training with the consecutive drops to

A) confirm that the mimosas were still capable of distinguishing between potential threats and harmless events.
B) clarify how efficiently the mimosas were able to respond to circumstances that they perceived as dangerous.
C) challenge the results of earlier experiments regarding the ability of mimosas to made use of biological data.
D) determine whether the mimosas remembered particular experiences that they had undergone several days earlier.

29

The author includes the seventh paragraph (line 68–74) most likely to

A) advance reservation about the design of the experiment explored in the passage
B) suggest that questions regarding the learning ability of plants remain.
C) offer a potential resolution to an ongoing debate among scientists who study plants.
D) imply that some conclusions about the ability of plants to learn may have been premature.

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30

What main effect does the author's inclusion of the last paragraph (line 75–76) have on the tone of the passage?

A) It creates a dismissive tone by restating the view of a person discredited in the passage.
B) It creates a humorous tone by referring to an anecdote discussed earlier in the passage.
C) It creates a triumphant tone by confirming that a historical figure may receive justice.
D) It creates a sarcastic tone by mocking the beliefs of a group of people described in the passage.

31

According to the figure, which choice is closest to the percentage of mean leaf openness of mimosas grown in a high-light environment at the 4-hour mark?

A) 60%
B) 70%
C) 80%
D) 90%

32

What claim from the passage about the mimosas that were exposed to the shocks is undermined by the data presented in the figure?

A) The mimosas did not close their leaves at all toward the end of the day's training.
B) The mimosas grown in a low-light environment learned more quickly than those grown in a high-light environment.
C) The mimosas could adaptively learned to ignore certain shocks.
D) The mimosas closed their leaves decisively after the administration of the shaker-plate shock.

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CONTINUE

1

Questions 33-42 are based on the following passage and supplementary material.

This passage is adapted from Detlef Fetchenhauer and David Dunning, "Why So Cynical? Asymmetric Feedback Underlies Misguided Skepticism Regarding the Trustworthiness of Others."©2010 by Detlef Fetchenhauer and David Dunning.

People can be cynical to a fault. They underestimate how often others respond generously to request for help and overestimate how much *Line* others' attitudes and actions are driven by selfish 5 concerns. To be sure, there is contrary evidence showing that people can be roughly realistic in anticipating the altruism of others, but an increasing body of evidence suggests that when people are contemplating whether they should rely on the 10 kindness of strangers, they suspect those strangers will prove more selfish than actually is the case.

We have previously shown this cynicism most clearly in experiments using the economic paradigm known as the " trust " or "investment" game. In the 15 game, the truster is given money that can be kept or handed to a completely random and anonymous stranger, the trustee. If the truster hands his or her money over. The amount of money is quadrupled (e.g., $5 becomes $20), and trustees have two options: 20 They can either split the money evenly between themselves and the truster (e.g., give $10 back and keep $10 for themselves), or they can keep all the money for themselves.

In a number of studies, we have shown that the 25 vast majority of trustees honor the trust that is offered them, giving money back even when their identities are anonymous and they are under no compulsion to act generously. However, most truster severely underestimate their fellow 30 participants' trustworthiness. Although 80% to 90% of trustees honor trust, trusters on average estimate that this rate will be only 45% to 60%.

Such cynicism may matter, in that it leads people to refrain from trusting, and thus pass up likely 35 monetary gains. For example, in versions of the game in which people can decide the exact amount of money to transfer to the trustee, many people pass along only a little money. This causes trustees to pass back little although they would have been quite 40 generous if they had been trusted more completely. Similarly, when trusters impose possible penalties if trustees are not generous enough in return, trustees respond by passing back significantly less than they would otherwise.

45 The research reported here investigated how such skepticism toward others can be explained. We focused on two possible determinants. First, participants may not be sufficiently motivated to provide accurate estimates of trustworthiness. 50 Behavioral economists would argue that participants provide valid estimates only if they have a sufficient material incentive to do so, although this argument cannot explain why estimates are so biased in one direction.

55 Second, when people decide whether to trust, they can make two mistakes. They can trust someone whose intentions are actually harmful, or they can refuse o trust a person who would actually reciprocate that trust. The chance that life informs 60 them about these two mistakes is asymmetric. When people trust another person and that person betrays their trust, people become painfully aware of that betrayal. However, if people distrust another person. they never give that person a chance to act in a 65 trustworthy way. Thus, people preclude themselves from learning when others, despite expectations, might prove trustworthy.

In essence, we argue for an *experience –sampling* explanation for unwarranted cynicism in situations 70 involving trust. When people trust and that trust is exploited, they become more cynical. However, when they mistakenly fail to trust a trustworthy person, they avoid the experience that would provide feedback to correct that mistake. Thus, their overall 75 impression of human nature is left overly cynical.

Predicted and Actual Percentage of Trustworthy Trustees in Three Trust Games

Game	Trusters' predictions of the percentage of trustees who are trustworthy	Actual percentage of trustees who are trustworthy
1	43.6%	77.8%
2	46.4%	80.2%
3	44.5%	77.8%

Adapted from Detled Fetchenhauer and David Dunning.'Do People Trust Too Much or Too Little?'©2008 by Elsevier B.V.

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CONTINUE

33

Over the course of the passage, the main focus shifts from a

A) presentation of the findings of certain studies to a discussion of research investigating how to explain those findings.

B) description of a controversy among researchers to an analysis of potential ways to resolve that controversy.

C) summary of the major conclusions of a body of research to an evaluation of new evidence that seems inconsistent with those conclusions.

D) presentation of anecdotal observations of a phenomenon to a proposal for a controlled study of that phenomenon.

34

The main function of the second paragraph (lines 12–23) is to

A) describe a method the authors used to assess people's cynicism in experimental contexts.

B) draw a distinction between cynicism displayed in experimental settings and cynicism displayed in everyday life.

C) suggest that the cynicism that subjects show in trust games varies with the amount of money at stake.

D) present data showing that people typically behave cynically in trust games.

35

Which choice provided the best evidence that the authors have designed experiments so as to eliminate the possibility that trustees' actions are influenced by a desire to be viewed as fair?

A) Lines 14–17 ("In the...trustee")

B) Lines 17–23 ("If the...themselves")

C) Lines 24–28 ("In a...generously")

D) Lines 28–30 ("However...trustworthiness")

36

Based on the passage, which change to the design of the trust game would some researchers say is most likely to increase the accuracy of trusters' predictions of trustees' behavior?

A) An increased amount of money is initially given to each truster.

B) A financial reward is paid to each truster for correct predictions.

C) The trusters are guaranteed a certain amount of money regardless of the trustees' decisions.

D) The trustees and the trusters are able to meet before the game starts.

37

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

A) Lines 35–38 ("For example...money")

B) Lines 38–40 ("This...completely")

C) Lines 41–44 ("Similarly...otherwise")

D) Lines 50–54 ("Behavioral...direction")

38

In saying that the chances of being informed about two types of trust mistakes are "asymmetric" (line 60),the authors mean that

A) people will realize only when they have made one type of mistake, not when they made the other type of mistake.

B) people are more likely to commit one type of mistake than they are to commit the other type of mistake.

C) one type of mistake is likely to cause people more harm, whether recognized or not, than is the other type of mistake.

D) the two types of mistakes are likely to be incorrectly perceived as the same type of mistake.

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CONTINUE

1

39

As used line 71,"exploited" most nearly means

A) developed to a point of excess.

B) used to selfish advantage.

C) advertised widely to others.

D) applied ineffectively.

40

According to the table, the actual percentage of trustees who were trustwworthy was smallest in

A) game 1 only.

B) game 2 only.

C) game 3 only.

D) game 1 and 3.

41

Which statement is best supported by the data presented in the table?

A) The difference between the predicted and actual precentages of trustworthy participants was nearly equal across the three games.

B) In games 1 and 3,the predicted and catual precentages of trustworthy participants were slightly greater than they were in game 2.

C) The oredicted precentage of trustworthy participants was nearly the same as the actual precentage of trustworthy participants in all threee games.

D) There was no pattern in the relationship between the predicted and actual precentages of trustworthy participants across the three games.

42

The data in the table most directly support which claim made in the passage?

A) If a truster gives money to a trustee,then the amount of money available multiplies.

B) Trusters tend to undervalue the trustworthiness of trustees.

C) Turstee's trustworthinss decreases when trusters can impose penalties.

D) The accuracy of predicions of trustworthiness is improved when predictors have material incentives.

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CONTINUE

1

Questions 43-52 are based on the following passage.

This passage is adapted from Susan W. Kleffer, "The Deadly Dynamics of Landsliders," ©2014 by Sigma Xi, The Scientific Research Society.

Approximately 17,000 years ago, a volume of rock equal to a cube about a half-mile on a side roared out of a steep canyon in the San Bernardino Mountains *Line* in southern California. It originated 1,500 feet above 5 the canyon bottom. Rocks in the slide, already fractured at the start of the event, shattered on impact with the canyon bottom, forming intricate three-dimensional jigsaw puzzles. When this event, known as the Blackhawk slide, excited from the 10 canyon, it ran out across a nearly flat valley floor for five miles. Amazingly, the pieces of the jigsaw puzzles stayed together as the slide zoomed along at nearly 75 miles an hour. A similar landslide triggered by the 1964 Alaska earthquake traveled three miles across 15 the nearly level Sherman Glacier before coming to rest. Where the base of the landslide could be seen on the glacier, it rested on—believe it or not—undisturbed snow. In other places it left alders, mosses, and small plants completely undisturbed.

