Answer Explanations
for Practice Test

PSAT/NMSQT Practice Test #2

Reading Test Answer Explanations

Question 1

Choice A is the best answer. Falvo believes that when trying something new it's important to not overdo it. This can be seen

purpose of these lines is to reemphasize what Falvo had said earlier in the passage about not overdoing it when trying new things.

Choice A is incorrect because lines 24-27 were addressed speci cally to Mosher, not the group. Choice C is incorrect because lines 24-27 are instructions to one runner about a speci c race. Choice D is incorrect because lines 24-27 do not reveal anything about Falvo's beliefs as much as they repeat or reemphasize what he had said earlier.

Question 4

Choice B is the best answer. In the passage, the narrator, Mosher, shrugged after Falvo told him not to do anything stupid and then said "sure" when the coach warned him not to worry about the other runners, responses that both indicate that Mosher was ignoring the coach's advice (or being dismissive of it).

Choices A, C, and D are incorrect because when Mosher shrugs at or offers a one-word response to the coach's advice, it can be inferred that he is simply ignoring it, not that he is a shy, dishonest, or hostile person.

Question 5

Choice C is the best answer. Falvo's advice to the runners at the beginning of the passage was not to push themselves too hard. Even if the more experienced runners did not verbally respond to that advice, it's clear they followed it because their running was described throughout the passage as having a "quiet, aggressive, sustained power that looked like nothing" (lines 38-39) and being as "smooth as water" (line 42). When passing Mosher on the track, those runners were also said to be "all business now" (line 55), describing ef ciency without too much effort; those runners were not pushing themselves too hard.

Choices A, B, and D are incorrect because the passage never states how the more experienced runners responded to Falvo's advice (except for McCann's smiling at the idea he shouldn't "drain the well" that day), so it's impossible to know if those runners were enthusiastic about it, ignored it, or only pretended to heed it. However, the way those racers were said to have run the time trial ("all business") does show that they generally accepted what their coach had said.

Question 6

Choice D is the best answer. The passage makes clear that Mosher ignores Falvo's advice to stay contained as a runner during the time trial. Later he makes it clear that he had no idea why he hadn't DIFFICULTYEasy n'tsg 432 544.2eear3encar teear teear te

followed Falvo's advice: "I don't know why. I can't explain it" (line 61).

Choices A, B, and C are incorrect because line 61 is explicit in stating that the narrator did not have a good reason to ignore Falvo's advice, not that he did so just because he was determined to keep up with the other runners, wanted to prove something to himself, or wanted to improve on his previous time.

Question 7

Choice B is the best answer. The previous question asks for Mosher's motivation for pushing himself too hard in the time trial. In line 61, Mosher offers no concrete explanation for why he ran the time trial the way he did: "I don't know why. I can't explain it."

Choice A is incorrect because lines 36-39 describe the other runners in the time trial but not the narrator. Choice C is incorrect because lines 73-76 explain Mosher's physical condition, not his internal motivation, at the end of the time trial. Choice D is incorrect because lines 91-94 explain Falvo's reaction to Mosher's race.

KEY:B

DIFFICULTY: Hard

Question 8

Choice A is the best answer. Falvo says to the exhausted Mosher: "'What we have here,' he was saying, 'is a failure to communicate. Stay within yourself, I said. Don't drain the well, I said'" (lines 81-83). By then Mosher had pushed himself so hard that he'd become physically ill and used up all his energy.

Choice B is incorrect because "don't drain the well" means don't use up the valuable energy one has, not "don't get sick." Choices C and D are incorrect because in the passage Falvo tells Mosher to maintain his own pace and run his own race, not that he should be concerned with the other runners or that he shouldn't quit if tired.

KEY:A

DIFFICULTY: Easy

Question 9

Choice D is the best answer. Lines 88-89 state "He laughed— that bitter Falvo laugh—ha!—like he'd just been vindicated." "Vindicated" means to be justi ed or proven correct, which is apt in this context because by running himself into sickness and exhaustion, Mosher had proven correct Falvo's belief that Mosher might overdo it.

Choice A is incorrect because "avenged" means to exact vengeance or satisfaction. Choices B and C are incorrect because in this passage no one is either set free or defended against; rather, Falvo is simply proven correct that Mosher might push too hard in the time trial.

KEY:D

DIFFICULTY: Medium

Question 10

being offered, not that those rewards were being resisted, awaited, or avoided.

Question 13

Choice D is the best answer. Lines 56-59 state that "according to one study of the world's democratic electoral systems, Brunei may be the only country where 'electoral politics has failed to put down

Choices A, B, and D are incorrect because the previous question asks about how politically open modern autocratic regimes tend to be, but lines 18-22 discuss the proportion of democracies in the world today; lines 46-50 describe shifts in public attitudes toward democracy; and lines 73-77 analyze reasons why some political autocracies may have changed.

Question 16

Choice B is the best answer. Lines 63-64 explain that while elections are central to democracy, other indicators of the openness of a society include "freedom of the press, civil liberties, [and] checks and balances that limit the power of any single institution" (lines 65-67).

KEY:B

DIFFICULTY: Medium

Choices A, C, and D are incorrect because "freedom of the press" is clearly cited in line 65 as being an indicator of political openness, but the passage says nothing similar about a strong head of state, con dence in the military, or the presence of a digital culture.

Question 17

Choice D is the best answer. While the graph shows there were more than 80 autocracies around the world in 1975, that number is smaller than the number of democracies (nearly 100) that the graph shows existed in 2011.

KEY:D

DIFFICULTY: Easy

Choice A is incorrect because the graph shows that approximately only 20 democracies existed in 1950. Choice B is incorrect because the graph shows that fewer than 80 democracies existed in 1995. Choice C is incorrect because the graph shows that approximately only 20 autocracies existed in 2011.

Question 18

Choice B is the best answer. The graph shows the lines representing the number of autocracies and the number of democracies intersecting between 1985 and 1990, when there were approximately 60 of each of those types of government around the world.

KEY:B

DIFFICULTY: Easy

Choice A is incorrect because the graph shows there were more autocracies than democracies in the world from 1975 to 1980. Choices C and D are incorrect because the graph shows there were more democracies than autocracies in the world from 1995 to 2000 and 2005 to 2010.

