

Question ID dadd5a11

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: dadd5a11

Approximate Rates of Speech and Information Conveyed for Five Languages

Language	Rate of speech (syllables per second)	Rate of information conveyed (bits per second)
Serbian	7.2	39.1
Spanish	7.7	42.0
Vietnamese	5.3	42.5
Thai	4.7	33.8
Hungarian	5.9	34.6

A group of researchers working in Europe, Asia, and Oceania conducted a study to determine how quickly different Eurasian languages are typically spoken (in syllables per second) and how much information they can effectively convey (in bits per second). They found that, although languages vary widely in the speed at which they are spoken, the amount of information languages can effectively convey tends to vary much less. Thus, they claim that two languages with very different spoken rates can nonetheless convey the same amount of information in a given amount of time.

Which choice best describes data from the table that support the researchers’ claim?

- A. Among the five languages in the table, Thai and Hungarian have the lowest rates of speech and the lowest rates of information conveyed.
- B. Vietnamese conveys information at approximately the same rate as Spanish despite being spoken at a slower rate.
- C. Among the five languages in the table, the language that is spoken the fastest is also the language that conveys information the fastest.
- D. Serbian and Spanish are spoken at approximately the same rate, but Serbian conveys information faster than Spanish does.

ID: dadd5a11 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it provides the most direct support from the table for the claim that two languages can convey similar amounts of information even if they’re spoken at different rates. The table shows the approximate rates at which five languages are spoken and the rates at which those five languages convey information. Vietnamese is spoken at around 5.3 syllables per second, whereas Spanish is spoken at around 7.7 syllables per second, but the two languages convey information at very similar rates: Vietnamese at a rate of around 42.5 bits per second and Spanish at a rate of around 42.0 bits per second. Thus, the description of Vietnamese conveying information at around the same rate that Spanish does despite being spoken more slowly supports the claim in the text that languages can convey the same amount of information even if spoken at different rates.

Choice A is incorrect because it isn't true that Thai and Hungarian have the lowest rates of speech of the five languages shown. According to the table, Hungarian is spoken at around 5.9 syllables per second, which is faster than Vietnamese (5.3 syllables per second). Additionally, even if this statement were true, the assertion that two languages are spoken the slowest and convey information the slowest wouldn't support the claim that languages can convey the same amount of information even if they're spoken at different rates. Choice C is incorrect because it isn't true that the fastest-spoken language (Spanish, at 7.7 syllables per second) also conveys information the fastest: Spanish conveys information at 42.0 bits per second, which is slower than the 42.5 bits-per-second rate at which Vietnamese conveys information. Additionally, even if this statement were true, the assertion that the language spoken the fastest also conveys information the fastest has no bearing on the claim that languages can convey the same amount of information even if they're spoken at different rates. Choice D is incorrect because it isn't true that Serbian conveys information faster than Spanish does. According to the table, Serbian conveys information at a rate of around 39.1 bits per second, which is slower than the 42.0 bits-per-second rate at which Spanish conveys information.

Question Difficulty: Hard

Question ID 902e2e43

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 902e2e43

In countries with right-hand traffic, drivers who want to make a left turn at a traffic intersection with stoplights have to wait for either a gap in oncoming traffic or a designated left-turn signal to turn green. At busy intersections, this often causes a backup of vehicles waiting to turn left or being prevented from proceeding by left-turning vehicles in front of them. Transportation researcher Vikash V. Gayah claims that in urban areas eliminating the option to turn left at busy intersections—both with and without dedicated left-turn signals—would improve traffic flow and, as a result, reduce overall travel times even if such a restriction would require drivers to sometimes travel a slightly longer distance.

Which finding, if true, would most directly support the researcher’s claim?

- A. In a town that installed left-turn signals at all busy intersections, seven out of ten survey respondents agreed with the statement “the streets in my community are easier to navigate by motor vehicle than before.”
- B. A traffic study of intersections in a large city shows that on average drivers wait longer to make a left turn at intersections without left-turn signals than at intersections with such signals.
- C. After a city eliminated left turns at busy intersections, a package-delivery company reports that its drivers have been able to reach more addresses in the city daily, on average, and therefore deliver more packages there annually.
- D. Statistics reveal that school buses in a city that eliminated left turns at most intersections took on average two minutes longer to complete their routes after the restriction took effect than they did before.

ID: 902e2e43 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents a finding that, if true, would most directly support Vikash V. Gayah’s claim that eliminating the option to turn left at busy intersections would improve traffic flow and reduce overall travel times. The text begins by describing a problem encountered by drivers in countries with right-hand traffic—namely that drivers wanting to make a left turn must wait for either gaps in oncoming traffic or for designated left-turn signals before proceeding. The resulting backup of vehicles causes increased traffic congestion at busy intersections that slows overall travel times. According to Gayah, eliminating left turns from busy intersections in urban areas would ease the congestion caused by vehicles waiting to turn left. If vehicles spend less time waiting at intersections for left turns, faster overall travel times would result even if some drivers would have to drive slightly longer distances to make the desired left turn. Drivers for package-delivery companies, who presumably spend most of the day driving to destinations across the city in which they are based, would likely provide a good indication of overall traffic patterns across the city. A finding that after a city had eliminated left turns at busy intersections, package-delivery companies were able to complete more daily deliveries on average—which implies faster travel times between package destinations—would therefore support the claim that overall travel times would decrease if left turns were eliminated at busy intersections.

Choice A is incorrect because a finding that a majority of survey respondents agreed with the statement that implementing left-turn signals at all busy intersections made navigating streets in their communities easier wouldn’t support the claim that

eliminating the option to turn left altogether at some busy intersections—both with and without dedicated left-turn signals—would improve the flow of traffic and overall traffic times. In fact, the text emphasizes that designated left-turn signals contribute to increased congestion because they require drivers to wait to turn left, which results in a backup of vehicles. Installing such signals at all busy intersections would thus potentially compound the problem of congestion, not improve it. Moreover, although making streets easier for drivers to navigate might indicate that left-turn signals are beneficial to drivers, it doesn't indicate that overall travel times would necessarily be reduced. Choice B is incorrect because a study concluding that drivers wait longer to make left turns at intersections without dedicated left-turn signals than at intersections with such signals wouldn't support the claim that eliminating the option to turn left altogether would reduce overall travel times. In fact, the finding would merely support the idea that installing left-turn signals would likely reduce the time drivers spend waiting at busy intersections that didn't previously have left-turn signals, not that overall travel times would be reduced. Choice D is incorrect because the finding that after a restriction eliminating left turns at most intersections took effect, school buses took longer to complete their routes than they did before the restriction was implemented would contradict rather than support the researcher's claim that eliminating left turns would reduce overall travel times.

Question Difficulty: Hard

Question ID b0574a52

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: b0574a52

“Poetry” is a 1919 poem by Marianne Moore. The poem highlights an ambivalence toward poetry as the speaker acknowledges its merits while also expressing a sense of displeasure, writing _____

Which quotation from “Poetry” most effectively illustrates the claim?

- A. “nor is it valid / to discriminate against ‘business documents and / school-books’; all these phenomena are important.”
- B. “One must make a distinction / however: when dragged into prominence by half poets, the result is not / poetry”
- C. “when [poems] become so derivative as to become unintelligible, the / same thing may be said for all of us—that we / do not admire what / we cannot understand.”
- D. “Reading [poetry], however, with a perfect contempt for it, one discovers that there is in / it after all, a place for the genuine.”

ID: b0574a52 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most effectively uses a quotation from "Poetry" to illustrate the claim that the poem highlights an ambivalence, or a conflicted attitude, toward poetry. In the quotation, the speaker suggests that one might read poetry with "contempt," or disdain, for it, but even with this negative attitude one will find "a place for the genuine." Because the quotation expresses conflicting attitudes toward poetry, it effectively illustrates the speaker’s ambivalence in discussing the merits and displeasure of reading poetry.

Choice A is incorrect because it doesn’t mention poetry or show ambivalence. Choice B is incorrect. Although the idea of "half poets" may seem to relate to ambivalence, the speaker mentions only negative attitudes toward certain works and the quotation therefore lacks a contrasting positive or neutral attitude that would be needed to indicate ambivalence. Choice C is incorrect because the speaker mentions only negative attitudes toward certain works and the quotation therefore lacks a contrasting positive or neutral attitude that would be needed to indicate ambivalence.

Question Difficulty: Hard

Question ID 2d15748e

Assessment	Test	Domain	Skill	Difficulty
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ID: 2d15748e

Electra is a circa 420–410 BCE play by Sophocles, translated in 1870 by R.C. Jebb. Electra, who is in mourning for her dead father and her long-absent brother, is aware of the intensity of her grief but believes it to be justified: _____

Which quotation from *Electra* most effectively illustrates the claim?

- A. "O thou pure sunlight, and thou air, earth's canopy, how often have ye heard the strains of my lament, the wild blows dealt against this bleeding breast, when dark night fails!"
- B. "Send to me my brother; for I have no more the strength to bear up alone against the load of grief that weighs me down."
- C. "I know my own passion, it escapes me not; but, seeing that the causes are so dire, will never curb these frenzied complaints, while life is in me."
- D. "But never will I cease from dirge and sore lament, while I look on the trembling rays of the bright stars, or on this light of day."

ID: 2d15748e Answer

Correct Answer: C

Rationale

Choice C is the best answer. Electra states that she "knows her own passion," which shows that she's aware of the intensity of her grief. But she also claims that the "causes are so dire"—meaning the reasons for her grief are so awful—that she can't let it go, which shows that she believes her grief is justified.

Choice A is incorrect. This quotation doesn't show that Electra believes her grief is justified. It shows that Electra is aware of its intensity, but it doesn't suggest that she believes she has a legitimate reason for feeling that way. Choice B is incorrect. This quotation doesn't show that Electra believes her grief is justified. It shows that Electra is aware of its intensity, but it doesn't suggest that she believes she has a legitimate reason for feeling that way. Choice D is incorrect. This quotation doesn't show that Electra believes her grief is justified. It shows that Electra is aware of the intensity of her grief, but it doesn't suggest that she has a legitimate reason for feeling that way.

Question Difficulty: Hard

Question ID 49adb38e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 49adb38e

Many archaeologists will tell you that categorizing excavated fragments of pottery by style, period, and what objects they belong to relies not only on standard criteria, but also on instinct developed over years of practice. In a recent study, however, researchers trained a deep-learning computer model on thousands of images of pottery fragments and found that it could categorize them as accurately as a team of expert archaeologists. Some archaeologists have expressed concern that they might be replaced by such computer models, but the researchers claim that outcome is highly unlikely.