20 The observations from the Alaska, and geological evidence from the Blackhawk landslide, led to the intriguing hypothesis that landslide can be transported like flexible sheets over a cushion of trapped and compressed air—literally like a flying 25 carpet. Imagine such huge masses of rock roaring down a canyon, hitting a resistant ledge, being launched hundreds of feet into the air, setting back onto a blanket of compressed air only a few feet thick, and then hurling out at breakneck speeds onto 30 the desert floor until the air leaks out and the slide gently glides to a halt, the whole event taking perhaps a minute or two. In this "air lubrication" hypothesis, the landslide floats as a nearly rigid stab on its cushion of air, so fragile jigsaw pieces of rock such as 35 those observed at Blackhawk are preserved.

Although the air lubrication hypothesis may work for specific slides, two arguments suggest that it cannot explain all long runouts. First is the question of whether the air can stay trapped under the slide 40 long enough for the runout, because it would tend to diffuse through the slide and around its edges. The second problem, which became obvious as a result of unmanned spacecraft looking at the planets and their satellites in the Solar System, is that 45 long runout landslides occur on our Moon and on four other moons in our Solar System that have no atmosphere—Io, Callisto, Phobos, and Iapetus. Such slides also occur on Mars, which currently has only a very thin atmosphere, although it is not 50 known what the atmosphere was like when the landslides formed in the past. Long runout slides on airless or nearly airless bodies have forced geologists to look at explanation other than air lubrication.

One group of theories takes into account the fact 55 that landslides are not monolithic slabs of rock, but consist of rock fragments of many different sizes. They fall into the broad category of materials called "granular matter" that have unique properties. The cereal in your breakfast bowl provides an example. 60 Sometimes these materials behave very much like a solid, and other times they flow like a liquid. Grains can flow, slosh, and reflect from boundaries like a liquid, they can erode channels just like flowing water, and in some instances they can produce hills 65 and gullies that mimic features formed by flowing water.

Increasingly, evidence has been mounting that lubrication is enhanced also by liquid water, ice, wet debris, or mud at the base of the slide, or perhaps 70 water within the slide. Even if landslides are not saturated with water, they are unlikely to be completely dry; they will always contain some liquid water (on Earth) or ice (on Earth and the other planets or satellites). Water is effective at lubricating 75 debris and mudflows. Sometimes water on the surface of the Earth provides a layer over which a landslide hydroplanes like a boat.

Even these possibilities do not exhaust the ideas proposed for long-runout slides. By studying 80 landslides at these many scales, geoscientists have come up with such a bewildering array of proposals for how they move that it may sound as if we simply don't know what we are talking about. In truth, some of the processes proposed almost certainly occur 85 some of the time in some of the landslides, and not all of the processes occur all of the time or in all places. The large number of hypotheses and mechanisms proposed is testimony to the awesome complexity of our world.

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CONTINUE

1

43

In the first paragraph, the effect of the word "amazingly" and the phrase "believe it or not" is to

A) imply that long runouts occur with surprising frequency.

B) convey astonishment at the results of certain long runouts.

C) stress that longrunouts are less destructive than they are assumed to be.

D) emphasize the beauty of landscape shaped by long runouts.

44

As used in line 35, "preserved" most nearly means

A) defended.

B) started.

C) kept intact.

D) set apart.

45

The author implies that air lubrication cannot explain all long runouts in part because it

A) is unlikely to occur in landslides that lack a substantial component of liquid water or ice.

B) requires a denser atmosphere than is found in some places where long runouts have occurred.

C) does not seem to occur on most rocky planets and satellites in the solar system despite those bodies meeting the necessary conditions for it.

D) can persist for only a small fraction of the time between the start and finish of a long runout.

46

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

A) Lines 36–38 ("Although... runouts")

B) Lines 38–41 ("First... edges")

C) Lines 51–53 ("Long-runout... lubrication")

D) Lines 67–70 ("Increasingly...slide")

47

A significant difference between the two arguments against the air-lubrication hypothesis discussed in the third paragraph (lines 36–53) is that the first argument

A) raises doubts about an important assumption of the hypothesis, while the second argument presents evidence that the hypothesis cannot account for.

B) implies that the hypothesis has been replaces by a more recent hypothesis, while the second argument implies that the hypothesis is simply a restatement of an earlier, discredited hypothesis.

C) asserts that the hypothesis is only a partial explanation, while the second argument suggests that the hypothesis is unnecessary.

D) identifies a logical contradiction in the hypothesis, while the second argument holds that the hypothesis is supported by questionable data.

48

The author would most likely agree with which claim regarding the phenomenon in which granular matter behaves like a liquid?

A) Most scientists studying landslides underestimate the significance of the phenomenon.

B) The effects of the phenomenon may be diminished if liquid water is present.

C) In some landslides the phenomenon probably does not play a significant role.

D) The geological formations created by the phenomenon may be difficult to distinguish from the formations created by earlier phenomenon.

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CONTINUE

1

49

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

A) Lines 60–61("Sometimes... liquid")
B) Lines 61–66 ("Grains... water")
C) Lines 79–83 ("By studying... about")
D) Lines 83–87 ("In truth...places")

50

The reference to breakfast cereal in the fourth paragraph (lines 54–66) serves to illustrate a natural phenomenon primarily by

A) identifying a potential familiar instance of the phenomenon.
B) stressing that the phenomenon is as commonplace as many aspects of daily life.
C) noting a behavior if which the phenomenon is responsible.
D) contrasting the magnitude of the phenomenon with the public's obliviousness to it.

51

According to the passage, moisture in landslides may serve to

A) make slides more destructive.
B) cause slides to grow in size.
C) minimize the amount of debris in slides.
D) allow slides to flow more smoothly.

52

Which statement best expresses the author's view of the great number and variety of theories about landslides that scientists have put forward?

A) They are a result of landslide researchers' tendency to reexamine and critique one another's research.
B) They may suggest that there is a lack of scientific consensus about landslides, but in reality most details about landslides are well established.
C) They stem from the fact that landslides are difficult to predict and therefore difficult to study while they are occurring.
D) They can give the impression that scientists are confused about landslides, but actually they reflect the complicated nature of landslides.

STOP

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

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CONTINUE

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.

Questions1-11 are based on the following passage.

Language as Art: The Poetry of Sterling Brown

In 1923,fresh from Harvard University with a master's degree in literature, writer and educator Sterling A.Brown set out on a journey that was to lay the groundwork for his career. During his University studies, Brown had been **1** blown away by poets who wrote about the everyday experiences of ordinary people. For the next six years after his graduation, he traveled through the American South, teaching at historically black colleges and **2** pursued his passion for studying African American culture, language, and history. The

1

Which choice best maintains the style and tone of the passage?

A) NO CHANGE

B) intrigued by

C) swept off his feet by

D) heavily into

2

A) NO CHANGE

B) the pursuit of

C) to pursue

D) pursuing

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CONTINUE

2

ways he used that knowledge would earn him and his subject matter a well-respected place in the African American literary tradition.

Brown had grown up 3 submerged in the storytelling traditions of his own family, and throughout his southern 4 journey. He eagerly swapped stories with others in the African American communities near the schools where he taught. He took great care in listening to people and learning their narratives. In his many encounters, Brown became adept at interviewing—finding just the right way to get people talking . He also developed a way of taking notes that 5 captured: the accents and regional expression he heard. Brown said , "I wanted to get an understanding of people, to acquire an accuracy in the portrayal of their lives."

3

A) NO CHANGE
B) buried
C) bathed
D) immersed

4

A) NO CHANGE
B) journey; he
C) journey, he
D) journey—he

5

A) NO CHANGE
B) captured
C) captured,
D) captured;

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CONTINUE

Based on this deep understanding, Brown began writing poem in the late 1920s that reflected the speech patterns and culture of the people ha had spent so much time with. He incorporated rhythms of popular music, characters and story lines from African American folklore, and the down-to-earth stories of struggle and sorrow that he had gathered. **6** However, Brown felt that representing African American culture as authentically as possible would help correct misconceptions and combat negative stereotypes.

Brown's extensive research culminated in the 1932 publication of *Southern Road,* a collection of his poetry, while he was teaching English at Howard University in Washington. DC. The poem contained representations of local dialects, **7** elements of religious songs, and references to folktales. Brown's faculty colleagues admired him as a historian, **8** and several positive reviews of *Southern Road* were published. At that time, such aspects of popular culture were not normally showcased in serious literature, Nevertheless, Brown inspired **9** others, including his own students and fellow poets such as Langston Hughes—and became celebrated as one of the great writers of the literary and

6

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

7

A) NO CHANGE
B) elements, of religious songs,
C) elements of religious, songs;
D) elements of: religious songs,

8

Which choice most effectively sets up the information that follows in the paragraph?
A) NO CHANGE
B) but they were not receptive to his poems at first.
C) recognizing the excellence of his scholarship.
D) but the influence of modernist poets o Brown's technique was undeniable.

9

A) NO CHANGE
B) others (including
C) others; including
D) others—including

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CONTINUE

2

artistic movement known as the Harlem Renaissance.

10 Brown's mother, who nurtured his literary aspirations, had granuated from Fisk University in Tennessee. Over time, *Southern Road* came to be seen as a milestone of African American literature, and

11 *The Collected Poems of Sterling A. Brown* was eventually published in 1980.

10

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

A) Kept, because it contributes to passage's description of Brown's family and upbringing.

B) Kept, because it identifies one of the reasons that Brown developed a passion for literature and creative writing.

C) Deleted, because it blurs the focus of the paragraph by introducing loosely related information about Brown's mother.

D) Deleted, because it does not offer details about the course of study undertaken by Brown's mother.

11

The writer wants a conclusion that reinforces the main idea of the passage. Which choice most effectively accomplishes this goal?

A) NO CHANGE

B) Brown went on to work as an editor for the Federal Writers' Project.

C) Brown's reputation as a gifted and groundbreaking writer was cemented.

D) it helped popularize jazz music as a facet of the Harlem Renaissance.

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CONTINUE

2

Questions 12-22 are based on the following passage and supplementary material.