Question 19

Choice A is the best answer. The rst paragraph states the main idea: "Researchers have found that the reintroduction of the gray wolf to Yellowstone National Park has boosted an important food source for the threatened grizzly bear. A study published in the Journal of Animal Ecology is essentially a tale of who eats what" (lines 3-7). The remainder of the passage then explains how adding gray wolves back into the Yellowstone food web affected various plant and animal species (elk, grizzly bears, fruit-bearing shrubs, aspen, and cottonwood trees), with the main purpose of the passage therefore summarized as a discussion of an ecological phenomenon.

Choices B, C, and D are incorrect because the passage is a full discussion of a certain ecological phenomenon (what happened when gray wolves returned to Yellowstone) and does not speci cally mention any scienti c experiment, environmental debate, or historic discovery.

KEY:A

DIFFICULTY: Medium

Question 20

Choice C is the best answer. Lines 8-15 of the passage highlight what happened in Yellowstone after wolves were introduced back into the park: "When wolves were reintroduced to the park in 1995 after a 70-year absence, they preyed on elk herds that browsed trees and shrubs. The elk population, which had exploded without the wolves, dropped. The over-browsed plants began to rebound, including berry-producing shrubs that provide nutritious summer meals for grizzlies when they are fattening up for hibernation." In other words, when the reintroduced wolves began to prey on elk herds, fewer grazing elk led to an increase in fruit-bearing plants found in the area.

Choice A is incorrect because even though the passage discusses a study of the ecology in Yellowstone National Park after the reintroduction of wolves, neither the study nor any investigation of grizzly bears occurred speci cally due to the drop in the elk population. Choice B is incorrect because the passage states that fewer elk in Yellowstone led to a resurgence of aspen trees, not a decrease in their numbers. Choice D is incorrect because the drop in the elk population in Yellowstone did not result in a surge in the wolf population there; rather, the addition of wolves to the park resulted in the drop in the elk population.

KEY:C

DIFFICULTY: Medium

Question 21

Choice B is the best answer. The previous question asks about a direct result of the decrease in elk population in Yellowstone National Park, with the answer being that fewer grazing elk meant

KEY:B

DIFFICULTY: Medium

more fruit-bearing plants. That idea is supported in lines 12-15: "The over-browsed plants began to rebound, including berry-producing shrubs that provide nutritious summer meals for grizzlies when they are fattening up for hibernation."

Choices A and D are incorrect because lines 6-7 and 49-50 address

Choices A, B, and C are incorrect because in this context, saying the elk herds "browsed trees and shrubs" means they ate those trees and shrubs, not that the elk inspected, skimmed, or destroyed the trees and shrubs.

Question 25

Choice C is the best answer. Lines 60-62 of the passage offer one scientist's opinion that the return of berry-producing shrubs may not solve all the grizzlies' food problems: "It may not be a panacea

Question 28

Choice A is the best answer. The passage's claim that the reintroduction of gray wolves to Yellowstone National Park led to an overall decline in the number of elk is supported by the table, which shows the number of winter elk in Yellowstone going from more than 16,000 in 1995 to only about 8,000 in 2004.

Choice B is incorrect because the table shows that while the number of elk went down most years after the reintroduction of the gray wolf, it actually went   up between the years 1998 (11,736) and 1999 (11,742) and the years 1999 (11,742) and 2000 (14,539). Choice C is incorrect because, while the table shows the wolf/elk ratio increasing between 1998 and 1999 (from 2.73 to 4.09), the number of elk actually increased those years too (from 11,736 to 11,742). Choice D is incorrect because the table clearly shows that the stabilization of wolf numbers in Yellowstone ultimately led to a

passage does Thoreau refer to conscientious people's moral sense as making them human or suggest that such people hold legislators to a different moral standard than they hold themselves.

Question 31

Choice D is the best answer. The previous question asks what point Thoreau makes about the people who follow their consciences, with the answer being that those people usually resist the state and end up its enemies. The best evidence in support of that answer is found in lines 30-34, which state, "A very few, as heroes, patriots, martyrs, reformers in the great sense, and   men, serve the state with their consciences also, and so necessarily resist it for the most part; and they are commonly treated as enemies by it. . . ."

Choice A is incorrect because lines 1-2 ask a rhetorical question but do not identify the point Thoreau makes about people who follow their conscience. Choice B is incorrect because lines 7-10 address corporations with a conscience, not people. Choice C is incorrect because lines 17-21 address people who do not follow their conscience but adhere blindly to the rules of the state instead.

KEY: D

DIFFICULTY: Hard

Question 32

Choice A is the best answer. Lines 53-55 explain that King does not believe unjust laws and statutes should be followed or have any moral authority: "Conversely, one has a moral responsibility to disobey unjust laws. I would agree with St. Augustine that 'an unjust law is no law at all.'"

Choice B is incorrect because at no point does King ever argue to do anything simply to attract attention. Choice C is incorrect because King says "any law that degrades human personality is unjust" (lines 64-65), which is the opposite of saying an unjust law is not detrimental to the human spirit. Choice D is incorrect because King says an unjust law is "out of harmony with the moral law" (line 60), not that an unjust law should be used to enforce moral law.

KEY: A

DIFFICULTY: Hard

Question 33

Choice C is the best answer. The previous question asks how King characterizes unjust statutes, with lines 53-55 providing evidence in support of the idea that King believed those statutes have no moral authority: "one has a moral responsibility to disobey unjust laws. I would agree with St. Augustine that 'an unjust law is no law at all.'"

Choice A is incorrect because lines 49-50 highlight what King considers the two different types of laws, just and unjust. Choice B is incorrect because lines 51-52 explain King's belief that one has a

KEY: C

DIFFICULTY: Hard

responsibility to follow   just laws. Choice D is incorrect because lines 64-65 explain King's de nition of what makes a law unjust but not how he believes people should respond to such a law.

Question 34

Choice A is the best answer. Lines 57-58 ask the question "How does one determine whether a law is just or unjust?" In this context, to "determine" whether a law is just means to establish whether a law is just.

Choices B, C, and D are incorrect because in the context of trying to determine whether a law is just or unjust, the word "determine" means to establish what the law is, not regulate, direct, or limit it.