Which finding, if true, would most directly support the researchers’ claim?

- A. In the researchers’ study, the model was able to categorize the pottery fragments much more quickly than the archaeologists could.
- B. In the researchers’ study, neither the model nor the archeologists were able to accurately categorize all the pottery fragments that were presented.
- C. A survey of archaeologists showed that categorizing pottery fragments limits the amount of time they can dedicate to other important tasks that only human experts can do.
- D. A survey of archaeologists showed that few of them received dedicated training in how to properly categorize pottery fragments.

ID: 49adb38e Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents a finding that, if true, would support the researchers’ claim that archaeologists are unlikely to be replaced by certain computer models. The text explains that although archaeologists hold that categorizing pottery fragments relies on both objective criteria and instinct developed through direct experience, researchers have found that a computer model can categorize the fragments with the same degree of accuracy as the humans can—a finding that has caused some archaeologists to worry that their own work won’t be needed any longer. If survey results indicate that categorizing pottery fragments limits the amount of time archaeologists can dedicate to other important tasks that only human experts can do, that would mean that computer models aren’t able to do all of the important things archaeologists do, thus supporting the researchers’ claim that computer models are unlikely to replace human archaeologists.

Choice A is incorrect because if it were true that the computer model could categorize the pottery fragments much more quickly than the archaeologists could, that would weaken the researchers’ claim that archaeologists are unlikely to be replaced by certain computer models, since it would demonstrate that the models could conduct the archaeologists’ work not only with equal accuracy but also at a faster pace. Choice B is incorrect because the inability of both the computer model and the archaeologists to accurately categorize all of the pottery fragments presented wouldn’t support the researchers’ claim that archaeologists are unlikely to be replaced by certain computer models. The text indicates that some archaeologists are worried because the computer model’s accuracy is equal to their own, and that could be the case whether both were perfectly accurate or were unable

to achieve complete accuracy. Choice D is incorrect because survey results showing that few archaeologists received special training in properly categorizing pottery fragments wouldn't support the researchers' claim that archaeologists are unlikely to be replaced by certain computer models. The amount of special training in categorizing pottery fragments that archaeologists have received has no direct bearing on whether computer models' success at categorizing fragments will lead to the models replacing the archaeologists.

Question Difficulty: Hard

Question ID e7899abb

Assessment	Test	Domain	Skill	Difficulty
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ID: e7899abb

E-book Sales as a Percentage of Total Unit Sales in All Book Formats for a Large US Trade Publisher, by Genre, 2006, 2011, 2016

Genre	2006	2011	2016
science fiction and fantasy	0.6	27.7	36.7
cookbooks	0	2.9	10.5
travel guides	0	5.5	24.6
romance	0.3	40.6	56.2

E-books became an increasingly popular means of reading in the United States in the 2000s and 2010s, though that popularity was concentrated in titles that, like those in most fiction genres, are meant to be read straight through from beginning to end. For books in nonfiction genres that do not tell stories and require the reader to flip back and forth through a volume, e-books were significantly less commercially successful. This can be seen by comparing _____

Which choice most effectively uses data from the table to illustrate the claim?

- A. the percentage of 2016 cookbook sales that were e-books with the percentage of 2016 science fiction and fantasy sales that were e-books.
- B. the percentage of 2006 romance sales that were e-books with the percentage of 2016 romance sales that were e-books.
- C. the percentage of 2006 romance sales that were e-books with the 2006 science fiction and fantasy sales that were e-books.
- D. the percentage of 2011 travel guide sales that were e-books with the percentage of 2016 travel guide sales that were e-books.

ID: e7899abb Answer

Correct Answer: A

Rationale

Choice A is the best answer because it uses data from the table to effectively support the claim that book genres that typically require the reader to start at the beginning of the story and read straight through are more commercially successful as e-books than other genres. For each of three years, the table presents four book genres and the percentage of total sales for each genre in e-book format. Cookbooks, a nonfiction genre, do not require the reader to read straight through. According to the table, 10.5 percent of total cookbook sales in 2016 were in the e-book format. The 2016 percentage of e-book sales was 36.7 percent in the science fiction and fantasy genre, which are typically stories read straight through from start to finish. The higher percentage of total sales of the story-based e-books in 2016 supports the claim in the text.

Choice B is incorrect because it compares the e-book sales of romance books in 2006 to those in 2016. Romance books are meant to be read straight through from start to finish. The text claims that books that are not stories and do not require reading straight through are not as commercially successful in e-book format as those that do. As this choice is only comparing e-book sales for one genre, it does not support the claim. Choice C is incorrect because both science fiction and fantasy and romance novels are fiction books meant to be read straight through from beginning to end. The text claims that books that are not stories and do not require reading straight through are less commercially successful in e-book format than those that do. As this choice does not compare e-book sales of story genres to e-book sales in genres that are not stories, it does not support the claim. Choice D is incorrect. Although the data in the table show that the travel guide e-books made up a greater percentage of total sales in 2016 than in 2011, this doesn't illustrate the claim in the text that e-books in nonfiction genres not meant to be read straight through are less commercially successful. The claim cannot be supported without comparing the percentage of e-book sales between fiction and nonfiction book genres from the table.

Question Difficulty: Hard

Question ID d5abe412

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: d5abe412

An Ideal Husband is an 1895 play by Oscar Wilde. In the play, which is a satire, Wilde suggests that a character named Lady Gertrude Chiltern is perceived as both extremely virtuous and unforgiving, as is evident when another character says _____

Which quotation from *An Ideal Husband* most effectively illustrates the claim?

- A. "Lady Chiltern is a woman of the very highest principles, I am glad to say. I am a little too old now, myself, to trouble about setting a good example, but I always admire people who do."
- B. "Do you know, [Lady Chiltern], I don't mind your talking morality a bit. Morality is simply the attitude we adopt towards people whom we personally dislike."
- C. "[Lady Chiltern] does not know what weakness or temptation is. I am of clay like other men. She stands apart as good women do—pitiless in her perfection—cold and stern and without mercy."
- D. "Lady Chiltern, you are a sensible woman, the most sensible woman in London, the most sensible woman I know."

ID: d5abe412 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most effectively uses a quotation to illustrate the claim that Lady Gertrude Chiltern is perceived as "both extremely virtuous and unforgiving." In the quotation, a man describes Lady Chiltern as someone who "does not know what weakness or temptation is." In other words, the man regards her as someone who is strong and adheres to a strict definition of moral perfection. However, he ironically suggests that this definition excludes mercy and forgiveness—qualities that are also thought of as virtues; according to him, Lady Chiltern is "pitiless in her perfection—cold and stern and without mercy." This description supports the idea that Lady Chiltern is perceived by others as virtuous as well as unforgiving.

Choice A is incorrect. The quotation supports the claim that Lady Chiltern is perceived as virtuous, in that it describes her as "a woman of the very highest principles." However, it doesn't characterize her as unforgiving or being perceived as such. Choice B is incorrect. The quotation suggests that Lady Chiltern is concerned with morality, but it suggests that her interest in discussing it is fundamentally hypocritical and functions as a means by which to judge others. However, the quotation doesn't address the question of whether Lady Chiltern is unmerciful to those who seek forgiveness for harm they have caused. Choice D is incorrect because it doesn't address either Lady Chiltern's perceived virtuousness or her perceived lack of forgiveness; instead, it expresses the belief that she is sensible.

Question Difficulty: Hard

Question ID 8b39297d

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 8b39297d

Pulitzer Prize–winning writer Héctor Tobar has built a multifaceted career as both a journalist and an author of short stories and novels. In an essay about Tobar’s work, a student claims that Tobar blends his areas of expertise by applying journalism techniques to his creation of works of fiction.

Which quotation from a literary critic best supports the student’s claim?

- A. “For one novel, an imagined account of a real person’s global travels, Tobar approached his subject like a reporter, interviewing people the man had met along the way and researching the man’s own writings.”
- B. “Tobar got his start as a volunteer for *El Tecolote*, a community newspaper in San Francisco, and wrote for newspapers for years before earning a degree in creative writing and starting to publish works of fiction.”
- C. “Many of Tobar’s notable nonfiction articles are marked by the writer’s use of techniques usually associated with fiction, such as complex narrative structures and the incorporation of symbolism.”
- D. “The protagonist of Tobar’s third novel is a man who wants to be a novelist and keeps notes about interesting people he encounters so he can use them when developing characters for his stories.”

ID: 8b39297d Answer

Correct Answer: A

Rationale

Choice A is the best answer. The example of Tobar approaching his subject “like a reporter,” including conducting “interviews” and “research,” shows Tobar applying journalism techniques to his fiction-writing.

Choice B is incorrect. This choice doesn’t support the claim. It tells us about Tobar’s initial career as a journalist, but it doesn’t say anything about him “applying journalism techniques” to his fiction-writing. Choice C is incorrect. This choice doesn’t support the claim. It tells us that Tobar applied fiction techniques to his nonfiction writing, but we’re looking for evidence of the other way around: that Tobar applied journalism techniques to his fiction-writing. Choice D is incorrect. This choice doesn’t support the claim. It tells us that a character in one of Tobar’s novels applied a journalism technique to his fiction-writing, but it doesn’t tell us that Tobar did that himself.

Question Difficulty: Hard

Question ID 1ee6eb70

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 1ee6eb70

Mean Ratings for Patients after 21 Days

Measure	Mean rating for participants aware of taking a placebo	Mean rating for participants in the control group
Global improvement	5.0	3.9
Symptom severity reduction	92.00	46.00
Quality of life improvement	11.4	5.4

To test whether a medication is effective, scientists compare outcomes for patients taking it and patients taking a placebo (a medically inactive substance). Patients normally aren’t told they’re receiving a placebo, but a research team conducted a study to see if there might be a medical benefit to telling them. The team used various measures to evaluate participants, with higher ratings indicating greater well-being in each measure. Compared to the mean ratings after 21 days for participants in the control group, the mean ratings for participants who were aware of taking a placebo _____

Which choice most effectively uses data from the table to complete the statement?

- A. ranged from 5.0 to 92.00, indicating that well-being varied widely from participant to participant.
- B. were lower for two measures, with the rating for only one measure indicating greater well-being for these participants.
- C. ranged from 3.9 to 46.00, with no rating indicating greater well-being in any measure for these participants.
- D. were higher for all three measures, indicating greater overall well-being for these participants.