More to a Smile Than Meets the Eye

Though people readily smile when they experience positive emotions, **12** paradoxically, they also may smile when they do not. At first blush, this might suggest that smiles are not useful cues for discerning various emotional states. However, scientific studies of the underlying anatomy of facial expressions reveal that many people are generally able to detect the subtle differences between "enjoyment" smiles—smiles that **13** will occur in the context of a positive emotional experience—and "nonenjoyment" smiles—smiles that do not.

12

Which choice best sets up the main focus of the passage?

A) NO CHANGE
B) it is usually the case that they refrain from smiling.
C) what provokes a smile can vary from person to person.
D) smile may be confused with other expressions, such as grimaces.

13

A) NO CHANGE
B) would occur
C) occur
D) occurred

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CONTINUE

2

[1]Broadly speaking, enjoyment smiles are characterized by the engagement of two specific facial **14** muscles; the zygomaticus major, which raise the mouth's corners, and the orbicularis oculi, which raise the cheeks, narrows the eye aperture, and produces **15** wrinkle's around the eye's. [2]These enjoyment smiles are called Duchenne, smiles after the French **16** anatomist G.B.Duchenne, who first studied the physiology of smiles in the 1860s. [3]By contrast. Nonenjoyment smiles involve the contraction of only the zygomaticus major and tend to last longer. [4]These smiles may be used in the context of a neutral emotion—when a person is posing for a photo, perhaps—as well as in other context, such as when attempting to conceal negative emotions, to reduce conflict, to deceive, or to appease others. [5]Researchers have identified as many as 50 different types of smiles in total, with at least 18 of these having a specific social meaning. **17**

14

A) NO CHANGE
B) muscles—the,
C) muscles: the
D) muscles, the:

15

A) NO CHANGE
B) wrinkles around the eye's.
C) wrinkle's around the eyes'.
D) wrinkles around the eyes.

16

A) NO CHANGE
B) anatomist; G.B.Duchenne,
C) anatomist, G.B.Duchenne
D) anatomist G.B.Duchenne

17

To make this paragraph most logical, sentence 2 should be placed
A) where it is now.
B) before sentence 1.
C) after sentence 3.
D) after sentence 4.

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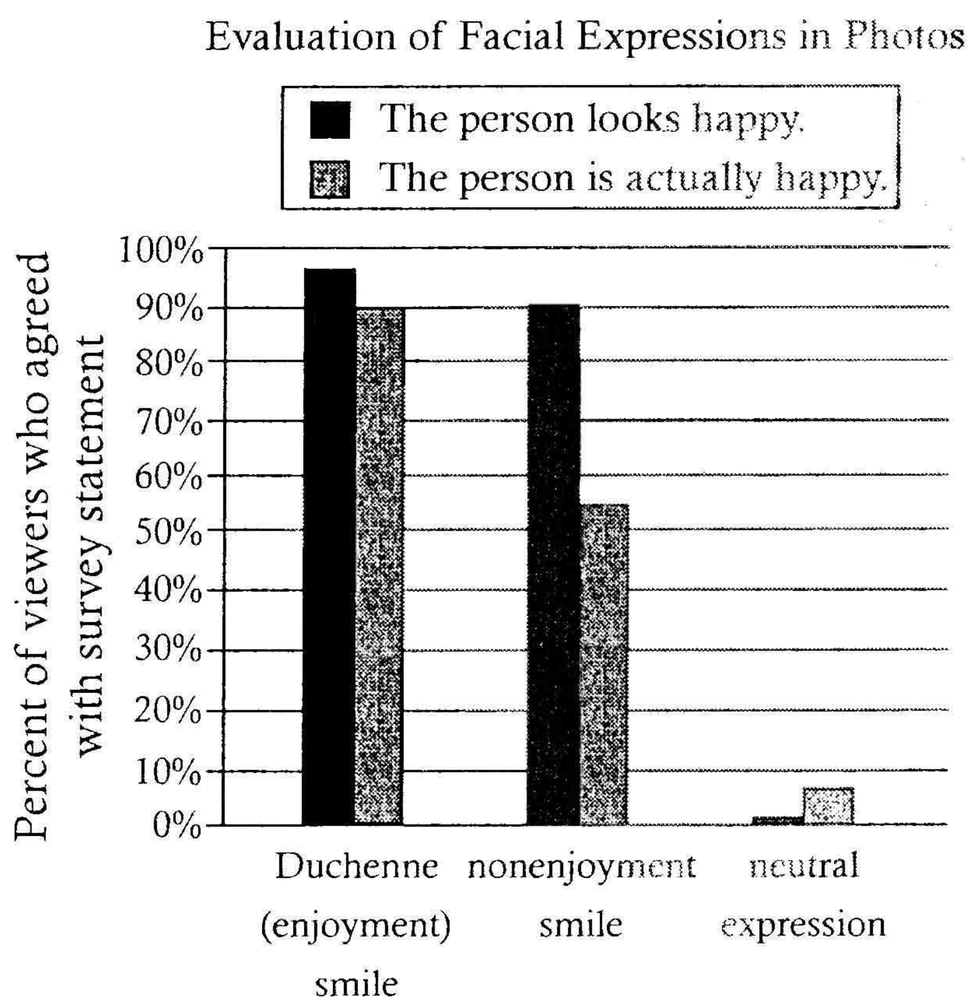
CONTINUE

Most people are not looking for contracted eye muscles when trying to detect genuine happiness in another person, but many seem **18** involuntarily capable of making the distinction between an enjoyment smile and a nonenjoyment smile.In a 2007 study using photographed and videotaped smile, as illustrated in the chart, researchers found that when participants viewed Duchenne smiles, most of them believed that the smiling person **19** was happier than he or she appeared to be. On the other hand, when those same participants evaluated a nonenjoyment smile, most of them characterized the smiling person as looking happy, but **20** very few of them believed that the smiler was actually happy.



Adapted from Lyriden Milers and Lucy Johnston, "Detecting Happiness Perceiver sensitivity to Enjoyment and Non-Enjoyment Smiles." ©2007

18

A) NO CHANGE
B) spontaneously
C) mechanically
D) intuitively

19

Which choice most accurately reflects the information presented in the chart?
A) NO CHANGE
B) was twice as happy as someone with a nonenjoyment smile.
C) looked happy but was actually unhappy
D) not only looked happy but was truly happy

20

Which choice most accurately reflects the information presented in the chart?
A) NO CHANGE
B) twice as many
C) only about half
D) almost all

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CONTINUE

2

Although Duchenne made his observation about the orbicularis oculi enjoyment smiles as far back as 1862, 21 it has been only in the recent past that empirical evidence has confirmed 22 the existence of there being a high correlation between the contraction of the muscle and self-reported positive moods along with neural activity consistence with positive emotional states.For those individuals who, for whatever reason, may not be sensitive facial perceivers instinctively, the finding provides a useful tool which to evaluate perceived warmth, happiness, or friendliness when a smiler's motives may not be entirely clear.

21

A) NO CAHNGE
B) but it has
C) while it has
D) it having

22

A) NO CHANGE
B) and demonstrated
C) the verification of
D) DELETE the underlined portion

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CONTINUE

2

Questions 23-33 are based on the following passage.

A Revolution in Radar

Meteorologists—scientists who analyze data to predict the weather—have long relied on radar technology. The conventional Doppler radar system works by **23** emitting radio waves that bounce off particles in the air, such as raindrops; meteorologists measure the strength and wavelength of these reflected radio **24** waves that also bounce off birds and insects. Thanks to new innovations in radar **25** technology! Meteorologists are now able to forecast weather events Earlier and with greater accuracy than ever before.

23

A) NO CHANGE
B) remitting
C) submitting
D) omitting

24

Which choice most effectively sets up the information conveyed in the remainder of the passage?

A) NO CHANGE
B) waves—just on of many valuable tasks that meteorologists perform.
C) waves and provide radar images that are viewed by millions of people.
D) waves to determine the location, direction, and intensity to precipitation.

25

A) NO CHANGE
B) technology; meteorologists
C) technology. Meteorologists
D) technology, meteorologists

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CONTINUE

2

[1]Doppler radar has limited utility for meteorologists because it sends out only a horizontal pulse of energy and can therefore create only a one-dimensional image of an area.[2]Since raindrops, snowflakes, and hailstones may have the same horizontal width, forecasters using Doppler cannot always distinguish among these different types of precipitation. [3]This produces a more complex two-dimensional image, enabling forecasters **26** in seeing the height and width of particles: the wholes shape. [4]However, a recent upgrade called dual polarization uses software and a hardware attachment to the radar dish to send and receive both horizontal and vertical pulses of energy. [5]As a result, meteorologists are better able to identify types of precipitation and **27** predict beforehand the amount of precipitation and the direction of a storm. **28**

26

A) NO CHANGE
B) to see
C) for seeing
D) by seeing

27

A) NO CHANGE
B) anticipate as well as predict
C) predict ahead of time
D) predict

28

To make this paragraph most logical, sentence 4 should be placed

A) where it is now.
B) after sentence 1.
C) after sentence 2.
D) after sentence 5.

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CONTINUE

Meteorologists use this information to enhance their public function. "This game-changing technology has already helped forecasters issue more accurate and timely warnings to the public." reports National Weather Service (NWS) director Louis Uccellini. Paul Schlatter of the National Oceanic and Atmospheric administration (NOAA) explains that meteorologists are now able to detect the subtle signs of impending changes in precipitation with up to one hour's advance notice of when such changes will occur. NOAA estimates that the improvements in forecasting made possible by dual-polarization radar **29** has the potential to save the public about $700 million annually by facilitating safety **30** precautions in advance of a storm.

29

A) NO CHANGE
B) have
C) has had
D) have had

30

The writer is considering revising the underlined portion to the following.

precautions, such as shutting down public transportation systems.