Question 35

Choice A is the best answer. The main purpose of each passage is to argue how individuals should respond to the law (especially unjust laws). Thoreau says that people of conscience need to become enemies of the state and King believes that "an unjust law is no law at all" (lines 54-55). That the primary purpose of each passage is to discuss the relationship between the individual and law can be seen from the rst sentence of the Thoreau passage: "Must the citizen ever for a moment, or in the least degree, resign his conscience to the legislator?" (lines 1-2) and the last sentence of the King passage: "I submit that an individual who breaks a law that conscience tells him is unjust, and who willingly accepts the penalty of imprisonment in order to arouse the conscience of the community over its injustice, is in reality expressing the highest respect for law" (lines 79-84).

Choices B, C, and D are incorrect because neither passage forwards a view on how << the

Choices A, B, and D are incorrect because King does not discuss in detail the consciences, the moral judgment, or the personal moral values of law-abiding people.

Question 37

Choice B is the best answer. In lines 6-7, Thoreau argues that people should rst follow their consciences: "The only obligation which I have a right to assume is to do at any time what I think right." King, on the other hand, suggests that it is not conscience that must be heard rst but something else: "One has not only a legal but a moral responsibility to obey just laws" (lines 51-52). A signi cant difference between the two could therefore be identi ed as Thoreau's emphasis on the importance of conscience and King's emphasis on morality.

Choice A is incorrect because Thoreau suggests that few people follow their consciences. "Must the citizen . . . resign his conscience to the legislator?" (lines 1-2). King differentiates between just and unjust laws (lines 50-54) but never suggests how many people might or might not "adhere to moral law." Choice C is incorrect because Thoreau argues that legality was secondary to conscience, not that conscience (or morality) resulted from legality. Choice D is incorrect because Thoreau does not suggest "good laws" should be disobeyed; he actually says the opposite.

KEY:B

DIFFICULTY: Hard

Question 38

Choice C is the best answer. Lines 77-79 expressly state how King believes one should respond to unjust laws: "One who breaks an unjust law must do so openly, lovingly, and with a willingness to accept the penalty." This suggests King would recommend that if Thoreau were truly against slavery, he should publicly break those laws and then willingly accept whatever consequences might result.

Choices A, B, and D are incorrect because King explicitly states in the passage that people have a moral responsibility to disobey unjust laws. King would not recommend that Thoreau obey unjust laws while working to change them (choice A), uphold unjust laws (choice B), or uphold unjust laws he is critical of (choice D).

KEY:C

DIFFICULTY: Medium

Question 39

Choice C is the best answer. The passage rst identi es an agricultural problem: "Consider the western corn rootworm—a beetle that's a serious pest of corn in the United States" (lines 7-8). By the conclusion of the passage, however, the way the rootworm's "gut bacteria" (lines 49-50) aided the insect's survival in both corn and soybean elds has been fully explained: "The team proved that

KEY:C

DIFFICULTY: Medium

the bacteria were responsible by killing them with antibiotics. Sure enough, this drastically lowered the cysteine protease activity in the guts of the rotation-resistant beetles and wrecked their ability to thrive among soybeans" (lines 65-69). Overall, the passage can therefore be summarized as having a focus shifting from the identi cation of an agricultural problem to an explanation of its cause.

Choice A is incorrect because the passage does not state that the challenge posed by the western corn rootworm was easy to overcome. Choice B is incorrect because the passage provides virtually no biographical information about the scientists involved (other than the fact they worked at the University of Illinois). Choice D is incorrect because while the passage ends its rst paragraph by stating the belief that "zoology is ecology," it otherwise does not discuss any particular scienti c eld.

Question 40

Choice C is the best answer. The rst paragraph of the passage says that animals aren't just animals but collections of microbes, with the remainder of the passage going on to explain that scientists found the way to control the western corn rootworm only after coming to understand its gut bacteria. The statement "zoology is ecology" (line 6) implies that the study of animals (zoology) is really the study of ecology (the relationship between organisms), as is shown to be the case through the example of the western corn rootworm's relationship with its gut bacteria. In other words, it asserts a general point that is supported by an example.

Choices A, B, and D are incorrect because the phrase "zoology is ecology" in line 6 means that the study of animals is greatly affected by studying the ways organisms interact (i.e., the way the western corn rootworm's gut bacteria has affected its growth and survival), not that those two elds of study should be merged, that knowledge obtained in one of those elds would lead to expertise in the other, or that one of those elds supplanted another.

KEY:C

DIFFICULTY: Hard

Question 41

Choice B is the best answer. Normal rootworms lay their eggs in corn elds "so that their underground larvae hatch into a feast of corn roots" (lines 10-11). "These rotation-resistant females might lay among soybean elds, so their larvae hatch into a crop of corn" (lines 20-22). Combined, these statements indicate a similarity: both normal and rotation-resistant rootworms produce larvae whose rst food will be the roots of crops.

Choice A is incorrect because the passage doesn't state that either type of rootworm reduces crop productivity by extracting nutrients

KEY:B

DIFFICULTY: Medium

from the soil. Choice C is incorrect because the passage clearly states that in the face of crop rotation, the normal rootworm will die rather than adapt. Choice D is incorrect because the passage says the normal and rotation-resistant rootworms have very different gut bacteria.

Question 42

Choice B is the best answer. The passage states that one way farmers have tried to eradicate the western corn rootworm is by rotating their crops (thereby reducing the viable elds for the rootworms), with the question of how some rootworms have overcome that problem being speci cally answered in lines 18-20: "But the rootworms have adapted to this strategy by reducing their strong instincts for laying eggs in corn."

Choices A, C, and D are incorrect because the lines cited do not speci cally answer the question of how some rootworms have overcome the farmers' efforts to eradicate them. Rather, lines 15-17 provide one way the farmers have been able to eradicate rootworms; lines 25-28 explain some of the challenges being faced by researchers studying the rootworm; and lines 41-43 identify a problem for the rootworms, not how these beetles have adapted to the farmers' eradication efforts.

Question 43

Choice A is the best answer. The point of the fourth paragraph is to explain how hard it was for scientists to determine what made the rotation-resistant rootworms different from the normal ones. "After many years of research [focused on genes] . . . results were mostly inconclusive" (lines 33-35).

Choices B, C, and D are incorrect because the central claim of the fourth paragraph is simply that many years of research led to only "inconclusive" results about differences between rotation-resistant and normal rootworms. Neither that paragraph nor any part of the passage claims that the rootworm's adaptation ability is unique, that its genetic make-up was more complex than originally thought, or that inadequate understanding of genetics in general was the reason the rootworm remained such a mystery.