ID: 1ee6eb70 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most effectively uses data from the table to complete the statement comparing the mean ratings for two different groups of participants in a study. The text explains that a research team evaluated the study's participants using various measures in order to learn whether there might be a medical benefit to telling patients they’re receiving a placebo. The table shows the team’s mean ratings for participants after 21 days for three of the measures: global improvement, symptom severity reduction, and quality of life improvement. According to the table, the mean ratings were higher for all three measures for participants aware of taking a placebo than for participants in the control group. Given that higher ratings indicate greater well-being, as the text states, the mean ratings in the table indicate greater overall well-being for participants aware of taking a placebo than for participants in the control group.

Choice A is incorrect because the table doesn't include data about individual participants; rather, it presents means, or mathematical averages, of ratings. For this reason, no conclusions can be drawn from data in the table about the extent to which well-being may have varied from participant to participant. Choice B is incorrect because according to the table, the mean ratings for participants aware of taking a placebo were higher for all three measures than for participants in the control group, not lower for two of the measures. Choice C is incorrect because it cites data from the table related to participants in the control group, not to participants aware of taking a placebo. Additionally, the mean ratings in the table for participants aware of taking a placebo are higher for all three measures than for participants in the control group. Given that higher ratings indicate greater well-being, as the text states, the ratings in the table for participants aware of taking a placebo indicate greater well-being for these participants in all three measures.

Question Difficulty: Hard

Question ID 2d8aec42

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PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 2d8aec42

Effect of Paywall Introduction on Newspaper Companies’ Revenues

Newspaper	Total revenue change (\$ in thousands)	Percentage change (%)	Newspaper size
Los Angeles Times	93,966	12.5	large
The New York Times	235,788	20	large
The Denver Post	−3,765	−1	small
Sun Sentinel	−24,899	−11.9	small
Chicago Tribune	94,492	19	large

Digital paywalls restrict access to online content to those with a paid subscription. In an investigation of the effect of paywalls on newspaper company revenues for print and digital subscriptions and advertising, Doug J. Chung and colleagues compared actual outcomes (with a paywall) to control estimates (without a paywall). The researchers concluded that introducing a paywall is generally more beneficial for larger newspapers, which have high circulation and tend to offer a substantial amount of unique online content.

Which choice best describes data from the table that support Chung and colleagues’ conclusion?

- A. The *Chicago Tribune* and the *Los Angeles Times* had similar total revenue changes, but the *Los Angeles Times* had a smaller percentage change.
- B. The *Los Angeles Times* had a 12.5% revenue change, while the *Chicago Tribune* had a 19% revenue change.
- C. The *New York Times* had a 20% revenue change, while the *Denver Post* had a −1% revenue change.
- D. The *Denver Post* had only a −1% revenue change, which was the smallest percentage change of the selected companies.

ID: 2d8aec42 Answer

Correct Answer: C

Rationale

Choice C is the best answer. The conclusion is that paywalls are more beneficial for large newspapers. This data supports that conclusion by comparing the revenue increase of a large newspaper to the revenue decrease of a small newspaper.

Choice A is incorrect. This choice doesn’t support the conclusion. It doesn’t include any small newspapers for comparison.

Choice B is incorrect. This choice doesn’t support the conclusion. It doesn’t include any small newspapers for comparison.

Choice D is incorrect. This choice doesn’t support the conclusion. It doesn’t include any large newspapers for comparison.

Question Difficulty: Hard

Question ID 6610977e

Assessment	Test	Domain	Skill	Difficulty
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ID: 6610977e

Archaeologist Petra Vaiglova, anthropologist Xinyi Liu, and their colleagues investigated the domestication of farm animals in China during the Bronze Age (approximately 2000 to 1000 BCE). By analyzing the chemical composition of the bones of sheep, goats, and cattle from this era, the team determined that wild plants made up the bulk of sheep’s and goats’ diets, while the cattle’s diet consisted largely of millet, a crop cultivated by humans. The team concluded that cattle were likely raised closer to human settlements, whereas sheep and goats were allowed to roam farther away.

Which finding, if true, would most strongly support the team’s conclusion?

- A. Analysis of the animal bones showed that the cattle’s diet also consisted of wheat, which humans widely cultivated in China during the Bronze Age.
- B. Further investigation of sheep and goat bones revealed that their diets consisted of small portions of millet as well.
- C. Cattle’s diets generally require larger amounts of food and a greater variety of nutrients than do sheep’s and goats’ diets.
- D. The diets of sheep, goats, and cattle were found to vary based on what the farmers in each Bronze Age settlement could grow.

ID: 6610977e Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents a finding that, if true, would most strongly support the team’s conclusion that cattle were likely raised closer to human settlements than sheep and goats were. The text explains that Vaiglova, Liu, and their colleagues analyzed the chemical composition of sheep, goat, and cattle bones from the Bronze Age in China in order to investigate the animals’ domestication, or their adaptation from a wild state to a state in which they existed in close connection with humans. According to the text, the team’s analysis showed that sheep and goats of the era fed largely on wild plants, whereas cattle fed on millet—importantly, a crop cultivated by humans. If analysis of the animal bones shows that the cattle’s diet also consisted of wheat, another crop cultivated by humans in China during the Bronze Age, the finding would support the team’s conclusion by offering additional evidence that cattle during this era fed on human-grown crops—and, by extension, that humans raised cattle relatively close to the settlements where they grew these crops, leaving goats and sheep to roam farther away in areas with wild vegetation, uncultivated by humans.

Choice B is incorrect because if it were true that sheep’s and goats’ diets consisted of small portions of millet, which the text states was a crop cultivated by humans, the finding would suggest that sheep and goats were raised relatively close to human settlements, weakening the team’s conclusion that cattle were likely raised closer to those settlements than sheep and goats were. Choice C is incorrect because the finding that cattle generally require more food and nutrients than do sheep and goats wouldn’t support the team’s conclusion that cattle were likely raised closer to human settlements than sheep and goats were. Nothing in the text suggests that cattle were incapable of obtaining sufficient food and nutrients without access to human-grown crops. Hence, even if cattle’s diets are found to have different requirements than the diets of sheep and goats, the cattle could have met those requirements from food located far from human settlements. Choice D is incorrect because if it were true that the

diets of sheep, goats, and cattle varied based on what the farmers in each Bronze Age settlement could grow, the finding would weaken the team's conclusion that cattle were likely raised closer to human settlements than sheep and goats were, suggesting instead that all three types of animals were raised close enough to human settlements to feed on those settlements' crops.

Question Difficulty: Hard

Question ID 0883a579

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 0883a579

The variety of species with adaptations to produce toxins is matched by the variety of uses of those toxins: northern stargazers, for example, use toxins for defense, whereas tiger snakes use toxins for predation and skeleton shrimp use toxins for intraspecific competition. In fact, a species may have adaptations enabling it to produce a toxin with multiple uses. Finding that the venom used by the Panamanian scorpion *Centruroides granosus* to subdue prey also inhibits growth of the pathogenic bacteria *Escherichia coli*, Dumas Gálvez and colleagues conclude that the particular form of venom production observed in *C. granosus* may have propagated through the species because it mitigates risk during feeding in addition to enhancing predation success.

Which finding, if true, would most directly support Gálvez and colleagues’ conclusion?

- A. *E. coli* does not appear to be virulent for *C. granosus* even when transmitted from prey captured without the use of venom.
- B. *E. coli* is frequently found in species preyed on by *C. granosus* and can survive exposure to the digestive juices of *C. granosus*.
- C. *C. granosus* appears to be chemically sensitive to prey infected with *E. coli* and tends to favor uninfected individuals.
- D. Exposure to *C. granosus* venom also inhibits the growth of nonpathogenic bacteria species common in the native environment of *C. granosus*.

ID: 0883a579 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents a finding that, if true, would most directly support Dumas Gálvez and colleagues’ conclusion that the venom produced by the scorpion species *Centruroides granosus* helps mitigate, or reduce, risk during feeding in addition to enhancing predation success. According to the text, Gálvez and colleagues found that the venom used by *C. granosus* both subdues prey and inhibits the growth of *Escherichia coli*, a pathogen that, if ingested by *C. granosus*, would presumably cause disease unless neutralized in some way. If it were true that *E. coli* is commonly found in species preyed on by *C. granosus* and, moreover, can withstand *C. granosus*’s digestive juices after ingestion, this would suggest that *C. granosus* likely relies on another mechanism to neutralize *E. coli* to make *E. coli*-infected prey safe for consumption by the scorpion species. Given that, as the text states, *C. granosus*’s venom was found to inhibit the pathogen’s growth, it therefore follows that the venom provides protection for *C. granosus* against *E. coli* that its digestive system wouldn’t otherwise provide, making it reasonable to conclude that the trait may have spread through the species because it mitigates risk during feeding.

Choice A is incorrect because a finding that *E. coli* doesn’t appear to be virulent, or dangerous, for *C. granosus* even when venom isn’t used would weaken rather than strengthen Gálvez and colleagues’ conclusion that a particular form of venom production spread in *C. granosus* in part because it helps reduce risk during feeding, since this finding would suggest that *E. coli* isn’t actually a risk to *C. granosus* when consuming prey. Choice C is incorrect because a finding that *C. granosus* can detect and avoid consuming *E. coli*-infected prey in the first place would suggest that an ability other than venom production is the primary factor that reduces *C. granosus*’s risk when feeding, which would suggest there has been less evolutionary pressure to develop venom that provides protection; thus, this finding wouldn’t clearly support the conclusion that *C. granosus*’s form of venom production

spread in the species in part because it helps reduce risk during feeding. Choice D is incorrect because Gálvez and colleagues' conclusion focuses on *C. granosus* venom in relation to the risk of *E. coli*, and a finding that the venom also inhibits nonpathogenic (not disease-causing) bacteria species, which presumably don't pose a risk if consumed, wouldn't be relevant to the conclusion that *C. granosus*'s particular form of venom production spread in the species in part because it helps reduce risk during feeding.

Question Difficulty: Hard

Question ID 0a46b3e5

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 0a46b3e5

Puerto Rico is an island in the Caribbean Sea. Indigenous people there started raising guinea pigs about 1,700 years ago. Guinea pigs had originally been domesticated much earlier in both Colombia and Peru. So were guinea pigs brought to Puerto Rico from Colombia or from Peru? Ancient Caribbean trade routes connected Puerto Rico with Colombia but not with Peru. Therefore, guinea pigs in Puerto Rico probably came from Colombia and descended from Colombian guinea pigs.

Which finding, if true, would most directly weaken the underlined claim?