Should the writer make this revision here?

A) Yes, because it clarifies the point being made with a relevant example of a safety precaution made possible by advances in radar technology.
B) Yes, because it provides additional information about when changes in precipitation are likely to occur.
C) No, because it wakens the paragraph's main argument by adding irrelevant information about public transportation.
D) No, because it fails to take into account other factors that government officials must consider when making decisions about public transportation.

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CONTINUE

2

31 In light of the job market for weather experts, the ability to implement the new technology is crucial for today's meteorologists. The NWS provides online training on operating the new 32 software. It also provides online training on interpreting the enhanced radar data. to prepare aspiring meteorologists, college-level meteorology programs are also incorporating dual-polarization technology into their curricula. With more detailed data at hand and the technological savvy to interpret it, 33 a new generation of meteorologists can empower the public to prepare more effectively for severe weather.

31

Which choice provides the most effective transition from the previous paragraph the this paragraph?

A) NO CHANGE
B) Given the importance of this innovation,
C) Though Doppler radar has been used for a long time,
D) With upgrades to operational radar systems taking place as early as 2011,

32

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

A) software while
B) software and
C) software; there is also training provided on
D) software; while providing the same training on

33

A) NO CHANGE
B) severe weather can be prepared for more effectively by a public empowered by a new generation of meteorologists.
C) the public can be empowered by a new generation of meteorologists to prepare more effectively for sever weather.
D) more effective preparation for severe weather can be accomplished by a public that is empowered by a new generation of meteorologists.

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CONTINUE

2

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

Asteroid Mining

As finite resources such as metals begin to dwindle on Earth, private companies are turning their gaze to space. Recent research shows that resources in near-Earth asteroids are extensive. The asteroid 3554 Amun, for example, is estimated to contain $8 trillion worth of iron and nickel, compared with Earth's current estimated yearly output of $340 billion. The estimated value of 3554 Amun's total cobalt reserves is **34** approximately 4,615 times that of Earth's estimated yearly output. However, legal problems currently hinder any possible asteroid mining. Additionally, the technology for such a venture is not fully developed. Once these issues are addressed, international cooperation and investments in advanced spacecraft can ensure that asteroid mining **35** became a successful industry.

Value of Metals in 3554 Amun and Earth (estimated)

Metal	3554 Amun's Reserves (dollars)	Earth's Current Yearly output (dollars)	3554 Amun's Reserves Compared with Earth's current Yearly output
Iron and nickel	8 trillion	340 billion	approximately 24 times more
Cobalt	6 trillion	1.3 billion	approximately 4,615 times more
Platinum	6 trillion	12 billion	500 times more

Adapted from Michael Allan McCrae, "Why Asteroid Mining is Necessary." ©2012 by infoMine Inc.

34

Which choice provides an accurate interpretation of the table?

A) NO CHANGE
B) approximately 24 times more than that of its platinum reserves.
C) far less than that of Earth's current estimated yearly output.
D) about 2 trillion dollars more than that of its iron and nickel reserves.

35

A) NO CHANGE
B) has become
C) becomes
D) had become

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CONTINUE

2

36 Many leaders in the fields of engineering and technology are in favor of asteroid mining. Platinum, for one, is used in a variety of technologies, from fuel cells to computers. Cobalt, because of its 37 hardness can be alloyed with other metals for use in turbine generators; it is also used for medical applications. 38 These metals have some promising uses, including ones in space itself, for building spacecraft and solar plants and for powering interplanetary colonies—prospects that currently are almost impossible because of cost constraints.

36

Which choice provides the most effective transition from the previous paragraph to this one?

A) NO CHANGE

B) Asteroids are rocky bodies that are too small to be classified as planets.

C) The immense resources from asteroids could serve many purposes.

D) Other useful materials, such as water and gases, also may be extracted from asteroids.

37

A) NO CHANGE

B) hardness;

C) hardness—

D) hardness,

38

Which choice provides the most effective expression of the underlined portion?

A) NO CHANGE

B) Some of the most promising uses of these metals are

C) There are promising uses of these metals, and some are

D) Promising uses of these metals include ones that are

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CONTINUE

2

If asteroid mining is to become a reality, several legal and technological hurdles must be overcome. The Outer Space Treaty of 1967, signed by over 100 countries, bans countries from taking any celestial bodies into **39** its possession; however, the treaty does not clarity **40** does it apply to private companies looking to mine asteroids? Additionally, spacecraft that can travel longer distances, have advanced storage capabilities, and can either carry people to the asteroids or be remotely controlled from Earth are yet to be developed. In the United States, hearings have been taking place in Congress to allow companies to keep the resources they mine, which has the potential to address both of these issues at lease **41** in the United Stated domestically, if not internationally. If companies are permitted to keep what they mine in space, it will **42** nevertheless encourage companies to invest in the technology required to make mining possible.

39

A) NO CHANGE
B) its own
C) their
D) one's

40

A) NO CHANGE
B) does it apply to private companies looking to mine asteroids.
C) whether it applies to private companies looking to mine asteroids.
D) if it applies to private companies looking to mine asteroids?

41

A) NO CHANGE
B) domestically,
C) domestically and nationally,
D) in a national, domestic sense,

42

A) NO CHANGE
B) in turn
C) for one thing
D) furthermore

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CONTINUE

2

Of course, with tremendous potential **43** comes difficulties. Only one space probe to date has ever successfully returned asteroid material to Earth. **44** But considering that the alternative is to mine Earth's finite recourses to depletion, private companies would be wise to invest further in the nascent field of asteroid-mining research.

43

A) NO CHANGE
B) does come
C) came
D) come

44

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

Additionally, developing spacecraft can cost billions of dollars in labor, research, materials, trials, and more.

Should the writer make this addition here?

A) Yes, because it provides an additional example that supports a claim made in the paragraph.
B) Yes, because it serves as a conclusion that restates the main idea of the passage.
C) No, because it introduces an idea that is not relevant to the focus of the paragraph.
D) No, because it includes information that contradicts a claim made earlier in the passage.

STOP

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

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CONTINUE

Math Test – No Calculator

25 MINUTES, 20 QUESTIONS

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

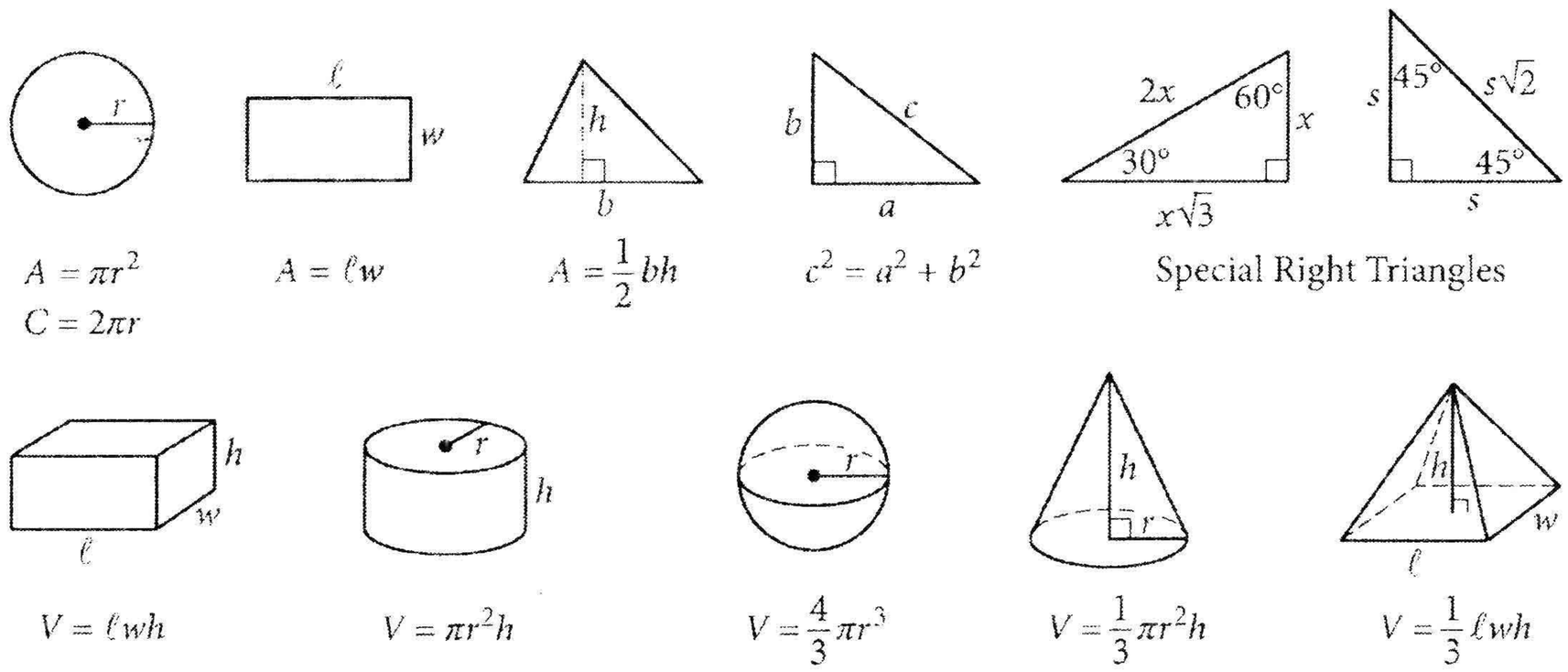
DIRECTIONS

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.

PEFERENCE



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

$A = \ell w$

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

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

Special Right Triangles

$V = \ell wh$

$V = \pi r^2 h$

$V = \frac{4}{3}\pi r^3$

$V = \frac{1}{3}\pi r^2 h$

$V = \frac{1}{3}\ell wh$

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.