Question 44

Choice A is the best answer. "There are almost certainly genetic differences that separate the rotation-resistant rootworms from their normal peers, but what are they?" (lines 23-25). In the context of genetic differences separating two types of insects, the word "separate" means to distinguish or differentiate.

Choices B, C, and D are incorrect because in the context of genetic differences separating two types of rootworms, "separate" means to distinguish or differentiate, not to discharge, extract, or scatter.

Question 45

Choice A is the best answer. After the passage states that normal rootworms can't survive in soybean elds but that rotation-resistant rootworms can, it explains that the difference between the two is their respective gut bacteria. Lines 54-55 state that "these different microbes give the resistant beetles an edge when eating soybeans."

Choice B is incorrect because the passage says that gut bacteria in rotation-resistant rootworms results in more cysteine proteases in their stomachs, not fewer. Choice C is incorrect because in the passage antibiotics are being used to kill microbes (or gut bacteria) only, not the rootworms themselves. Choice D is incorrect because the passage never mentions anything being transferred to the larvae.

KEY:A

DIFFICULTY: Medium

Question 46

Choice D is the best answer. The previous question asks what the gut bacteria of rotation-resistant rootworms do, with the correct answer being that they allow that variation of beetle to survive in the soybean elds where normal rootworms cannot. This answer is supported speci cally in lines 54-55, which state that "these different microbes give the resistant beetles an edge when eating soybeans."

Choices A, B, and C are incorrect because the lines cited do not explain what the gut bacteria of rotation-resistant rootworms do. Rather, lines 29-30 explain that understanding the western corn rootworm was a challenge to researchers; lines 39-40 state only that normal rootworms and rotation-resistant ones have very different microbes in their stomachs; and lines 44-47 explain that the difference in rootworms was not so much simple genetics as a multispecies conspiracy.

KEY:D

DIFFICULTY: Medium

Question 47

Choice C is the best answer. The main idea of the last paragraph is that it is the gut bacteria of rotation-resistant rootworms that allow them, but not normal rootworms, to thrive in soybean elds. "The team proved that the bacteria were responsible by killing them with antibiotics. Sure enough, this drastically lowered the cysteine protease activity in the guts of the rotation-resistant beetles and wrecked their ability to thrive among soybeans" (lines 65-69).

KEY:C

DIFFICULTY: Medium

Choice A is incorrect because the second-to-last paragraph of the passage says cysteine proteases allow rootworms to survive in soybean elds, not that they are in any way harmful to the rootworms. Choice B is incorrect because the eggs laid by rotation-resistant rootworms among soybeans will hatch into crops of corn, not of soybeans. Choice D is incorrect because the passage clearly states that rotation-resistant rootworms   do use cysteine proteases to digest soybeans, not that they do not use them for that task.

Writing and Language Test Answer Explanations

Question 1

Choice D is the best answer because the pronoun "it" in the independent clause that begins "it has been . . ." needs the antecedent "coffee." The passive voice phrase "coffee was introduced" is acceptable in this context because indicating who introduced coffee to Italy is not important to the passage.

Choices A, B, and C are incorrect because each results in a vague or ambiguous pronoun ("it," "they," "their").

KEY:D

DIFFICULTY: Easy

Question 2

Choice B is the best answer because the phrase "in fact" signals the relationship between the preceding sentence, which states a fact (coffee "has been a ubiquitous part of Italian culture"), and the following sentence, which provides evidence for the fact ("one cannot visit . . .").

Choices A, C, and D are incorrect because these transitional expressions don't signal an accurate relationship between the two sentences they connect. "However," "even so," and " despite" indicate that a contrast will follow, not support for a previous statement.

KEY:B

DIFFICULTY: Easy

Question 3

Choice C is the best answer because the plural pronoun "they" agrees in number with the plural noun "coffeehouses," and the plural verb "have become" is used correctly to show that the action is current and ongoing.

Choices A and B are incorrect because the singular pronoun "it" does not agree in number with the plural noun "coffeehouses." Choice D is incorrect because the helping verb "had" cannot describe an action that began in the past and continues into the present.

KEY:C

DIFFICULTY: Hard

Question 4

Choice C is the best answer because the subjective pronoun "who" is used correctly as the subject of the clause to refer to those people who frequent coffeehouses, and the plural verb "love" agrees with the plural pronoun "those."

Choice A is incorrect because "which" is not the correct pronoun to use when referring to people. Choice B is incorrect because "loves" is a singular verb and a plural one is needed to agree with the plural

KEY:C

DIFFICULTY: Medium

Question 9

Choice A is the best answer because the adjective "correct" is clear and concise.

Choices B, C, and D are incorrect because they all include redundant words. "Correct," "proper," "properly," and "appropriate" all convey the same idea, and any combination of these words should not be used together.

Question 10

Choice D is the best answer because two commas are necessary to set off a transitional phrase such as "for example" when it is used in the middle of a sentence.

Choices A, B, and C are incorrect because they all include incorrect punctuation. When needed, commas should be used in pairs to set off transitions and cannot be partnered with colons or dashes.

Question 11

Choice D is the best answer because the sentence should not be added. The passage focuses on coffee drinking in Italy and this

Choice A is incorrect because a participle cannot be used to replace the basic present tense verb "fail." Choice B is incorrect because a conjunction is needed between the independent clauses. Choice D is incorrect because if a semicolon is used, what follows must be an independent clause.

Question 14

Choice C is the best answer because a pair of commas is needed to set off the nonrestrictive phrase "regardless of latitude" in the middle of the sentence.

Choices A, B, and D are incorrect because none contains a pair of commas to set off the nonrestrictive phrase.

KEY:C

DIFFICULTY: Easy

Question 15

Choice D is the best answer because the word "mortality" is clear and concise, and no ideas or words are repeated.

Choices A, B, and C are incorrect because they contain redundant words or ideas. "Continuing on" and "continue on" should not be used in the same sentence. "Keep going" and "continuing on" repeat the same idea, as do "mortality" and "death."

KEY:D

DIFFICULTY: Hard

Question 16

Choice B is the best answer because the singular verb "provides" agrees in number with the singular noun "study."

Choices A, C, and D are incorrect because the plural verbs "provide," "are providing," and "have provided" don't agree with the singular noun "study."

KEY:B

DIFFICULTY: Medium

Question 17

Choice B is the best answer because the phrase "four quail eggs" is plural, not possessive, and needs no apostrophe.