- A. Ancient guinea pigs in Puerto Rico were genetically less similar to ancient guinea pigs in Colombia than to ancient guinea pigs in Peru.
- B. Guinea pigs are common in ancient Puerto Rican art, especially in pottery.
- C. Modern breeds of guinea pigs don't look like images of guinea pigs in ancient art from Puerto Rico, Colombia, and Peru.
- D. The guinea pig population of ancient Colombia was much larger than the guinea pig population of ancient Peru.

ID: 0a46b3e5 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents a finding that, if true, would most directly weaken the underlined claim that guinea pigs in Puerto Rico probably came from Colombia and descended from Colombian guinea pigs. The text makes this claim based on the fact that ancient trade routes connected Puerto Rico with Colombia but not with Peru. However, if it's true that ancient guinea pigs in Puerto Rico were genetically less similar to ancient guinea pigs in Colombia than to ancient guinea pigs in Peru, this would suggest that the Puerto Rican guinea pigs didn't descend from Colombian guinea pigs. Instead, Puerto Rican guinea pigs' greater genetic similarity to Peruvian guinea pigs implies that ancient guinea pigs in Puerto Rico were likely brought to the island from Peru, despite the lack of direct ancient trade routes between the two regions.

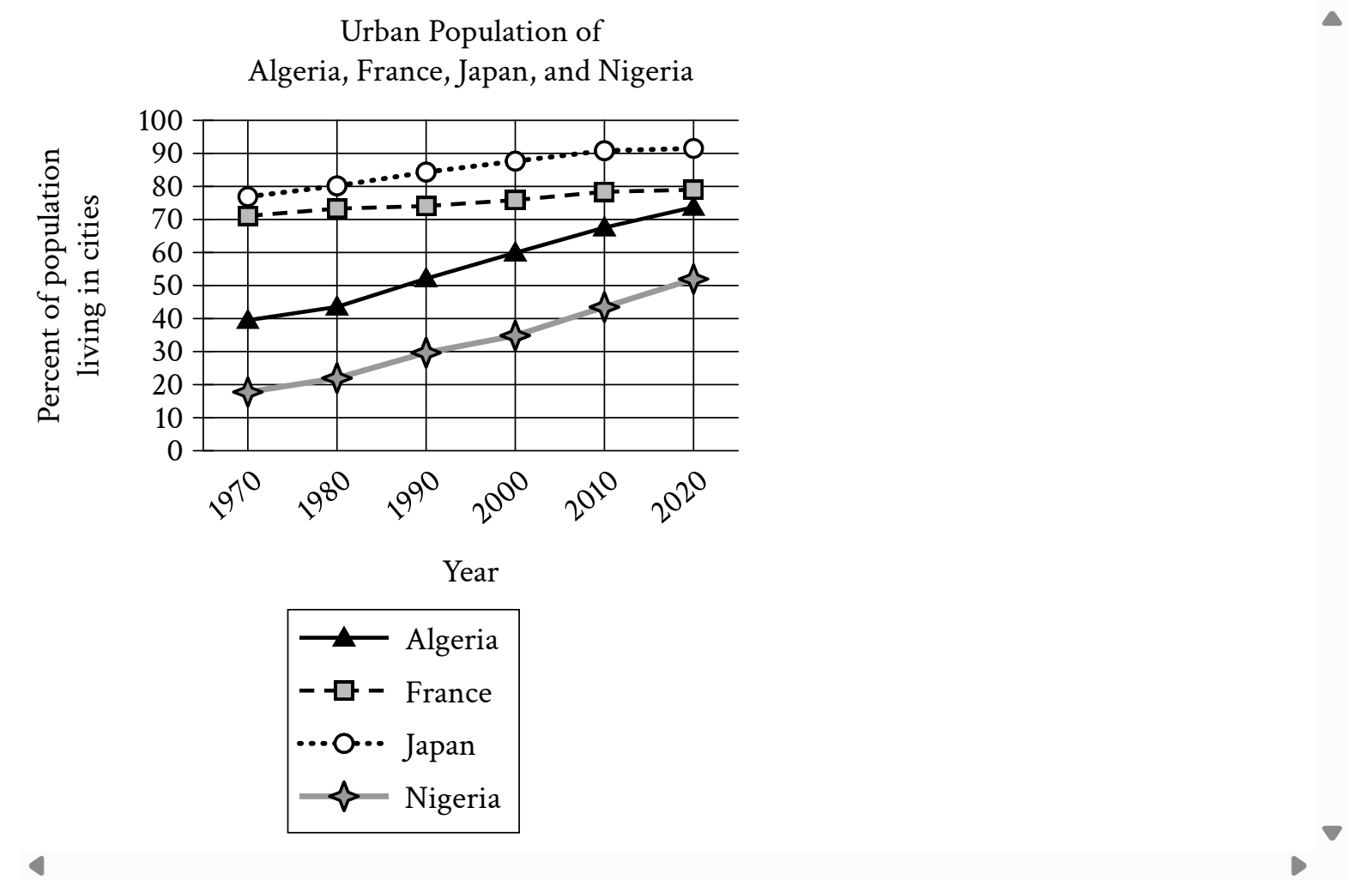
Choice B is incorrect. While a finding about how common guinea pig imagery is in ancient Puerto Rican art would indicate the cultural significance of guinea pigs, it wouldn't be relevant to a claim about the geographical origin or descent of the guinea pig population on the island. The guinea pigs depicted in the artwork could have descended from guinea pigs in either Colombia or Peru; therefore, the finding would neither weaken nor strengthen the claim that guinea pigs in Puerto Rico probably came from Colombia and descended from Colombian guinea pigs. Choice C is incorrect because the finding that modern breeds of guinea pigs don't look like images of guinea pigs in ancient art from Puerto Rico, Colombia, and Peru wouldn't address the ancestral relationships between ancient guinea pig populations in these three regions. Therefore, the finding would neither weaken nor strengthen the claim that guinea pigs in Puerto Rico probably came from Colombia and descended from Colombian guinea pigs. Choice D is incorrect because a finding about the population sizes of guinea pigs in ancient Colombia and ancient Peru wouldn't be relevant to a claim about which population the Puerto Rican guinea pigs likely descended from. The smaller guinea pig population of Peru could still have been the source for the Puerto Rican guinea pig population.

Question Difficulty: Hard

Question ID 50bdebcc

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div></div> <div></div> <div></div>

ID: 50bdebcc



The share of the world’s population living in cities has increased dramatically since 1970, but this change has not been uniform. France and Japan, for example, were already heavily urbanized in 1970, with 70% or more of the population living in cities. The main contributors to the world’s urbanization since 1970 have been countries like Algeria, whose population went from _____

Which choice most effectively uses data from the graph to complete the assertion?

- A. around 50% urban in 1970 to around 90% urban in 2020.
- B. less than 40% urban in 1970 to around 90% urban in 2020.
- C. less than 20% urban in 1970 to more than 50% urban in 2020.
- D. around 40% urban in 1970 to more than 70% urban in 2020.

ID: 50bdebcc Answer

Correct Answer: D

Rationale

Choice D is the best answer. This choice effectively uses data from the graph to complete the example. The line representing the percent of Algeria's population living in cities is the black triangle line. According to the graph, it started at 40% in 1970 and reached 70% in 2020.

Choice A is incorrect. This choice misreads the graph. The line representing the percent of Algeria's population living in cities is the black triangle line. According to the graph, it started at 40% in 1970 and reached 70% in 2020. Choice B is incorrect. This choice misreads the graph. The line representing the percent of Algeria's population living in cities is the black triangle line. According to the graph, it started at 40% in 1970 and reached 70% in 2020. Choice C is incorrect. This choice misreads the graph. The line representing the percent of Algeria's population living in cities is the black triangle line. According to the graph, it started at 40% in 1970 and reached 70% in 2020.

Question Difficulty: Hard

Question ID afd16fcc

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: afd16fcc

Jan Gimsa, Robert Sleight, and Ulrike Gimsa have hypothesized that the sail-like structure running down the back of the dinosaur *Spinosaurus aegyptiacus* improved the animal’s success in underwater pursuits of prey species capable of making quick, evasive movements. To evaluate their hypothesis, a second team of researchers constructed two battery-powered mechanical models of *S. aegyptiacus*, one with a sail and one without, and subjected the models to a series of identical tests in a water-filled tank.

- Which finding from the model tests, if true, would most strongly support Gimsa and colleagues’ hypothesis?
- A. The model with a sail took significantly less time to complete a sharp turn while submerged than the model without a sail did.
 - B. The model with a sail displaced significantly more water while submerged than the model without a sail did.
 - C. The model with a sail had significantly less battery power remaining after completing the tests than the model without a sail did.
 - D. The model with a sail took significantly longer to travel a specified distance while submerged than the model without a sail did.

ID: afd16fcc Answer

Correct Answer: A

Rationale

Choice A is the best answer. This finding would most strongly support the hypothesis. The hypothesis is that the sail improved the dinosaur’s ability to chase quick, evasive prey. This finding suggests that the sail helped the dinosaur make sharp turns more quickly, which supports that hypothesis.

Choice B is incorrect. This finding wouldn’t necessarily support the hypothesis. The hypothesis is that the sail improved the dinosaur’s ability to chase quick, evasive prey. It’s unclear how the sail displacing more water would relate to that hypothesis—it doesn’t seem to be relevant. Choice C is incorrect. This finding wouldn’t necessarily support the hypothesis. The hypothesis is that the sail improved the dinosaur’s ability to chase quick, evasive prey. It’s unclear how the difference in battery power between the models would relate to that hypothesis—it doesn’t seem to be relevant. Choice D is incorrect. This finding would actually weaken the hypothesis. The hypothesis is that the sail improved the dinosaur’s ability to chase quick, evasive prey. This finding suggests that the sail slowed the dinosaur down—which would probably make it worse at catching quick, evasive prey.

Question Difficulty: Hard

Question ID 084f845a

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 084f845a

Estimates of Tyrannosaurid Bite Force

Study	Year	Estimation method	Approximate bite force (newtons)
Cost et al.	2019	muscular and skeletal modeling	35,000–63,000
Gignac and Erickson	2017	tooth-bone interaction analysis	8,000–34,000
Meers	2002	body-mass scaling	183,000–235,000
Bates and Falkingham	2012	muscular and skeletal modeling	35,000–57,000

The largest tyrannosaurids—the family of carnivorous dinosaurs that includes *Tarbosaurus*, *Albertosaurus*, and, most famously, *Tyrannosaurus rex*—are thought to have had the strongest bites of any land animals in Earth’s history. Determining the bite force of extinct animals can be difficult, however, and paleontologists Paul Barrett and Emily Rayfield have suggested that an estimate of dinosaur bite force may be significantly influenced by the methodology used in generating that estimate.