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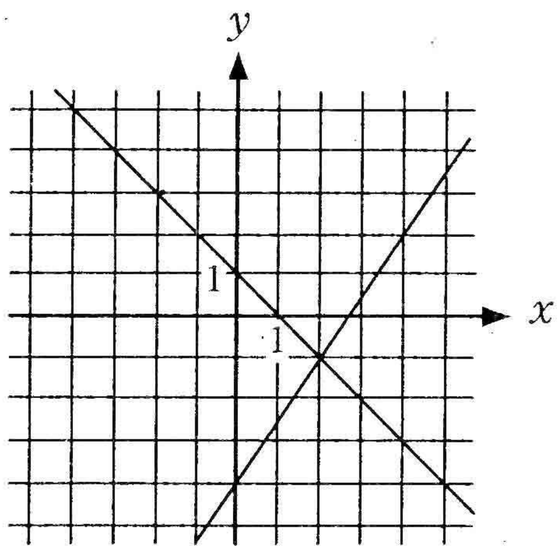
CONTINUE

3

1



A system of two linear equations is graphed on the xy–plane above. Which of following ordered pairs (x,y) is the solution to the system?

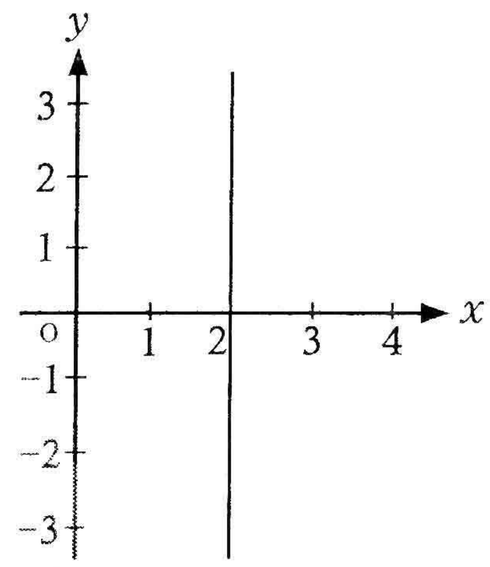
A) (1,1)

B) (1, −2)

C) (2, −1)

D) (2, 1)

2



Which of the following is an equation of the line shown in the xy –plane above?

A) $y = 2$

B) $x = 2$

C) $y = 2x$

D) $x = 2y$

3

Sarah ordered a set of golf clubs and a golf bag online, which were shipped to her house. The weight w, in pounds, of the bag and the clubs is estimated by the equation $w=1.2c+13$, where c is the number of clubs in the bag. What is the best interpretation of the number 1.2 in the equation?

A) The estimated weight, in pounds, of 1 club

B) The estimated weight, in pounds, of 13club

C) The estimated weight, in pounds, of the bag with no clubs

D) The estimated weight, in pounds, of the bag with 13 clubs

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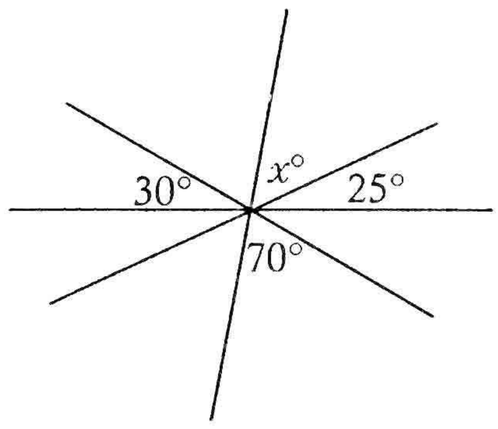
CONTINUE

4



In the figure above, four lines intersect at a point. What is the value of x?

A) 30

B) 45

C) 55

D) 65

5

$$(x+1)^2-9=0$$

If $x=k$ is a solution to the equation above, which of the following must be true?

A) $k < -5$

B) $-5 < k < 3$

C) $3 < k < 4$

D) $4 < k$

6

Which of the following is equivalent to $\frac{x^2+3x+2}{x+3}$?

A) $3x$

B) $x+2$

C) $x+\frac{2x}{x+3}$

D) $x+\frac{2}{x+3}$

7

In the xy-plane, what is the slope of the line that passes through the points (0,0) and (3,4)?

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

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

C) 3

D) 4

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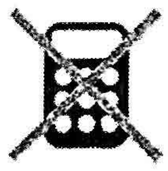

3

8

In the xy–plane,the point with coordinates $(a,2)$ and $(b,2)$ lie on the graph of the equation $y=5x^2-3$.If $a\neq b$,what is the valve of b^2-a^2 ?

A) −3

B) 0

C) 5

D) 17

9

$$3x=y$$
$$3x=36-y$$

Based on the system of equations above,what is the value of y?

A) 9

B) 12

C) 15

D) 18

10

The equation $x^2+y^2=169$ represents a circle graphed in the xy–plane.Which of the following points (x,y) lies on the circle and also on the line with equation $y=x-7$?

A) (10,3)

B) (−3,10)

C) (−5,−12)

D) (−12,5)

11

A scooter rental company charges \$11 for the first hour of renting a scooter and \$6 for each additional hour. Which of the following functions gives the cost $s(t)$,in dollars, of renting a scooter for t hours?

A) $S(t)=11t$

B) $S(t)=11t+6$

C) $S(t)=5t+6$

D) $S(t)=6t+5$

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CONTINUE

12

$$x^2+3x-1=0$$

Which of the following is a solution to the equation above?

A) $\frac{-3+\sqrt{13}}{2}$

B) $\frac{3-\sqrt{13}}{2}$

C) $\frac{-3+\sqrt{7}}{2}$

D) $\frac{3-\sqrt{7}}{2}$

13

$$4ax-\frac{2}{3}=2x-\frac{1}{3}b$$

In the equation above, a and b are constants. If the equation has infinitely many solutions, what is the value of ab?

A) 0

B) 1

C) 2

D) 4

14

Which of the following is equivalent to the product of the expression $-d$ and $d-1$?

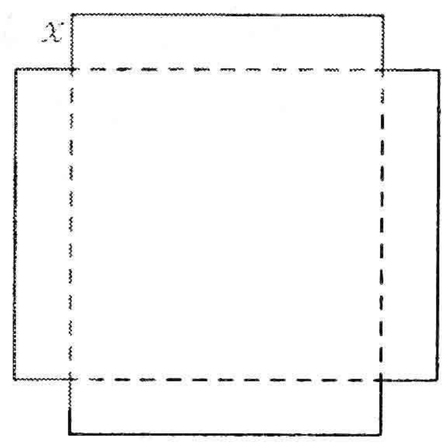
A) $-d^2+d$

B) $-d^2-d$

C) $-d^2-1$

D) -1

15



In the figure above, a square with sides of length x inches has been removed from each of the four corners of a square piece of cardboard that originally had an area of 144 square inches. When the cardboard is folded upward along the dashed lines, it forms an open box with no top. Which of the following quantities is represented by $(12-2x)^2$ square inches?

A) The area of the bottom face of the box

B) The area of the five faces of the box

C) The area of the four squares that have been removed from the box

D) The surface area of the closed box

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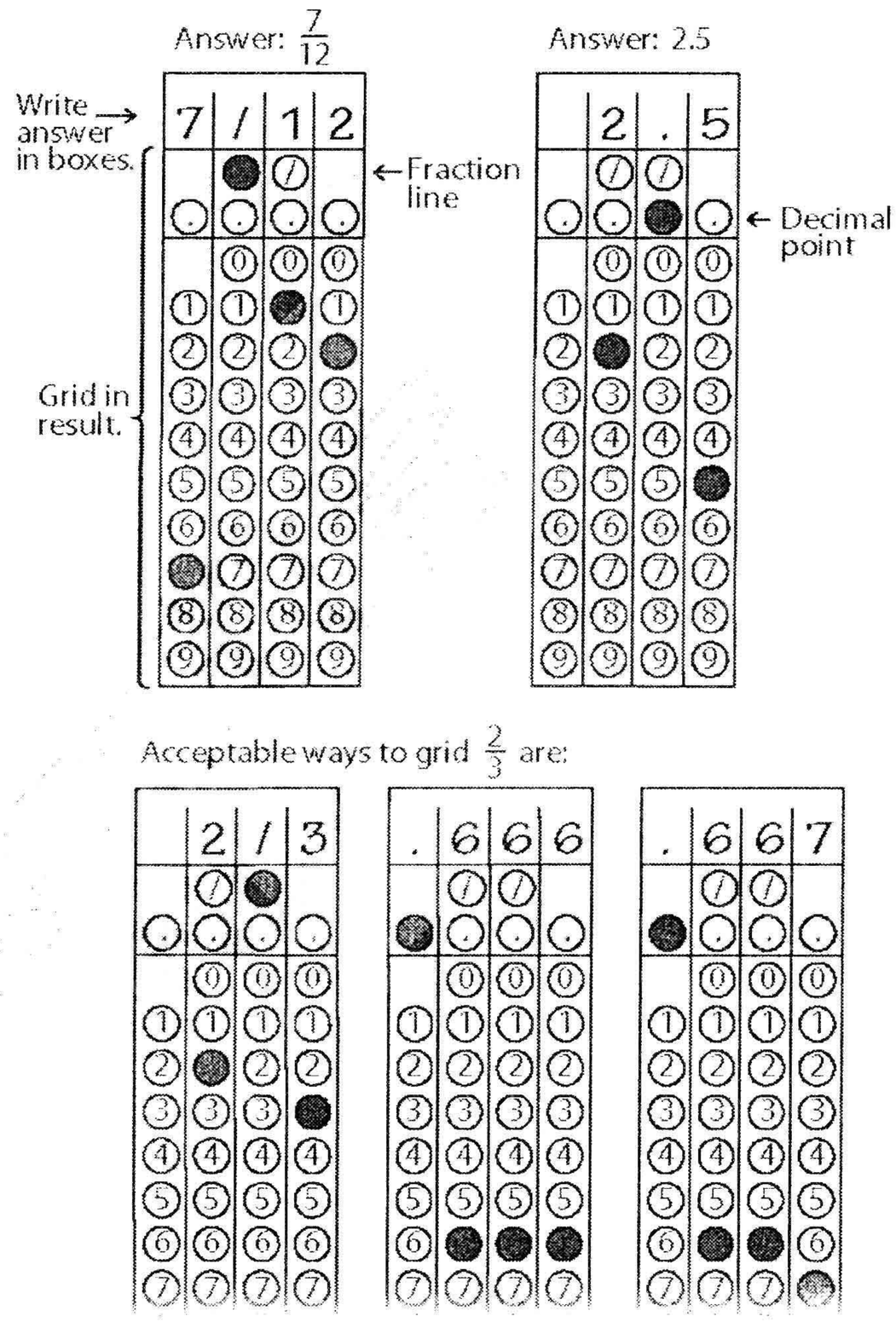
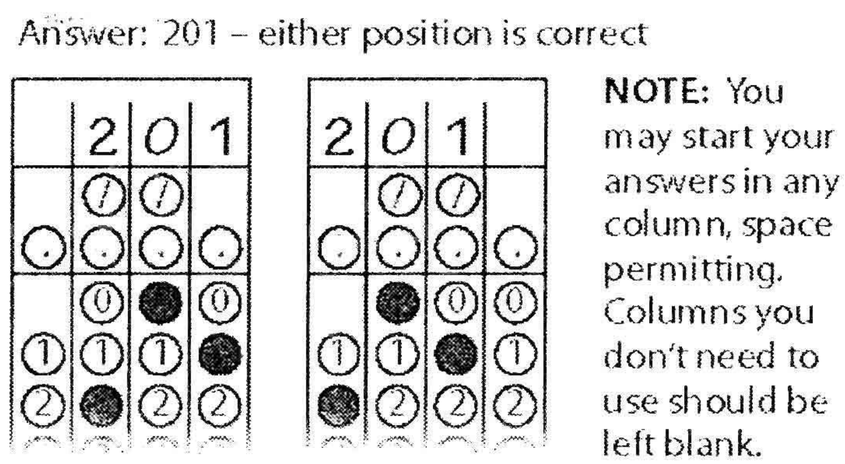
CONTINUE