Choices A and C are incorrect because no apostrophe is needed in the plural "eggs." Choice D is incorrect because "quail" should not be plural.

KEY:B

DIFFICULTY: Medium

Question 18

Choice A is the best answer because sentence 5 (the scientists returning to count the eggs "many times over nine days") logically joins sentence 4 (how many eggs were used to bait the nests at the beginning of the nine-day period) with sentence 6 (how many eggs were required to consider a nest to have survived at the end of the nine-day period).

KEY:A

DIFFICULTY: Medium

Choices B, C, and D are incorrect because moving sentence 5 would result in a paragraph that doesn't make sense logically or chronologically.

Question 19

Choice B is the best answer because it doesn't contain a conjunctive adverb or transitional phrase, neither of which is needed here.

Choices A, C, and D are incorrect because they contain conjunctive adverbs or transitional phrases that are not needed in the middle of this sentence.

Question 20

Choice C is the best answer because the gure indicates that the percent of surviving nests decreased over time at each of the four locations (all four lines show a decrease over the nine-day period).

Choices A, B, and D are incorrect because they do not correctly represent the information conveyed in the gure. The gure does not indicate that the number of predators invading the nests either increased or decreased, nor does it indicate that the percent of surviving nests increased.

Question 21

Choice A is the best answer because it accurately describes the data represented in the gure. The percent of surviving nests was greater at higher latitudes (for example, 82 degrees North) than at lower latitudes (for example, 63 degrees North).

Choices B, C, and D are incorrect because the gure does not indicate that the percent of surviving nests at locations having higher latitudes was smaller or remained the same, or that the percent of eggs was lower.

Question 22

Choice A is the best answer because it most clearly and concisely combines the underlined sentences to indicate the relationship between the risks to the shorebirds and rewards for their offspring.

Choices B, C, and D are incorrect because they are wordy or combine ideas in a way that is not logical. Additionally, none indicates the risk-reward relationship as clearly as choice A does.

Question 23

Choice C is the best answer because in this context "adhere to" means to follow or to stick to, which is the right connotation when referring to a musical score.

Choices A, B, and D are incorrect because they offer options that do not work connotatively when substituted into the sentence.

Question 24

Choice D is the best answer because it creates a complete sentence by attaching the dependent clause ("As . . . improvisations") to the independent clause ("they . . . own") with a comma.

KEY:D

Choices A and C are incorrect because a period or a semicolon cannot be used to end a dependent clause. Choice B is incorrect because a comma is needed between an introductory dependent clause and the independent clause that follows it.

Question 25

Choice C is the best answer because the correlative conjunctions "not only" and "but also" must be followed by parallel phrases. Since "by saxophonist Coleman Hawkins" follows "but also," "by Armstrong" needs to follow "not only."

Choices A, B, and D are incorrect because none contains the preposition "by," which is needed to be consistent with the same preposition used later in the sentence.

Question 26

Choice A is the best answer. The sentence should be added to provide a transition from the idea that Armstrong played solos in recordings to the idea that he played them in dance halls as well.

Choice B is incorrect because the sentence doesn't explain why Armstrong was skilled at improvisation. Choices C and D are incorrect because the sentence should be added to provide a transition between two ideas in the paragraph.

Question 27

Choice A is the best answer because it makes a connection to the main topic of the previous paragraph, the band's solos.

Choices B, C, and D are incorrect because they do not refer to the band's solos, which is the main topic of the previous paragraph.

Question 28

Choice B is the best answer because the suggested revision provides an explanation of what a "call-and-response structure" is.

Choice A is incorrect because, while Armstrong was a trumpeter and the suggested revision does mention the trumpet section, this is not the main reason to make the revision. Choices C and D are incorrect because the sentence should be revised as suggested.

Question 29

Choice D is the best answer because it clearly and concisely identi es what Redman did to accommodate Armstrong's style.

Choices A, B, and C are incorrect because they are redundant. The verbs "adjust," "alter," "change," and "rework" have essentially the same meaning and should not be used together.

Question 30

Choice C is the best answer because no punctuation is needed before the quotation.

Choices A, B, and D are incorrect because they all include unnecessary punctuation.

Question 31

Choice D is the best answer because only "however" indicates the contrast between the information in the previous sentence and the information in this sentence. The previous sentence states that in 1925 Armstrong left Henderson's band, while this sentence says that though he had left, his in uence continued to be noticeable in the band's music.

Choices A, B, and C are incorrect because they do not indicate a contrast between the rst two sentences in the paragraph.

Question 32

Choice B is the best answer because it is idiomatic. When one situation changes to another, it can be said that the situation "gives way" to another.

Choices A, C, and D are incorrect because they are not idiomatic and do not make sense when substituted into the sentence.

Question 33

Choice D is the best answer because the pronoun "that" is used correctly to refer to "arrangements." A comma isn't used in this context because the clause following the main clause is needed to complete the meaning of the sentence.

Choices A, B, and C are incorrect because each uses a comma inappropriately. Because the clause that follows "arrangements" is essential to the formation of the sentence, no comma should be used.

Question 34

Choice D is the best answer because sentence 6 refers to commonplace "stories" about young artists being able to survive in big cities, and sentence 3 explains that "these tales" may have been true to some degree. Sentence 3 should be placed after sentence 6.

Choices A, B, and C are incorrect because "these tales" in sentence 3 must refer to something that has been discussed previously. No stories or tales are mentioned in sentences 1, 2, or 4.

Question 35

Choice D is the best answer because the pronoun "you," which refers in this context to people in general, is consistent with the other pronoun, "your," in the sentence ("time to practice your art").

Choices A, B, and C are incorrect because the pronoun "one" and the nouns "artist" and "artists" are not consistent in person with the pronoun "your."

Question 36

Choice B is the best answer because "however" indicates the appropriate relationship between the claim in the previous sentence (artists could once get by in a big city) and the claim in this sentence ("this life is no longer possible"). It signals the contrast between the past and present.

Choices A, C, and D are incorrect because the claim in this sentence is not a result or an example of the claim in the previous sentence.

Question 37

Choice C is the best answer because "such as" indicates that examples will follow, and "upscale venues" completes the contrast with "affordable theaters, jazz cafes, and art galleries."