Which choice best describes data from the table that support Barrett and Rayfield’s suggestion?

- A. The study by Meers used body-mass scaling and produced the lowest estimated maximum bite force, while the study by Cost et al. used muscular and skeletal modeling and produced the highest estimated maximum.
- B. In their study, Gignac and Erickson used tooth-bone interaction analysis to produce an estimated bite force range with a minimum of 8,000 newtons and a maximum of 34,000 newtons.
- C. The bite force estimates produced by Bates and Falkingham and by Cost et al. were similar to each other, while the estimates produced by Meers and by Gignac and Erickson each differed substantially from any other estimate.
- D. The estimated maximum bite force produced by Cost et al. exceeded the estimated maximum produced by Bates and Falkingham, even though both groups of researchers used the same method to generate their estimates.

ID: 084f845a Answer

Correct Answer: C

Rationale

Choice C is the best answer because it accurately describes data from the table that support Barrett and Rayfield’s suggestion about bite force estimates. According to the text, Barrett and Rayfield believe that estimates of dinosaur bite force may be strongly influenced by the methods used to produce them—that is, that different methods may produce significantly different results. The table shows that the studies by Bates and Falkingham and by Cost et al. used the same estimation method (muscular and skeletal modeling) and produced similar bite force estimates (approximately 35,000–57,000 newtons and 35,000–63,000 newtons, respectively). The study by Meers, however, used body-mass scaling and produced a much higher bite force estimate (183,000–235,000 newtons), while the study by Gignac and Erickson used tooth-bone interaction analysis and produced a much

lower bite force estimate (8,000–34,000 newtons). The fact that one method produced similar estimates in two different studies and that two different methods used in other studies produced substantially different estimates supports the idea that dinosaur bite force estimates are significantly influenced by the methodology used to produce them.

Choice A is incorrect because it inaccurately describes data from the table. The table does show that the studies by Meers and by Cost et al. used different estimation methods and produced very different ranges of estimated dinosaur bite force, which would support Barrett and Rayfield’s suggestion that different methodologies may produce significantly different estimates. However, the table doesn’t show that the study by Meers produced the lowest estimated maximum bite force while the study by Cost et al. produced the highest. In fact, the study by Meers estimated a maximum bite force of approximately 235,000 newtons, which is the highest of all the estimated maximums. Choice B is incorrect. Although the data from Gignac and Ericson’s study are accurately described, a single set of findings from one study using only one methodology can’t show that different methodologies may produce significantly different dinosaur bite force estimates, as Barrett and Rayfield suggest. Choice D is incorrect. Although the table shows that the maximum bite force estimated by Cost et al. was higher than that estimated by Bates and Falkingham, the difference is relatively small; in fact, both teams estimated a minimum bite force of approximately 35,000 newtons and a maximum bite force close to approximately 60,000 newtons. Because these findings demonstrate that a single methodology (muscular and skeletal modeling) produced similar overall results in two studies, the findings don’t support Barrett and Rayfield’s suggestion that different methodologies may produce significantly different dinosaur bite force estimates.

Question Difficulty: Hard

Question ID 366038a0

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 366038a0

Neural networks are computer models intended to reflect the organization of human brains and are often used in studies of brain function. According to an analysis of 11,000 such networks, Rylan Schaeffer and colleagues advise caution when drawing conclusions about brains from observations of neural networks. They found that when attempting to mimic grid cells (brain cells used in navigation), while 90% of the networks could accomplish navigation-related tasks, only about 10% of those exhibited any behaviors similar to those of grid cells. But even this approximation of grid-cell activity has less to do with similarity between the neural networks and biological brains than it does with the rules programmed into the networks.

Which finding, if true, would most directly support the claim in the underlined sentence?

- A. The rules that allow for networks to exhibit behaviors like those of grid cells have no equivalent in the function of biological brains.
- B. The networks that do not exhibit behaviors like those of grid cells were nonetheless programmed with rules that had proven useful in earlier neural-network studies.
- C. Neural networks can often accomplish tasks that biological brains do, but they are typically programmed with rules to model multiple types of brain cells simultaneously.
- D. Once a neural network is programmed, it is trained on certain tasks to see if it can independently arrive at processes that are similar to those performed by biological brains.

ID: 366038a0 Answer

Correct Answer: A

Rationale

Choice A is the best answer. While many networks can perform navigation tasks, or even mimic grid cells, it doesn't mean they're actually behaving like biological brains—this finding suggests that the rules that govern neural network behavior are completely unlike the way real brains work.

Choice B is incorrect. Although it mentions the rules that are programmed into the networks, this finding wouldn't clarify whether or not these rules have anything to do with the function of biological brains. Choice C is incorrect. This choice suggests that neural networks are modeled after multiple types of brain cells, which sidesteps the question of whether these rule-based networks are genuinely similar to biological brains. Choice D is incorrect. This choice doesn't address the key point of the claim, which is that the apparent similarity between neural networks and biological brains is only due to the rules programmed into the networks. It focuses on training tasks, not the originally programmed rules.

Question Difficulty: Hard

Question ID 6649150d

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 6649150d

Tadpole Body Mass and Toxin Production after Three Weeks in Ponds

Population density	Average tadpole body mass (milligrams)	Average number of distinct bufadienolide toxins per tadpole	Average amount of bufadienolide per tadpole (nanograms)	Average bufadienolide concentration (nanograms per milligram of tadpole body mass)
High	193.87	22.69	5,815.51	374.22
Medium	254.56	21.65	5,525.72	230.10
Low	258.97	22.08	4,664.99	171.43

Ecologist Veronika Bókony and colleagues investigated within-species competition among common toads (*Bufo bufo*), a species that secretes various unpleasant-tasting toxins called bufadienolides in response to threats. The researchers tested *B. bufo* tadpoles’ responses to different levels of competition by creating ponds with different tadpole population densities but a fixed amount of food. Based on analysis of the tadpoles after three weeks, the researchers concluded that increased competition drove bufadienolide production at the expense of growth.

Which choice uses data from the table to most effectively support the researchers’ conclusion?

- A. The difference in average tadpole body mass was small between the low and medium population density conditions and substantially larger between the low and high population density conditions.
- B. Tadpoles in the low and medium population density conditions had substantially lower average bufadienolide concentrations but had greater average body masses than those in the high population density condition.
- C. Tadpoles in the high population density condition displayed a relatively modest increase in the average amount of bufadienolide but roughly double the average bufadienolide concentration compared to those in the low population density condition.
- D. Tadpoles produced approximately the same number of different bufadienolide toxins per individual across the population density conditions, but average tadpole body mass decreased as population density increased.

ID: 6649150d Answer

Correct Answer: B

Rationale

Choice B is the best answer. This data shows that the tadpoles in the high-density pond (meaning those with the most competition) didn’t grow as big as the other two groups but produced more bufadienolide.

Choice A is incorrect. This doesn’t fully support the conclusion. It doesn’t include any data about bufadienolide production. Choice C is incorrect. This doesn’t fully support the conclusion. It doesn’t include any data about growth. Choice D is incorrect. This

doesn't fully support the conclusion. It doesn't demonstrate that the tadpoles in the high-density pond produced more bufadienolide overall. The fact that they didn't produce more kinds of bufadienolide isn't relevant to the conclusion.

Question Difficulty: Hard

Question ID 2d3b8ce9

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 2d3b8ce9

“The Young Girl” is a 1920 short story by Katherine Mansfield. In the story, the narrator takes an unnamed seventeen-year-old girl and her younger brother out for a meal. In describing the teenager, Mansfield frequently contrasts the character’s pleasant appearance with her unpleasant attitude, as when Mansfield writes of the teenager, _____

Which quotation from “The Young Girl” most effectively illustrates the claim?

- A. “I heard her murmur, ‘I can’t bear flowers on a table.’ They had evidently been giving her intense pain, for she positively closed her eyes as I moved them away.”
- B. “While we waited she took out a little, gold powder-box with a mirror in the lid, shook the poor little puff as though she loathed it, and dabbed her lovely nose.”
- C. “I saw, after that, she couldn’t stand this place a moment longer, and, indeed, she jumped up and turned away while I went through the vulgar act of paying for the tea.”
- D. “She didn’t even take her gloves off. She lowered her eyes and drummed on the table. When a faint violin sounded she winced and bit her lip again. Silence.”

ID: 2d3b8ce9 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it most effectively illustrates the claim in the text that in describing the teenaged girl, Mansfield contrasts the character’s pleasant appearance with her unpleasant attitude. In the quotation, Mansfield describes the teenager as having a “lovely nose” (a compliment about her appearance) but also as treating her makeup puff “as though she loathed it” (a judgment suggesting her unpleasant attitude).

Choice A is incorrect because the teenager’s reaction to the flowers doesn’t make it clear that she has an unpleasant attitude, and nothing in the quotation indicates that any part of her appearance is pleasant. Choice C is incorrect because the quotation suggests that the teenager has an unpleasant attitude (being upset with the location and leaving the table before the narrator has paid for the meal) but doesn’t give any indication that she has a pleasant appearance. Choice D is incorrect because the quotation suggests that the teenager may have an unpleasant attitude (lowering her eyes, wincing, and sitting in silence) but doesn’t give any indication that any part of her appearance is pleasant.

Question Difficulty: Hard

Question ID 78677bf4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 78677bf4

Declining fishing technology costs and overexploitation of near-shore fishing grounds have made isolated oceanic reefs, which often lack regulatory protections, increasingly attractive to commercial and sport fishers. A team led by Octavio Aburto-Oropeza surveyed the biomass density and species composition of two isolated reefs: Alacranes, a protected (fishing prohibited) reef 135 kilometers from the Yucatan Peninsula, and Bajos del Norte, an unprotected reef 25 kilometers farther out to sea. Species at the highest level of the trophic pyramid constituted 34% of the biomass at Alacranes and 10% of the biomass at Bajos del Norte. Aburto-Oropeza and colleagues attribute this difference to the two reefs’ difference in regulatory status.

Which finding, if true, would most directly support Aburto-Oropeza and colleagues’ explanation?

- A. Total biomass at Alacranes is much greater than total biomass at Bajos del Norte, though the reefs’ biomass densities are similar.
- B. Some of the species that compose the highest trophic level at Bajos del Norte are not found at Alacranes.
- C. It is somewhat more expensive for commercial and sport fishers to reach Bajos del Norte than it is to reach Alacranes.
- D. Commercial and sport fishers tend to disproportionately remove species at the highest trophic level.