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 $3\frac{1}{2}$.)
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.





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

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CONTINUE

3

16

$$y=5x+4$$

Given the equation above, if $y=12$, what is the value of x?

17

$$(3i^2+2)(3i^2-2)$$

The expression shown above can be written as the complex number $ai+b$, where a and b are real numbers. What is the value of $a+b$?
(Note $i=\sqrt{-1}$)

18

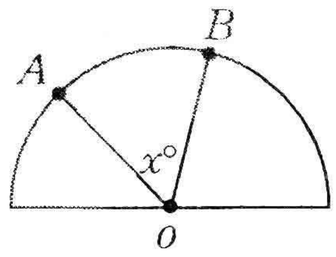
If $x+y=\sqrt{2(xy+3)}$, what is the value of x^2+y^2?

19

$$f(x)=(x-a)(x-b)$$

The function f is defined above , where a and b are integer constants. If $f(1)>0$, $f(4)<0$, and $f(7)>0$, what is one possible value of $a+b$?

20



In the semicircle above, $\overline{OA}$ and $\overline{OB}$ are radii. The length of arc $\widehat{AB}$ is 14π and $x=70$. What is the length of $\overline{OA}$?

STOP

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

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CONTINUE

No Test Material On This Page

Math Test – Calculator

55 MINUTES, 38 QUESTIONS

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

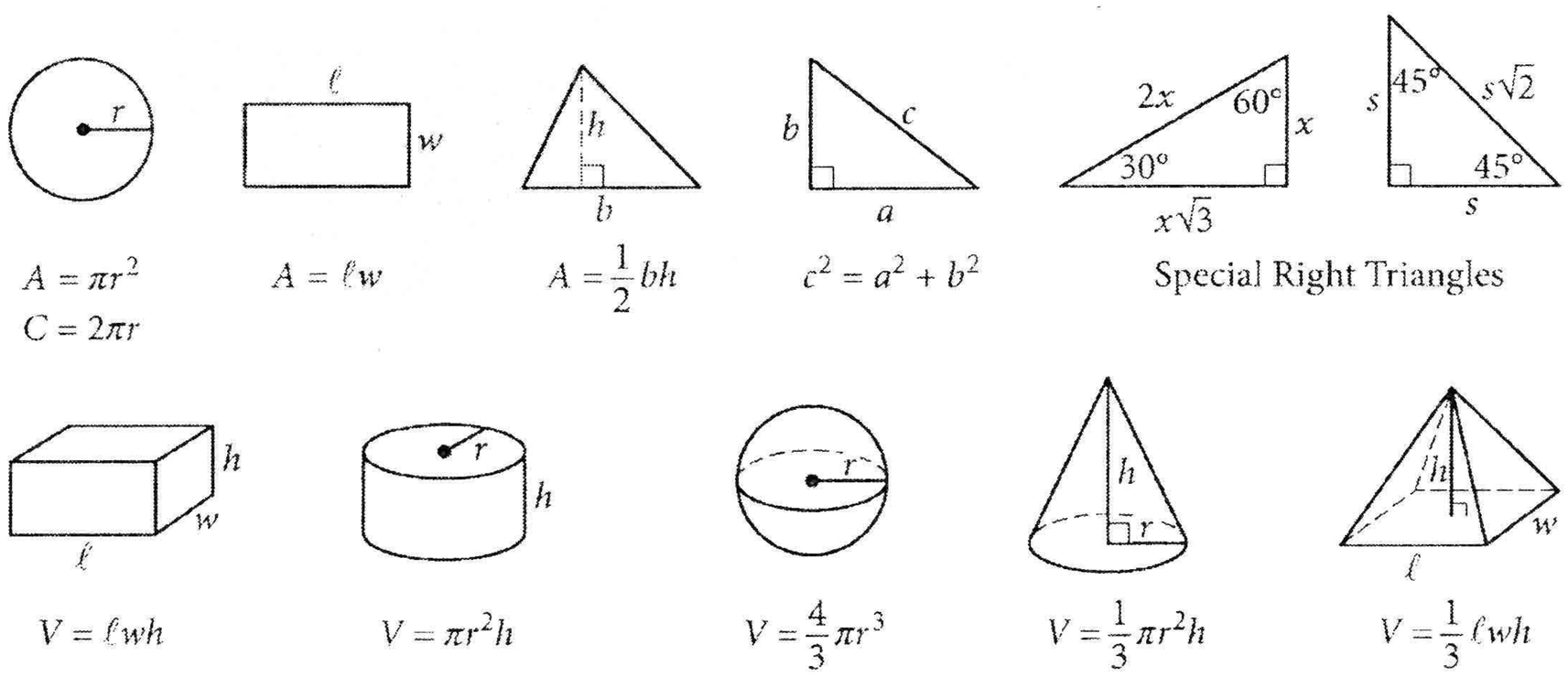
DIRECTIONS

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 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 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.

PEFERENCE



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

$A = \ell w$

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

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

Special Right Triangles

$V = \ell wh$

$V = \pi r^2 h$

$V = \frac{4}{3}\pi r^3$

$V = \frac{1}{3}\pi r^2 h$

$V = \frac{1}{3}\ell wh$

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.

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CONTINUE

1

If $3x+7=7-3x$, what is the value of x?

A) 0

B) 1

C) 3

D) 6

2

A survey was given to a random sample of 300 high school students in California. The results of this survey should be representative of which the following populations?

A) All high school students in the United States

B) All high school students in California

C) All students in California

D) All students in the United States

3

A certain wind turbine spins at a rate of 22 revolutions per minute. At this rate, how many revolutions will the wind turbine make in 5 hours?

A) 110

B) 300

C) 1,320

D) 6,600

4

If $g(x)=30+2(x+1)+x^2$, what is the value of $g(5)$?

A) 65

B) 66

C) 67

D) 77

5

If the expression $2x+6$ is equivalent to $2(x + a)$, where a is a constant, what is the value of a?

A) 2

B) 3

C) 4

D) 6

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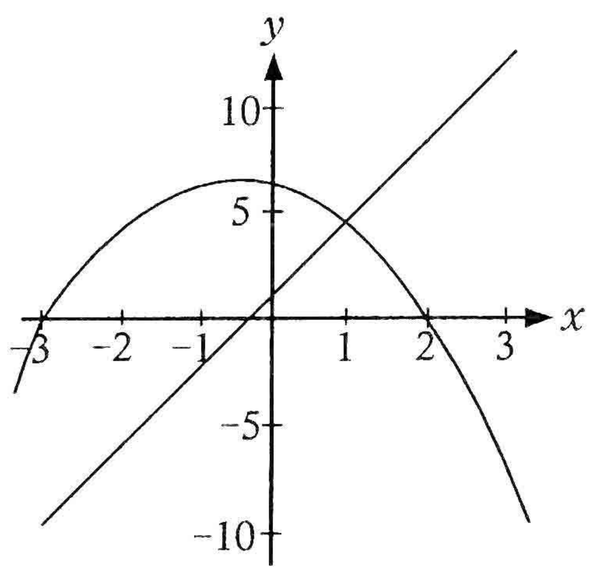
CONTINUE

6



Two equations are graphed in the xy–plane above. Which of the following could be a solution (x_1, y_1) to this system of equation?