Choices A, B, and D are incorrect. In choice A, "other places" is

new businesses. Choice B mischaracterizes the examples as places "where artists are unlikely to spend money." The contrast in this sentence is not between places where artists spend money and places where they don't; rather, it is between places where artists have opportunities to perform or display their art ("affordable theaters, jazz cafes, and art galleries") and places that do not accommodate "the artist just starting out" ("eb2S.L>BDC BT 10 0 0 10 72 189stson()t0.g1 Q y, ng r-151 >>BDCn rtuim0ta

Question 38

Choice A is the best answer because "so far as," meaning "to the extent or degree," is idiomatic in this context.

Choices B, C, and D are incorrect because the resulting phrases ("go too far to declare," "go farther to declare," "go to declare") are unidiomatic in this context.

Question 39

Choice C is the best answer because the dash is appropriate in this sentence. In this case, it draws attention to the idea that Cleveland, unlike cities that are too expensive, is a great place for young artists.

Choices A, B, and D are incorrect because the semicolon, colon, and single parenthesis are all used inappropriately in this sentence. In choice A, the semicolon links an independent clause to a dependent clause. In choice B, the colon is unnecessary and should be deleted. In choice D, the single parenthesis must be paired with another parenthesis after "artists."

Question 40

Choice D is the best answer because it is clear and doesn't repeat information already provided in the sentence.

Choices A, B, and C are incorrect because they either repeat information or add unnecessary words.

Question 41

Choice D is the best answer because the plural pronoun "those" agrees with its antecedent "prices," and two similar things are being compared: the prices of homes and the prices of cars.

Choice A is incorrect because it compares the prices of homes to "an economy car" rather than to other prices. Choice B is incorrect because the pronoun and noun, "that" and "car," need to be plural to be consistent with "prices" of "homes." Choice C is incorrect because the singular possessive "car's" doesn't make sense in the comparison. In this context, the phrase "an economy car's" would be understood to refer to a price, but "price" does not appear as an antecedent in the sentence. The comparison should be to "prices."

Question 42

Choice A is the best answer because the singular possessive pronoun "its" agrees in number with the antecedent "Cleveland."

Choices B and C are incorrect because they are contractions, not possessive pronouns. Choice D is incorrect because it is a plural

possessive pronoun. The correct answer needs to be singular to agree with the singular antecedent "Cleveland."

Question 43

Choice C is the best answer because the sentence should not be added. It contains an irrelevant detail that doesn't support previous statements.

Choices A and B are incorrect because the sentence is irrelevant and shouldn't be added. Choice D is incorrect because the sentence would not be relevant in the nal paragraph either.

KEY:C

DIFFICULTY: Easy

Question 44

Choice B is the best answer because "discount" in this context means "disregard."

Choice A is incorrect because "undermine" means "weaken or impair," which does not make sense in the context of the sentence. Choices C and D are incorrect because their tone is too colloquial and inconsistent with the tone of the passage.

KEY:B

DIFFICULTY: Hard

Math Test – No Calculator Answer Explanations

Question 1

Choice D is correct. The expression $15x - 24ax$ contains two terms with common factors. One of the common factors is x. Factoring x from the expression gives $x(15 - 24a)$, which can also be written as $(15 - 24a)x$.

Choices A, B, and C are incorrect and may result from incorrectly combining and/or factoring the two terms of the expression. One can check that the expressions in each of these choices are not equivalent to the given expression. For example, in choice A, for $x = 1$ and $a = 0$, the value of the given expression is -15 and the value of the expression $39ax^2$ is 0.

Question 2

Choice A is correct. Dividing each side of the equation $d = rt$ by t results in an equation that expresses r in terms of the other variables: $r = \dfrac{d}{t}$.

Choices B, C, and D are incorrect and may result from algebraic errors when rewriting the given equation.

Question 3

Choice B is correct. The equation $x - y = 4$ can be rewritten as y

Choices A, B, and D are incorrect because none of these values satisfy the given equation.

Question 5

Choice C is correct. Multiplying each side of the second equation by 3 and then adding the equations eliminates x, as follows:

$$\begin{array}{r} 3x \quad 4y \quad 20 \\ 3x \quad 30y \quad 48 \\ \hline 0 \quad 34y \quad 68 \end{array}$$

Solving the obtained equation for y gives y 2.

Substituting 2 for y in the second equation of the system gives x 10(2) 16, which simpli es to x 20 16, or x 4.

Choices A, B, and D are incorrect because there is no solution to the system for which the x-coordinate is one of the numbers given in these choices. For example, substituting 14 for x in the second equation gives y 3. But the pair (14, 3) does not satisfy the rst equation, and it is therefore not a solution to the system of equations.

Question 6

Choice B is correct. If the equation y 36

tax and from multiplying by this factor on the wrong side of the equation. Choice C is incorrect and may result from multiplying by the sales tax factor on the wrong side of the equation. Choice D is incorrect and may result from using the factor $1 - 0.08 = 0.92$ instead of $1 + 0.08 = 1.08$ to calculate the sales tax.

Question 8

Choice B is correct. Any line that passes through the point $(-3, 3)$ and has a positive slope will intersect the y-axis at a point $(0, b)$ with $b > 3$; that is, such a line will have a y-intercept greater than 3. Therefore, a line that has a positive slope and a negative y-intercept cannot pass through the point $(-3, 3)$.

Choices A, C, and D are incorrect because they are points that a line with a positive slope and a negative y-intercept could pass through. For example, in choice A, the line with equation $y = \frac{1}{3}x - 2$ has a positive slope $\frac{1}{3}$ and a negative y-intercept (-2) but passes through the point $(-3, -3)$.

Question 9

Choice C is correct. If the length, in centimeters, of one piece of rope is represented by q, and each piece of rope must be at least 270 centimeters and no more than 280 centimeters long, then it follows that $270 \le q \le 280$. In turn, the total length x, in centimeters, of rope needed for the parachute is $18q$ because 18 pieces are needed. So, since $x = 18q$, multiplying all the terms of the inequality $270 \le q \le 280$ by 18 gives $(270 \times 18) \le 18q \le (280 \times 18)$, or $4,860 \le x \le 5,040$.

be expressed as the price of each box multiplied by the number of each type of box, which is $12.99n$ for nails and $14.99s$ for screws. And since this total cannot exceed $60, it follows that $12.99n + 14.99s \leq 60$.