ID: 78677bf4 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it provides the finding that, if true, would most directly support Aburto-Oropeza and colleagues’ explanation that species composition differs between Alacranes and Bajos del Norte because of a difference in the regulation of fishing at the two reefs. The text explains that isolated oceanic reefs are often unprotected and are increasingly attracting commercial and sport fishing activity. According to the text, when Aburto-Oropeza and colleagues surveyed Alacranes, an isolated reef where fishing is prohibited, and Bajos del Norte, an isolated reef that is unprotected, they found that species at the highest trophic level (that is, top predators) make up a smaller proportion of the total mass of all living organisms at Bajos del Norte (10%) than they do at Alacranes (34%). If it were true that commercial and sport fishers tend to disproportionately remove top predators—that is, that they catch them at a higher rate than they catch other species—this would support the explanation that the allowance of fishing at Bajos del Norte and the prohibition of fishing at Alacranes has led to a lower proportion of top predator species remaining in the total biomass at Bajos del Norte.

Choice A is incorrect. To support the researchers’ claim that the role of fishing regulations accounts for Alacranes having a greater proportion of species at the highest trophic level (top predators) than Bajos del Norte does, a finding would need to help explain how fishing affects the presence of top predator species in particular; the finding that the two reefs have similar biomass densities (that is, about the same mass of living organisms per unit) and that Alacranes has a much greater total biomass (total mass of living organisms) wouldn’t reveal anything about the species composition at each reef or help explain why the *proportion* of top predators in the total biomass at each reef differs. This finding might simply suggest that Alacranes is a larger reef, with more units at that density. Choice B is incorrect because the finding that there are species at the highest trophic level (top

predators) at Bajos del Norte that aren't found at Alacranes would reveal only that there are some different species in the reefs' total biomasses (total mass of living organisms) but wouldn't explain why that's the case; this finding wouldn't be clearly connected to the role of fishing regulations, which is what, according to the researchers, accounts for the reefs having different proportions of top predators in their total masses. Choice C is incorrect. To support the researchers' claim that the role of fishing regulations accounts for Alacranes having a greater proportion of species at the highest trophic level (top predators) than Bajos del Norte does, a finding would need to help explain how fishing affects the presence of top predator species in particular, but different costs of reaching the two reefs wouldn't affect fishing behavior at all because fishing isn't even allowed on one of the reefs.

Question Difficulty: Hard

Question ID 1f80067e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 1f80067e

American fashion designer Patrick Kelly was known for his love of colorful buttons. Many of his signature dresses feature bold assortments of buttons throughout the garment. In a paper, a fashion design student claims that Kelly’s use of buttons as decoration was inspired by his childhood observations of the styles and actions of the women in his family.

Which quotation from a work by a historian would be the most effective evidence for the student to include in support of this claim?

- A. “Although some of the assortments of buttons appear to be mismatched pieces scattered randomly throughout Kelly’s dresses, his most famous designs feature carefully crafted patterns of matching buttons.”
- B. “Many of Kelly’s contemporaries were inspired by his designs to incorporate buttons, as well as zippers and snaps, as decorative items in their work.”
- C. “Kelly’s grandmother, who would repair clothing when he was a child, frequently added mismatched buttons to the clothes to draw attention away from any flaws in the garments.”
- D. “Kelly was destined to be a designer from a young age: he learned how to sew clothing from his aunt Bertha, and his love of drawing was developed by his mother.”

ID: 1f80067e Answer

Correct Answer: C

Rationale

Choice C is the best answer. This quotation draws a direct connection between the use of buttons and Kelly’s stylish female relatives.

Choice A is incorrect. This choice mentions Kelly’s use of buttons, but it doesn’t connect that design choice to the influence of women in Kelly’s family. Choice B is incorrect. This choice discusses how other designers were inspired by Kelly, which doesn’t provide evidence that Kelly was inspired by his family. Choice D is incorrect. While this choice does refer to fashionable women in Kelly’s family, it doesn’t connect their influence to Kelly’s use of buttons.

Question Difficulty: Hard

Question ID ad12047a

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: ad12047a

A researcher conducted an experiment inspired by studies suggesting that people may benefit from feeling frightened in certain circumstances, such as when watching scary movies or visiting haunted attractions. The researcher recruited several participants and had them walk through a local haunted house attraction. Immediately after exiting the attraction, each participant completed a survey about their experience. Based on the survey responses, the researcher claims that feeling frightened in controlled situations can boost a person’s mood and confidence.

Which quotation from a participant would best illustrate the researcher’s claim?

- A. “After I came out of the haunted house, I felt very accomplished and less stressed.”
- B. “My friends kept laughing as we were walking through the haunted house.”
- C. “The haunted house was scary at first, but I knew everyone was just acting, so I felt less scared after a few minutes.”
- D. “The sense of relief I felt at the end of the haunted house was similar to the feelings I have when I finish a scary movie.”

ID: ad12047a Answer

Correct Answer: A

Rationale

Choice A is the best answer. This choice illustrates both “feeling frightened in controlled situations” (the haunted house) and the benefit of a boosted mood (“less stressed”) and confidence (“very accomplished”).

Choice B is incorrect. This choice isn’t the best illustration of the claim. While laughing may indicate a good mood, this choice provides no evidence of “feeling frightened” or boosted confidence. Another choice provides better evidence. Choice C is incorrect. This choice isn’t the best illustration of the claim. This choice demonstrates “feeling frightened” in a controlled environment, but it doesn’t provide strong evidence of boosted mood or confidence. Another choice provides better evidence. Choice D is incorrect. This choice isn’t the best illustration of the claim. While a “sense of relief” could be interpreted as a boosted mood, this choice doesn’t provide direct evidence of “feeling frightened” or of increased confidence. This choice simply suggests that haunted houses and scary movies have a similar effect. Another choice provides better evidence for the researcher’s claim.

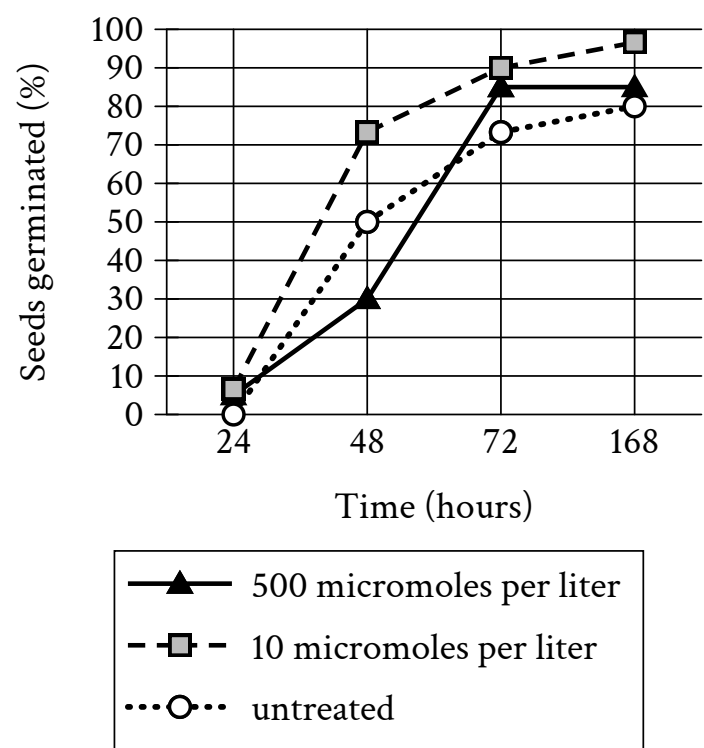
Question Difficulty: Hard

Question ID 0695d037

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div></div> <div></div> <div></div>

ID: 0695d037

Seed Germination with and without H₂S Treatment



In high concentrations, hydrogen sulfide (H₂S) is typically toxic to many plants. Frederick D. Dooley and colleagues wanted to understand what effects low doses of H₂S might have on plant growth. They treated bean, corn, wheat, and pea seeds with various concentrations (measured in micromoles per liter) of H₂S and tracked the germination of those seeds along with the germination of untreated seeds. Treatment with particular concentrations of H₂S was associated with accelerated germination: for example, _____

- Which choice most effectively uses data from the graph to complete the statement?
- A. at 24 hours, less than 10% of seeds treated with H₂S at a concentration of 10 micromoles per liter had germinated, whereas more than 90% of those seeds had germinated at 168 hours.
 - B. at 48 hours, more than 70% of seeds treated with H₂S at a concentration of 10 micromoles per liter had germinated, whereas only approximately 50% of untreated seeds had germinated.
 - C. at 168 hours, more than 90% of seeds treated with H₂S at concentrations of 10 or 500 micromoles per liter had germinated, whereas less than 70% of untreated seeds had germinated.
 - D. at 48 hours, approximately 50% of seeds treated with H₂S at a concentration of 10 micromoles per liter had germinated, whereas only approximately 30% of untreated seeds had germinated.

Correct Answer: B

Rationale

Choice B is the best answer. The claim is that some concentrations of H_2S led to increased germination rates, and this choice accurately shows that seeds treated with 10 micromoles per liter of H_2S tended to germinate faster than untreated seeds.

Choice A is incorrect. This choice doesn't justify the claim. The claim compares the germination rates of seeds exposed to certain concentrations of H_2S to untreated seeds, but this choice only discusses one concentration of H_2S , so it can't support any comparison between treated and untreated groups. Choice C is incorrect. This choice misreads the graph. At 168 hours, only about 85% of seeds treated with H_2S at 500 micromoles per liter and well over 70% of untreated seeds had germinated (about 80%). Choice D is incorrect. This choice misreads the graph. At 48 hours, about 70% of seeds treated with H_2S at 10 micromoles per liter and about 50% of untreated seeds had germinated.

Question Difficulty: Hard

Question ID 91f4c01b

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 91f4c01b

A student is writing a paper about *One Night in Miami...*, a 2020 film directed by Regina King and written by Kemp Powers. Powers adapted the film’s screenplay from his 2013 play, which he wrote after learning about a 1964 meeting that took place in Miami, Florida, between four prominent figures of the Civil Rights movement: Malcolm X, Muhammad Ali, Jim Brown, and Sam Cooke. The student claims that although Powers was inspired by this meeting, the film is best understood not as a precise retelling of historical events but rather as a largely imagined but informed representation of them.

Which quotation from an article about *One Night in Miami...* would be the most effective evidence for the student to include in support of this claim?