A) (0, 1)

B) (2, 0)

C) (1, 4)

D) (−2, −1)

7

The mean weight of a group of 10 automobiles is 3,316 pounds. The weights, in pounds, of 4 of the automobiles in the group are listed below.

Automobile	Weight (in pounds)
A	1,800
B	3,200
C	3,300
D	8,500

The removal of which of these automobiles from the group will have the largest impact on the mean weight of the group of automobiles?

A) Automobile A

B) Automobile B

C) Automobile C

D) Automobile D

8

The inside of a can of soup is in the shape of a cylinder having an internal height of 10 centimeters and an internal radius of 5 centimeters. To the nearest cubic centimeter, what is the maximum amount of soup that the can could hold?

A) 157

B) 196

C) 250

D) 785

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CONTINUE

9

In a survey, 58 residents of a particular town were selected at random, and approximately 40% of them reported that they recycle regularly. If the reported percentage is used as an estimate for the proportion of all residents in the town who recycle regularly, the margin of error is 13%. Which of the following statements is appropriate based on the data provided?

A) Less than 25% of all the town residents recycle regularly.

B) Between 0% and 13% of all the town residents recycle regularly.

C) Between 27% and 53% of all the town residents recycle regularly.

D) Approximately 12.6% of the surveyed residents misstated how often they recycle.

10

A recipe for pound cake instructs a cook to use 3 cups of flour for every $\frac{3}{4}$ teaspoon of vanilla extract used. According to the recipe, if a cook uses 2 teaspoons of vanilla extract, how many cups of flour should be used?

A) 4

B) $4\frac{1}{2}$

C) $5\frac{3}{4}$

D) 8

11

Hours(x)	Total cost(y)
1	9
2	11
6	19
8	23

Selected values representing the total cost y, in dollars, to rent a canoe for x hours are shown in the table above. The relationship between x and y is linear. If the data are graphed in the xy-plane, what is the slope of the line that represents this situation?

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

B) 1

C) 2

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

12

If $\frac{60}{c+2}=10$, what is value of $c+2$?

A) 3

B) 4

C) 6

D) 8

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CONTINUE

13

The population of a town was 8,247 in 1990. In 2000, the population of the town was 2.6% less than the population in 1990, and the population in 2010 was 2.2% less than the population in 2000. Which of the following was the population of this town in 2010?

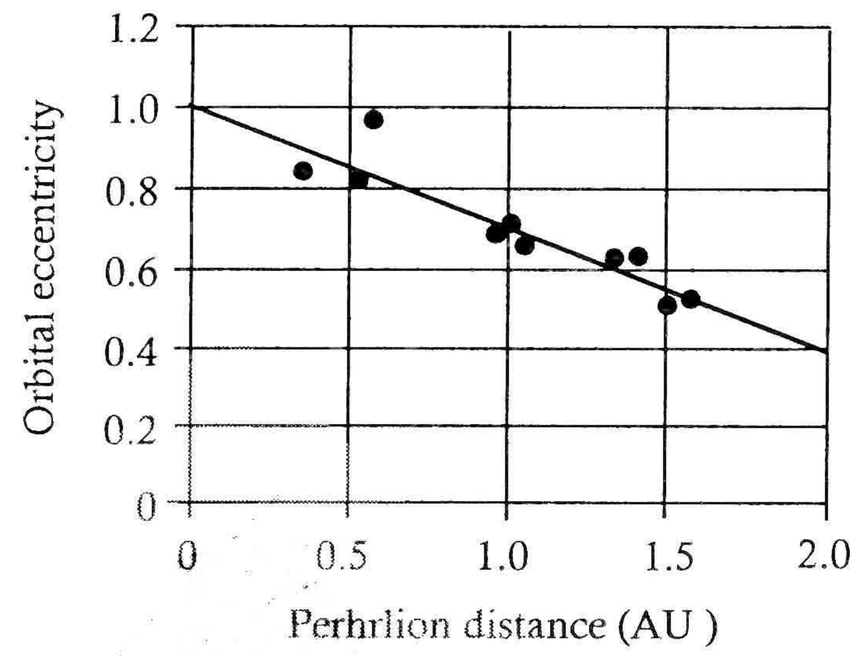
A) 4,763
B) 7,855
C) 8,026
D) 8,066

14

Frank walked 1,200 feet east and then walked 400 feet south on level ground to get from his home to his school. If there were a straight, level path from his home to his school, what would be the length, rounded to the nearest 100 feet, of the path?

A) 800 feet
B) 1,100 feet
C) 1,300 feet
D) 1,600 feet

Questions 15-18 refer to the following information.



The scatterplot above shows the perihelion distance, in astronomical units (AU), and the orbital eccentricity fire a random sample of ten comets. The line of best fit fire the data is also shown.

15

According to the line of the best fire, of the following which best predicts the orbital eccentricity of a comet with a perihelion distance of 0.75 AU?

A) 0.61
B) 0.78
C) 0.87
D) 0.95

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CONTINUE

16

Of the comets in the sample with orbital eccentricity greater than 0.6, what fraction have a perihelion distance less than 0.75 AU?

A) $\frac{7}{10}$

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

C) $\frac{3}{8}$

D) $\frac{1}{7}$

17

Of the following, which best approximates the median perihelion distance for the comets in the sample with an orbital eccentricity less than 0.8 ?

A) 0.6

B) 0.9

C) 1.0

D) 1.3

18

A scientist reports the perihelion distance of an eleventh comet to be 0.23 AU and the orbital eccentricity to be $0.\dot{9}9$. Which of the following statements best describes the orbital eccentricity?

A) It is approximately 0.08 greater than the value predicted by the line of best fit.

B) It is approximately 0.08 less than the value predicted by the line of best fit.

C) It is approximately 0.22 greater than the value predicted by the line of best fit.

D) It is the value predicted by the line of best fit.

19

In the xy-plane, line l passes through the point $(-2,1)$ and has slope $\frac{3}{2}$. Which of the following is an equation of line l?

A) $y=\frac{3}{2}x+4$

B) $y=\frac{3}{2}x+1$

C) $y=\frac{3}{2}x-\frac{7}{2}$

D) $y=-2x+\frac{3}{2}$

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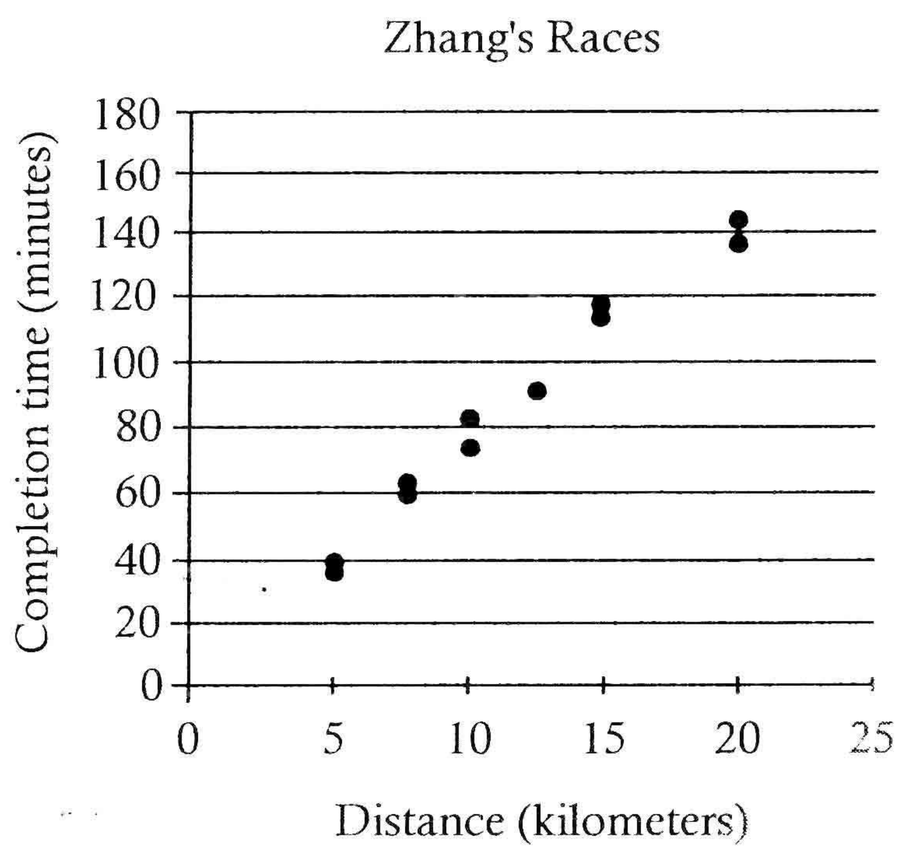
CONTINUE

20

Zhang has run 11 races this year. The distance of each race and the number of minutes it took him to complete each race is shown in the scatterplot below.



Which of the following is closest to the slope of a line of best fit for this scatterplot ?

A) 2
B) 4
C) 8
D) 11

21

Voyager 1 is a space launched by NASA to obsever the outer solar system . If *Voyager* 1 is currently traveling at a rate of 17.032 kilometers per second, how fast is it traveling ,in miles per hour, rounded to the nearest 100 miles per hour? (1 mile is approximately 1.61 kilometers)

A) 600
B) 1,600
C) 38,100
D) 98,700

22

In the xy–plane, what is the x–intercept of the line that has a slope of $-\frac{4}{3}$ and passes through the point (0,12) ?

A) −9
B) −4
C) 3
D) 9

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CONTINUE

Questions 23 and 24 refer to the following information.

The owner of Maple Street Bakery is estimating the bakery's daily sales , S, daily expense , E, and daily profit , P. For a day on which the bakery has x customers, the owner uses the models in the table below.