Choice A is incorrect because the first inequality allows the total cost of nails and screws to exceed the carpenter's budget of $60, and the second inequality incorrectly expresses the constraint on the number of boxes that the carpenter can buy. That number must be greater than 1, since the carpenter must buy at least one box of nails and one box of screws. Choice B is incorrect because the second equation incorrectly expresses the constraint on the number of boxes that the carpenter can buy. That number must be greater than 1, since the carpenter must buy at least one box of nails and one box of screws. Choice C is incorrect because the first inequality allows for the total cost to exceed the carpenter's budget of $60.

Question 11

Choice A is correct. In the figure, triangles ABC and BDC are similar because each has an angle that measures $28°$, and they share angle C. Thus their corresponding sides are in proportion. The sides AB in triangle ABC and BD in triangle BDC correspond to each other because they are opposite the same angle in both triangles (angle C), and the sides BC in triangle ABC and DC in triangle BDC correspond to each other because they are opposite the congruent angles with measure $28°$ in the corresponding triangles. Therefore, $\dfrac{AB}{BC} = \dfrac{BD}{DC}$.

Choices B, C, and D are incorrect because they are ratios that do not have the same value as $\dfrac{AB}{BC}$ and are likely the result of misunderstanding which triangles are similar or which sides of the triangles are corresponding sides.

Question 12

Choice C is correct. After distributing the outside exponents to each expression within the parentheses by the rules of exponents, the left side of the equation can be rewritten as

$$\left(x^2 y^3\right)^{\frac{1}{2}} \left(x^2 y^3\right)^{\frac{1}{3}} = x^{(2)\left(\frac{1}{2}\right)} y^{(3)\left(\frac{1}{2}\right)} \cdot x^{(2)\left(\frac{1}{3}\right)} y^{(3)\left(\frac{1}{3}\right)} = xy^{\frac{3}{2}} \cdot x^{\frac{2}{3}} y .$$

Multiplying the expressions within the parentheses and applying the exponent rules yields $x^{1+\frac{2}{3}} y^{\frac{3}{2}+1} = x^{\frac{5}{3}} y^{\frac{5}{2}}$, which means the equation $x^{\frac{5}{3}} y^{\frac{5}{2}} = x^{\frac{a}{3}} y^{\frac{a}{2}}$ is true for all positive values of x and y. It

follows that the corresponding exponents of x and y on both sides of

the equation must be equal, which yields a 5.

Choices A, B, and D are incorrect and may result from errors when applying the rules of exponents to the given expression.

Question 13

Choice B is correct. The graph of y (x 6)(x 12) is a parabola that

opens upward and has a vertical axis of symmetry. The vertex of

the parabola lies on this axis of symmetry, and the x-intercepts of

the parabola are equidistant from the axis of symmetry. Since the

equation y (x 6)(x 12) is in factored form, the x-intercepts of its

graph are (6, 0) and (12, 0). Therefore, the axis of symmetry is the

line x $\frac{6 \ (\ 12)}{2}$, or x 3. Because the vertex lies on the line

the x-coordinate of the vertex must also be

Choices A, C, and D and may result from
misunder   ationship between the given equat
               tercepts of the parabola as well as the rel
between the x-intercepts of the parabola and the   e of the
parabola's vertex. For example, choice C ma   takenly
taking the x-intercepts of the graph of   2) as (6, 0)
and (12, 0) instead of as (6, 0) and

Question 14

The correct answer is 2.   is written in the form
mx n px r, where   hen the linear equation is
satis ed by any value   and will have in nitely many solutions.
Distributing 7 on the right-hand side of the given equation yields
21x 14 21x 7a. Therefore, the equation will have in nitely many
solutions if 14 7a; that is, if a 2.

Question 15

The correct answer is 90. Juliene practiced twice as long on
Monday as she did on Tuesday. Therefore, if x is the number of
minutes Juliene practiced on Tuesday, then 2x is the number of
minutes she practiced on Monday. The total amount of time Juliene
practiced on the two days is MC /Span <</Lang (en-US)/MCID 2209 >>BDC BT 1Tf 10.5 0 0 10.1 l10.8S110.5 208

Math Test – Calculator Answer Explanations

Question 1

Choice B

Question 4

Choice D is correct. In the   is correct. In the

Choice A is incorrect; it is the result of multiplying 400 characters per second by 5 characters per word. Choice C is incorrect because it is the number of characters that can be printed each minute, not the number of 5-character words that can be printed each minute. Choice D is the result of multiplying, rather than dividing, the $24,000$ characters the printer can print each minute by 5 characters per word.

Question 8

Choice C is correct. From Year 0 to Year 1, the salary increases by $$1,140$; from Year 1 to Year 2, the salary increases by $$1,174$; from Year 2 to Year 3, the salary increases by $$1,210$; and from Year 3 to Year 4, the salary increases by $$1,245$. Because the dollar amount of the salary increases each year at a nonconstant rate, a linear model will not be a good fit to the data. However, the ratio of the salary in a certain year to the salary in the preceding year remains about the same from one year to the next. For example, the ratio of the salary in Year 1 to the salary in Year 0 is $\frac{39,140}{38,000}$, and the ratio of the salary in Year 2 to the salary in Year 1 is $\frac{40,314}{39,140}$. Both these ratios are approximately 1.03, which corresponds to a 3% increase each year. Therefore, an exponential model increasing by approximately 3% each year would describe the data better than the models in the other choices.

Choices A and B are incorrect because they suggest a linear model is most appropriate; in a linear model, the dollar amount of the salary increase would be approximately the same from one year to the next. In this example, the dollar amount of the salary increase is increasing each year, so a linear model wouldn't fit the data well. Choice D is incorrect because the ratio of the salary in a certain year to the salary in the preceding year (for example, $\frac{40,314}{39,140}$ and $\frac{39,140}{38,000}$) is approximately 1.03, which corresponds to a 3% increase each year, not a 9% increase each year.

Question 9

Choice A is correct. Distributing the factor of -1 through the second expression in parentheses in $(x^2 y - 3y^2 - 5xy^2) - (-x^2 y - 3xy^2 - 3y^2)$ yields $x^2 y - 3y^2 - 5xy^2 + x^2 y + 3xy^2 + 3y^2$. Regrouping by like terms, the expression becomes $(x^2 y + x^2 y) + (-3y^2 + 3y^2) + (-5xy^2 + 3xy^2)$, which simplifies to $2x^2 y - 2xy^2$.