- A. “When Powers learned of the meeting, he initially planned to write a much longer work about its four famous participants rather than focusing on the meeting itself.”
- B. “*One Night in Miami...* received numerous awards and nominations, including an Academy Award nomination for Powers for Best Adapted Screenplay.”
- C. “Powers has described *One Night in Miami...* as the story of four friends encouraging and supporting one another while engaged in a crucial political debate about how best to achieve equality for Black people in the United States.”
- D. “Powers could find only the most superficial historical details about the meeting, so he read extensively about the four individuals and their thinking at the time in an effort to portray what might have happened between them.”

ID: 91f4c01b Answer

Correct Answer: D

Rationale

Choice D is the best answer because it provides a quotation that effectively supports the student’s claim about the film *One Night in Miami...*. The quotation states that in researching the play on which the film was based, Kemp Powers only found superficial details about what actually happened during the 1964 meeting in Miami between four leading Civil Rights leaders, meaning that there is very little information about the meeting in the historical record. In the absence of greater details, it wouldn’t have been possible for the film to be a precise retelling of the historical events it depicts. The quotation explains that to compensate for this lack of information about the meeting, Powers did extensive research into the four figures and how they thought at the time in order to speculate in an informed way about what they might have said or what might have occurred between them. Therefore, the quotation effectively supports the claim that the film is best understood not as a precise retelling of a historical event but as a deeply informed imaginative rendering of that event.

Choice A is incorrect. Although the quotation discusses how on learning about the 1964 meeting in Miami, Powers was inspired to write a play and, later, to adapt it into a screenplay, it doesn’t discuss Powers’s approach to representing what had occurred in the meeting. Instead, it states that Powers didn’t initially plan to write a story only “focusing on the meeting itself” but rather had considered writing a “much longer” and more expansive work about the meeting’s four participants. Choice B is incorrect because the quotation doesn’t discuss Powers’s approach to representing historical events in his play and in the film; instead, the

quotation focuses on the film's positive critical reception by mentioning that it received numerous awards and nominations. Choice C is incorrect. Although the quotation references historical events that are discussed directly in the play and film by explaining how the four historical figures featured in the story engage in political debates about contemporary issues, it doesn't specify to what extent Powers's representation of what occurred during the 1964 meeting in Miami is a factual retelling of what happened and how much is an imaginative rendering of what might have happened. Rather, the quotation focuses on Powers's description of the film's basic premise and how the characters engage with the historical context of its setting.

Question Difficulty: Hard

Question ID 38fdf03e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 38fdf03e

As media consumption has become increasingly multiplatform and socially mediated, active news acquisition has diminished in favor of an attitude known as “news finds me” (NFM), in which people passively rely on their social networks and ambient media environments for information about current events. Homero Gil de Zúñiga and Trevor Diehl examined data on a representative group of adults in the United States to determine participants’ strength of NFM attitude, political knowledge, and political interest. Although no major election took place sufficiently near the study for Gil de Zúñiga and Diehl to identify causality between NFM and voting behavior, they did posit that NFM may reduce voting probability through an indirect effect.

Which finding, if true, would most directly support the idea advanced by Gil de Zúñiga and Diehl?

- A. NFM attitude tends to increase in strength as major elections approach, and people are significantly more likely to vote in major elections than in minor elections.
- B. NFM attitude has a strong negative effect on political knowledge and interest, and there is known to be a strong positive correlation between political knowledge and interest and the likelihood of voting.
- C. Political interest is known to have a strong positive effect on likelihood of voting but shows only a weak positive effect on political knowledge, and NFM attitude shows little correlation with either political knowledge or political interest.
- D. The likelihood of voting increases as political knowledge increases, and the relationship between NFM attitude and political knowledge tends to strengthen as the size of people’s social networks increases.

ID: 38fdf03e Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents a finding that, if true, would most directly support the idea advanced by Homero Gil de Zúñiga and Trevor Diehl that NFM (“news finds me”) attitude may reduce voting probability through an indirect effect. The text describes NFM as an attitude that has lowered people’s interest in actively acquiring news and introduces Gil de Zúñiga and Diehl’s study on the effects of NFM on people in the United States’ political knowledge and interest. The text goes on to say that despite the fact that the study didn’t occur near a major election, Gil de Zúñiga and Diehl still conclude that NFM may reduce voting probability. If the likelihood, or probability, that a person will vote is linked to that person’s level of political knowledge and interest, that would suggest that negatively affecting a person’s level of political knowledge and interest would also negatively affect how likely that person is to vote. Thus, if NFM attitude has a negative effect on political knowledge and interest, then it would also likely reduce voting probability.

Choice A is incorrect because the finding that NFM attitude increases as major elections approach wouldn’t address the effect of NFM on the likelihood of voting, which is the idea advanced by Gil de Zúñiga and Diehl. Moreover, although the text mentions that there were no major elections that occurred near the time of the study, it doesn’t discern between major and minor elections when discussing voting probability. Choice C is incorrect because finding that NFM attitude shows little correlation with either political knowledge or political interest would undermine, not support, Gil de Zúñiga and Diehl’s idea that NFM may reduce voting

probability because it suggests that NFM has no effect on political knowledge or political interest. Choice D is incorrect. Although Gil de Zúñiga and Diehl's idea would be supported by the finding that the likelihood of voting increases as political knowledge increases, nothing in the text suggests that the researchers' idea hinges on the size of people's social networks.

Question Difficulty: Hard

Question ID 420a24bd

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 420a24bd

Hedda Gabler is an 1890 play by Henrik Ibsen. As a woman in the Victorian era, Hedda, the play’s central character, is unable to freely determine her own future. Instead, she seeks to influence another person’s fate, as is evident when she says to another character, _____

Which quotation from a translation of *Hedda Gabler* most effectively illustrates the claim?

- A. “Then what in heaven’s name would you have me do with myself?”
- B. “I want for once in my life to have power to mould a human destiny.”
- C. “Then I, poor creature, have no sort of power over you?”
- D. “Faithful to your principles, now and for ever! Ah, that is how a man should be!”

ID: 420a24bd Answer

Correct Answer: B

Rationale

Choice B is the best answer because it most effectively illustrates the claim in the text that Hedda seeks to influence another character’s fate. In the quotation, Hedda says that she wants “to have power to mould a human destiny,” or shape a person’s fate, just as the text indicates. Additionally, the phrase “for once in my life” suggests that Hedda feels that she has never been able to shape anyone’s life, including her own, supporting the text’s assertion that she “is unable to freely determine her own future.”

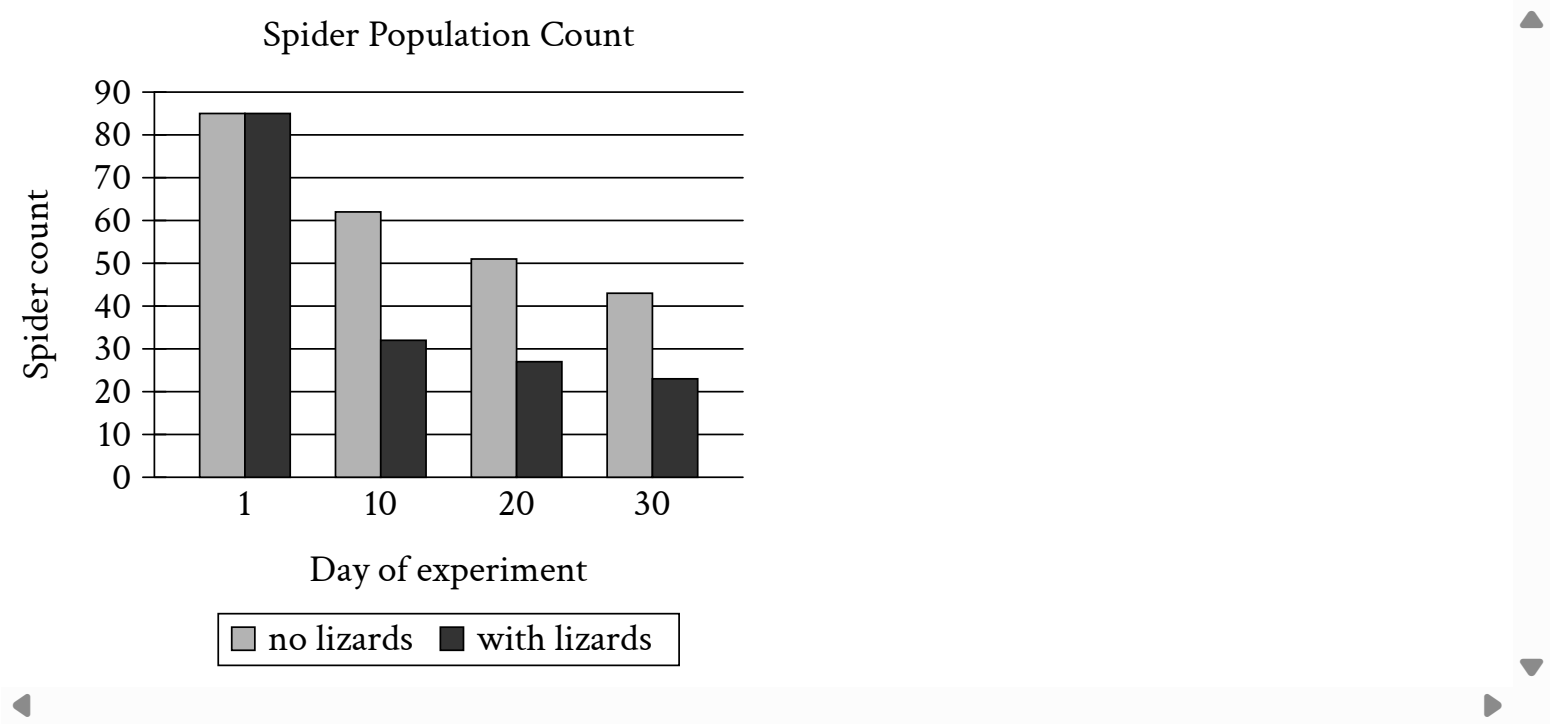
Choice A is incorrect because this quotation shows Hedda being uncertain about what to do with her own life, not wanting to influence another person’s fate. Choice C is incorrect because while this quotation shows Hedda’s interest in finding out whether she has any power over another character, it doesn’t clearly show that she wants to influence that person’s fate. In this quotation, Hedda seems to have inferred or concluded (“then”) that she doesn’t have any influence over the person to whom she’s speaking, and she’s asking that person to confirm her lack of influence. Choice D is incorrect because this quotation expresses Hedda’s belief that a man should be true to his principles, not her desire to influence another person’s fate.