Quantity (in dollars)	Model (x=number of customers for the day)
Daily sales,S	$S(x)=6x$
Daily expenses,E	$E(x)=810+1.5x$
Daily profit,P	$P(x)=S(x)-E(x)$

The daily expenses, E, consist of a fixed cost for wages and rent and a variable cost for food supplies that depends on the number of customers for the day .

23

Which of the following is the best interpretation of the number 6 in the definition of $S(x)$?

A) On average ,each item at the bakery costs \$6.

B) Each customer at the bakery spends an average of \$6.

C) The bakery makes an average of \$6 in profit for each customer.

D) On average, each customer at the bakery buys 6 different items.

24

Using the models and an estimate for the number of daily customers, the bakery owner calculates that profit on a typical day will be at least \$3,150 and at most \$3,600.Which of the following inequalities is the estimate for the number of daily customers, x, that the owner is using ?

A) $525 \leq x \leq 600$

B) $700 \leq x \leq 800$

C) $880 \leq x \leq 980$

D) $2,100 \leq x \leq 2,400$

25

Danica is mixing iced tea and lemonade to make a punch. She likes the taste of the punch most when she mixes 2 ounces of iced tea with 5 ounces of lemonade. If she uses this same mixing ratio of iced tea to lemonade to make 10.5 liters of punch , how many liters of lemonade will she need ?

A) 3

B) 4.2

C) 7.5

D) 8.5

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CONTINUE

26

$$3x+7y=14$$
$$ax+28y=56$$

In the system of the equation above, a is a constant. If the system has infinitely many solutions, what is the value of a?

A) 2
B) 3
C) 4
D) 12

27

A partially filled glass containing 24 milliliters of water is placed under a leaky faucet that produces one 0.05-milliliter drop of water every 5 seconds. Until the glass is full, which of the following can be used to represent the volume v, in milliliter, of water in the glass s seconds after it is placed under the faucet?

A) $v(s)=0.25s+24$
B) $v(s)=0.05s+24$
C) $v(s)=0.01s+24$
D) $v(s)=6s$

28

The amount of water y, in gallons, in a reservoir x minutes after the reservoir begins to drain can be modeled by the equation $y=1{,}500-3x$. If the equation is graphed in the xy-plane, which of the following is the best interpretation of the x-intercept?

A) The reservoir drains at the rate of 3 gallons per minute.
B) There are 500 gallons of water in the reservoir before it begins to drain.
C) There are 1,500 gallons of water in the reservoir before it begins to drain.
D) The water will completely drain from the reservoir 500 minutes after the reservoir begins to drain.

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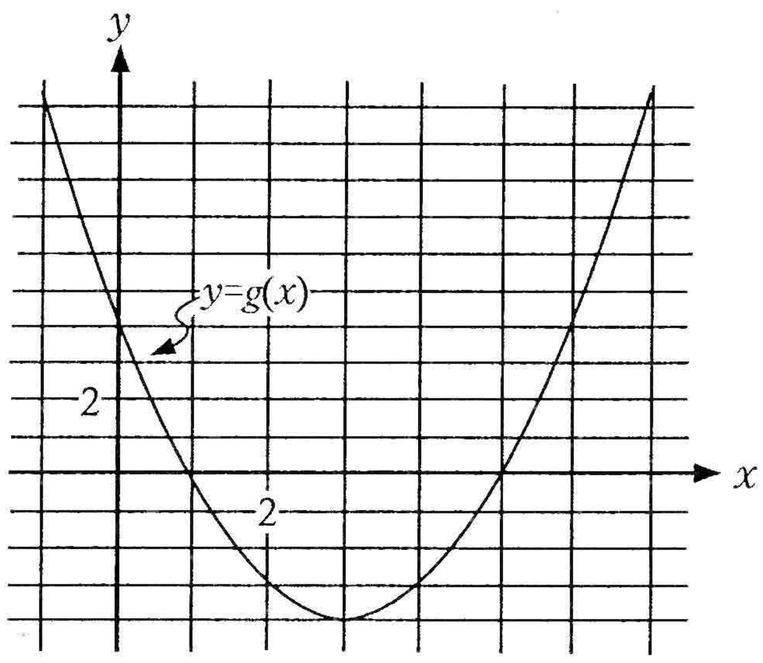
29



The function g is shown in the xy–plane above, and the function f (not shown) is defined by $f(x)=x^2+4x+3$. Which of the following statements must be true?

I. The minimum value of f is greater than the minimum value of g.

II. The y–intercept of f is less than the y–intercept of g.

III. The functions f and g intercept on the x–axis.

A) I only

B) II only

C) III only

D) I and II only

30

An online newsletter currently has 1,000 subscribes. If the number of subscribes triples every six months, which of the following functions N gives the number of subscribes the newsletter will have t years from now?

A) $N(t)=3(1{,}000)^{\frac{t}{2}}$

B) $N(t)=1{,}000(3)^{t}$

C) $N(t)=1{,}000(3)^{2t}$

D) $N(t)=1{,}000(3)^{\frac{t}{6}}$

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CONTINUE

31

At a coffee shop, Don combined arabica beans with robusta beans to make a coffee bean blend. The arabica beans cost $13.50 per pound, and the robusta beans cost $9.25 per pound. He used 1.2 pounds of robusta beans in the blend, and the total cost of the blend was $21.90. How many pounds of arabica beans did Don use in the blend?

32

$$C(x)=7000+25x$$

A company uses the function above to estimate the cost of $C(x)$, in dollars, to produce x units of a product. Based on the model, how many units of the product can the company produce at a cost of $25,000?

33

	Deparyment			
Faculty	Math	Physics	Blology	Total
Full-time	28	18	16	62
Part-time	32	25	39	96
Total	60	43	55	158

The table above shows the number of full-time and part-time faculty in the math, physics, and biology departments at a university. What fraction of the math department faculty at the university is part-time?

34

In 2008, the island of Guam had a population of approximately 175,800 people and a population density of 830 people per square mile. Based on these approximations, if 9%of the island's area was suitable for growing crops, to the nearest whole number, what is the area, in square miles, of land in Guam that was suitable for growing crops?

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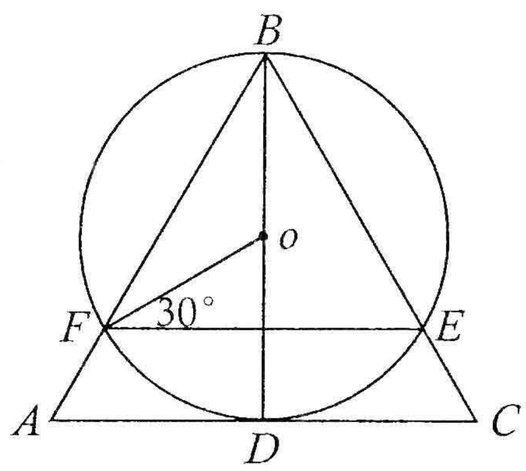
CONTINUE

35



In the figure above, O is the center of the circle and $\overline{AC}$ is tangent to the circle at D. If triangle ABC is equilateral, what is the ratio $\frac{FE}{AC}$?

36

The function $h(t)=-16t^2+32t+6$ can be used to model the height of a ball, in feet, t seconds after it is thrown into the air. The function can be rewritten in the form $h(t)=-a(t-j)^2+k$, where k is the maximum height of the ball, in feet. What is the value of k?

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CONTINUE

Questions 37 and 38 refer to the following information.

Recommended Daily Intake of Calcium

Age	Calcium(mg)
0–6 months	200
7–11 months	250
1–3 years	700
4–8 years	1,000
9–18 years	1,300
19–50 years (male)	1,000
51–70 years (female)	1,000
51–70 years	1,200
71+ years	1,200

The table above shows the recommended daily intake of calcium, in milligrams (mg), by age and gender.

37

Heather and her husband Roger are 32 and 35 years old, respectively. Their three children are 4 months old, 3 years old, and 5 years old. What is the range of the values of the recommended daily calcium intakes, in milligrams, for the members of the family?

38

Jennifer is a 55-year-old woman. Her recommended calcium intake is 20% greater than that of her daughter. What is the youngest age her daughter could be, in years?

STOP

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

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CONTINUE

No Test Material On This Page

2017 年 8 月新 SAT 北美卷答案

Reading				Writing				Math1		Math2	
题号	答案	题号	答案	题号	答案	题号	答案	题号	答案	题号	答案
1	A	41	A	1	B	41	B	1	C	1	A
2	B	42	B	2	D	42	B	2	B	2	B
3	C	43	B	3	D	43	D	3	A	3	D
4	B	44	C	4	C	44	A	4	C	4	C
5	B	45	B	5	B			5	B	5	B
6	C	46	C	6	D			6	D	6	C
7	C	47	A	7	A			7	B	7	D
8	D	48	C	8	B			8	B	8	D
9	B	49	A	9	D			9	D	9	C
10	D	50	A	10	C			10	C	10	D
11	C	51	D	11	C			11	D	11	C
12	C	52	D	12	A			12	A	12	C
13	D			13	C			13	B	13	B
14	D			14	C			14	A	14	C
15	A			15	D			15	A	15	B
16	D			16	A			16	8/5	16	C
17	A			17	A			17	5	17	D
18	D			18	D			18	6	18	图不准
19	B			19	D			19	7,8or9	19	A
20	C			20	C			20	36	20	C
21	B			21	A					21	C
22	B			22	D					22	D
23	D			23	A					23	B
24	C			24	D					24	C
25	C			25	D					25	C
26	D			26	B					26	D
27	A			27	D					27	C
28	A			28	C					28	D
29	B			29	B					29	D
30	B			30	A					30	C
31	B			31	B					31	0.8
32	A			32	B					32	720
33	A			33	A					33	8/15
34	A			34	A					34	19
35	C			35	C					35	3/4
36	B			36	C					36	22
37	D			37	D					37	800
38	A			38	B					38	4
39	B			39	C						
40	D			40	C						