Choice B is incorrect; it is the result of adding, rather than subtracting, the given expressions $(x^2 y - 3y^2 - 5xy^2)$ and $(-x^2 y - 3xy^2 - 3y^2)$. Choice C is incorrect; it is the result of subtracting only the first term in the second expression from the first expression and adding the other terms in the second expression to the first expression. Choice D is incorrect; it is the result of attempting to multiply the first, second, and third terms in each of the two expressions rather than subtracting.

Question 10

Choice D is correct. The equation $4x + \frac{1}{2}x - 7 = 7\frac{1}{2}x - 7$ can be rewritten as $\frac{7}{2}x - 7 = \frac{7}{2}x - 49$, which results in the equation $-7 = -49$. Because -7 is not equal to -49, there is no value of x that makes the equation true. Therefore, there are no solutions to this equation.

Choice A is incorrect. It may be the result of substituting 0 for x in the given equation and incorrectly applying the distributive property on the right side of the equation, yielding $-7 = -7$. Choice B is incorrect and likely results from errors made when simplifying the left- and right-hand sides of the equation when solving for x. Choice C is incorrect and may result from incorrectly distributing the 7 on the right-hand side of the equation to obtain $\frac{7}{2}x - 7 = \frac{7}{2}x - 7$; this equation has infinitely many solutions.

Question 11

Choice D is correct. The range of Joseph's bills is $\$193.12 - \$145.30 = \$47.82$, which is greater than the range of Samuel's bills, which is $\$188.99 - \$149.23 = \$39.76$. The median of Joseph's bills is $\$180.33$, which is less than the median of Samuel's bills, $\$181.27$.

Choices A, B, and C are incorrect. The range of Joseph's bills is greater than the range of Samuel's bills, and the median of Joseph's bills is less than the median of Samuel's bills. Each of choices A, B, and C gets at least one of these facts wrong.

Question 12

Choice A is correct. According to the table, there are   16 double-

decker train cars that have been in service for less than   10

Question 16

Choice B is correct. Since the 327 9th-grade students are a random sample selected from all 9th-grade students in the school, the sample can be considered to be representative of all the 9th-grade students in the school. This means that the proportion of 9th-grade students in the school who had a GPA of 3.0 or greater can be estimated using the proportion of 9th-grade students who had a GPA of 3.0 or greater in the sample. Of the 327 9th-grade students in the study, $61 + 95 = 156$ students had a GPA of 3.0 or greater. Therefore, the probability that a 9th-grade student at the school chosen at random had a GPA of 3.0 or greater is estimated to be $\frac{156}{327} \approx 0.477$, which rounds to 0.48.

Choice A is incorrect. This answer choice is the result of dividing the number of students in the study enrolled in Propel with a GPA of 3.0 or greater, 61, by the number of students in the study not enrolled in Propel with a GPA of 3.0 or greater, 95, rather than dividing the total number of students with a GPA of 3.0 or higher by the total number of students in the study. Choice C is incorrect. This answer choice reflects the probability that a 9th-grade student, selected at random, is enrolled in Propel. It is the result of dividing the total number of students enrolled in Propel, rather than the total number of students with a GPA of 3.0 or greater, by the total number of students in the study. Choice D is incorrect. This answer choice reflects the probability that a 9th-grade student, selected at random, is enrolled in Propel and has a GPA of 3.0 or greater. It is the result of dividing the number of students who both are enrolled in Propel and had a GPA of 3.0 or greater, rather than all students who had a GPA of 3.0 or greater, by the total number of students in the study.

Question 17

Choice D is correct. There are 61 students enrolled in Propel who had a GPA of 3.0 or greater and 48 students enrolled in Propel who had a GPA of less than 3.0, so there are a total of $61 + 48 = 109$ students enrolled in Propel. The percentage of students enrolled in Propel who had a GPA of 3.0 or greater is $\frac{61}{109} \times 100\% \approx 55.96\%$, or about 56%. There are 95 students who are not enrolled in Propel who had a GPA of 3.0 or greater and 123 students not enrolled in

KEY:

Propel who had a GPA of less than 3.0, so there are a total of $95 + 123 = 218$ students who are not enrolled in Propel. The percentage of students not enrolled in Propel who had a GPA of 3.0 or greater is $\frac{95}{218} \times 100\% \approx 43.58\%$, or about 44%. Therefore, the difference, to the nearest whole percent, between the percentage of

Question 19

Choice C is correct. Let S be the length, in inches, of each of the 4 sides of the square sculpture, and let T be the length, in inches, of each of the 3 sides of the equilateral triangle sculpture. Since the rod used to make the square sculpture is the same length as the rod used to make the triangle sculpture, $4S = 3T$. The fact that each side of the triangle, T, is 2 inches longer than each side of the square, S, can be expressed by the equation $T = S + 2$. Substituting $S + 2$ for T in the equation $4S = 3T$ gives $4S = 3(S$

Question 21

Choice B is correct. It is given that the equation $A = 4p - 64$ will relate the area A, in square feet, of the path and the perimeter p, in feet, of the fountain. This equation can be rewritten to express p in terms of A: subtracting 64 from each side of $A = 4p - 64$ gives A

Choices A, B, and C are incorrect because each of these functions
fails to give the correct value $C = 100$ for $t = 0$.

Choices A, B, and C are incorrect. Each of these points lies on the line with equation $x = \frac{1}{3}y$, but none of these points lies on the line with equation $154 - 4y = 10x$. For example, the point $(1, 3)$ does not lie on the line with equation $154 - 4y$

Question 30

The correct answer is 1368. According to the graph, the king crab supply in 2006 was 180 million pounds. It is given that 60% of this supply was sold at $8 per pound and the rest of the supply was sold at $7 per pound. It follows that (0.6)(180) 108 million pounds of king crab was sold at $8 per pound, and 180 – 108 72 million pounds of king crab was sold at $7 per pound. Therefore, the revenue generated, in millions of dollars, from the sales of king crab in 2006 was (108)(8) (72)(7) 1368

Question 31

The correct answer is 85. According to the graph, the king crab supply in 2011 was 80 million pounds. So at the price of $17 per pound, the revenue generated, in millions of dollars, from the sales of king crab in 2011 was (80)(17) 1360 Since x millions pounds of king crab was sold in 2012 at the price of $16 per pound, the revenue in 2012 was $16x$ million dollars. It is given that the revenue generated from the sales of king crab in 2011 was the same as the revenue in 2012 Therefore, $16x$ 1360 so x 85.