Question Difficulty: Hard

Question ID fb77b411

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: fb77b411



To investigate the effect of lizard predation on spider populations, a student in a biology class placed spiders in two enclosures, one with lizards and one without, and tracked the number of spiders in the enclosures for 30 days. The student concluded that the reduction in the spider population count in the enclosure with lizards by day 30 was entirely attributable to the presence of the lizards.

Which choice best describes data from the graph that weaken the student’s conclusion?

- A. The spider population count was the same in both enclosures on day 1.
- B. The spider population count also substantially declined by day 30 in the enclosure without lizards.
- C. The largest decline in spider population count in the enclosure with lizards occurred from day 1 to day 10.
- D. The spider population count on day 30 was lower in the enclosure with lizards than in the enclosure without lizards.

ID: fb77b411 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it describes data from the graph that weaken the student’s conclusion about the reduction in the spider population in the enclosure with lizards. The graph shows that the enclosure with lizards and the enclosure without lizards each began with about 85 spiders, and that the number of spiders in each enclosure fell over the 30 days of the study. The

student's claim is that the reduction in spiders in the enclosure with lizards is "entirely attributable to the presence of the lizards," meaning that the spider population wouldn't have declined except for the presence of the lizards. This claim is weakened, however, by the fact that the enclosure without lizards also saw a substantial reduction in the number of spiders. Since the number of spiders fell in the enclosure without lizards as well as in the enclosure with lizards, there must be some other factor than just the presence of the lizards that contributed to the reduction in the spider population.

Choice A is incorrect because the fact that the two enclosures started with the same number of spiders is irrelevant to the claim that the reduction in spider population by day 30 in the enclosure with lizards can be entirely attributed to the lizards. Choice C is incorrect because the fact that the spider population in the enclosure with lizards fell more between days 1 and 10 than in other periods has nothing to do with the student's claim that the reduction in spiders in that enclosure by day 30 can be entirely attributed to the lizards. Choice D is incorrect. Although it's true that on day 30 the spider population was lower in the enclosure with lizards than in the enclosure without lizards, this fact doesn't weaken the student's claim that the reduction in the spider population in the enclosure with lizards can be entirely attributed to the lizards. Indeed, the lower spider population in the enclosure with lizards suggests that the lizards are contributing to the reduction in the spider population, though the fact that the spider population also fell substantially in the other enclosure means that the lizards aren't the only cause of the reduction.

Question Difficulty: Hard

Question ID 7b860813

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 7b860813

While attending school in New York City in the 1980s, Okwui Enwezor encountered few works by African artists in exhibitions, despite New York’s reputation as one of the best places to view contemporary art from around the world. According to an arts journalist, later in his career as a renowned curator and art historian, Enwezor sought to remedy this deficiency, not by focusing solely on modern African artists, but by showing how their work fits into the larger context of global modern art and art history.

Which finding, if true, would most directly support the journalist’s claim?

- A. As curator of the Haus der Kunst in Munich, Germany, Enwezor organized a retrospective of Ghanaian sculptor El Anatsui’s work entitled *El Anatsui: Triumphant Scale*, one of the largest art exhibitions devoted to a Black artist in Europe’s history.
- B. In the exhibition *Postwar: Art Between the Pacific and the Atlantic, 1945–1965*, Enwezor and cocurator Katy Siegel brought works by African artists such as Malangatana Ngwenya together with pieces by major figures from other countries, like US artist Andy Warhol and Mexico’s David Siqueiros.
- C. Enwezor’s work as curator of the 2001 exhibition *The Short Century: Independence and Liberation Movements in Africa, 1945–1994* showed how African movements for independence from European colonial powers following the Second World War profoundly influenced work by African artists of the period, such as Kamala Ibrahim Ishaq and Thomas Mukarobgwa.
- D. Enwezor organized the exhibition *In/sight: African Photographers, 1940 to the Present* not to emphasize a particular aesthetic trend but to demonstrate the broad range of ways in which African artists have approached the medium of photography.

ID: 7b860813 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents a finding that, if true, would most directly support the arts journalist’s claim about Enwezor’s work as a curator and art historian. In the text, the arts journalist asserts that Enwezor wished not just to focus on modern African artists but also to show “how their work fits into the larger context of global modern art and art history,” or how their work relates to artistic developments and work by other artists elsewhere in the world. The description of *Postwar: Art Between the Pacific and the Atlantic, 1945–1965* indicates that Enwezor and Siegel’s exhibition brought works by African artists together with works by artists from other countries, thus supporting the arts journalist’s claim that Enwezor sought to show works by African artists in a context of global modern art and art history.

Choice A is incorrect because it describes a retrospective that wouldn’t support the arts journalist’s claim that Enwezor wanted to show how works by modern African artists fit into the larger context of global modern art and art history. The description of *El Anatsui: Triumphant Scale* indicates that the retrospective focused only on the work of a single African artist, El Anatsui. The description doesn’t suggest that the exhibition showed how El Anatsui’s works fit into a global artistic context. Choice C is incorrect because it describes an exhibition that wouldn’t support the arts journalist’s claim that Enwezor wanted to show how works by modern African artists relate to the larger context of global modern art and art history. The description of *The Short Century: Independence and Liberation Movements in Africa, 1945–1994* indicates that the exhibition showed how African artists

were influenced by movements for independence from European colonial powers following the Second World War. Although this suggests that Enwezor intended the exhibition to place works by African artists in a political context, it doesn't indicate that the works were placed in a global artistic context. Choice D is incorrect because it describes an exhibition that wouldn't support the arts journalist's claim that Enwezor wanted to show how works by modern African artists relate to the larger context of global modern art and art history. The description of *In/sight: African Photographers, 1940 to the Present* indicates that the exhibition was intended to reveal the broad range of approaches taken by African photographers, not that the exhibition showed how photography by African artists fits into a global artistic context.

Question Difficulty: Hard

Question ID 21c51108

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 21c51108

Survey Results for Two Online Account Sign-in Methods

Sign-in method	Percent of participants in the UK who chose method	Percent of participants in Japan who chose method	Percent of participants in India who chose method
Biometrics (for example, a face scan)	33	29	22
Onetime passcodes	16	8	25

A survey listed methods for signing into online accounts. Participants in different countries were asked to choose the sign-in method they view as most secure. The table presents data for two of the methods. According to the table, onetime passcodes were viewed as most secure by _____

Which choice most effectively uses data from the table to complete the text?

- A. 33 percent of survey participants in the UK.
- B. 22 percent of survey participants in India.
- C. 8 percent of survey participants in Japan.
- D. 16 percent of survey participants in India.

ID: 21c51108 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most effectively uses data from the table to complete the text about survey results for online account sign-in methods. According to the table, 8 percent of participants in Japan viewed onetime passcodes as the most secure sign-in method. This is the only choice that correctly represents data in the table.

Choice A is incorrect because according to the table, 33 percent of participants in the UK viewed biometrics, not onetime passcodes, as the most secure sign-in method; onetime passcodes were viewed as the most secure method by 16 percent of these participants. Choice B is incorrect because according to the table, 22 percent of participants in India viewed biometrics, not onetime passcodes, as the most secure sign-in method; onetime passcodes were viewed as the most secure method by 25 percent of these participants. Choice D is incorrect because according to the table, the country in which 16 percent of participants viewed onetime passcodes as the most secure sign-in method was the UK, not India; of participants in India, 25 percent viewed such passcodes as the most secure method.

Question Difficulty: Hard

Question ID 2d3477a5

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 2d3477a5

Male túngara frogs make complex calls to attract mates, but their calls also attract frog-biting midges, insects that feed on the frogs’ blood. Researchers Ximena Bernal and Priyanka de Silva wondered if the calls alone are sufficient for midges to locate the frogs or if midges use carbon dioxide emitted by frogs as an additional cue to their prey’s whereabouts, like mosquitoes do. In an experiment, the researchers placed two midge traps in a túngara frog breeding area. One trap played recordings of túngara frog calls and the other released carbon dioxide along with playing the calls. Bernal and de Silva concluded that carbon dioxide does not serve as an additional cue to frog-biting midges.

Which finding from the experiment, if true, would most directly support Bernal and de Silva’s conclusion?

- A. Only a small number of midges were found in the traps, though the majority were found in the trap that played calls and released carbon dioxide.
- B. Midges entered the trap that released carbon dioxide and played calls only during or immediately after periods of carbon dioxide release.
- C. More midges were found in the trap that only played calls than in the trap that played calls and released carbon dioxide.
- D. The trap that released carbon dioxide and played calls attracted few midges when carbon dioxide concentrations were low but attracted many midges when carbon dioxide concentrations were high.

ID: 2d3477a5 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents a finding that, if true, would most directly support the researchers’ conclusion that carbon dioxide does not serve as an additional cue to frog-biting midges regarding the location of male túngara frogs. The text begins by stating that the mating call of the male túngara frogs also attracts frog-biting midges, which prey on the frogs’ blood. Researchers Bernal and de Silva were curious if the mating calls were sufficient signals for the midges to locate the frogs or if midges also used carbon dioxide emitted by the frogs to locate their prey. The text then details the procedure the researchers used to investigate their question and summarizes their conclusion—that carbon dioxide does not serve as an additional cue to the midges. Thus, if more midges were found in the researchers’ trap that only played calls than in the trap that played calls and released carbon dioxide, it follows that the frog calls seem sufficient without the carbon dioxide cue. This finding supports the researchers’ conclusion that carbon dioxide does not serve as an additional cue to frog-biting midges.

Choice A is incorrect because finding that the majority of frog-biting midges were found in the traps that both played the mating call and released carbon dioxide would present evidence that directly refutes the researchers’ conclusion—that carbon dioxide does not serve as an additional cue to the frog-biting midges regarding the location of túngara frogs. Choice B is incorrect because if the midges entered the trap that played calls and released carbon dioxide only during or immediately after carbon dioxide was released, that would suggest that the midges used the carbon dioxide as a way to locate their prey, a finding that would contradict the researchers’ conclusion that carbon dioxide was not an additional cue to the midges. Choice D is incorrect

because a trap attracting larger numbers of midges with high carbon dioxide concentrations than a trap with low carbon dioxide concentrations suggests that carbon dioxide might serve as an additional cue to the midges as to the location on the frogs, a finding contrary to the researchers' conclusion.

Question Difficulty: Hard

Question ID cd3fbdde

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: cd3fbdde

Although Eastern North Pacific (ENP) gray whales generally migrate between their wintering waters along the coast of Mexico and their foraging waters in the Arctic, a subset of this population—known as the Pacific Coast Feeding Group (PCFG)—forages along the coastlines of Northern California (USA) and British Columbia (Canada) instead. Interestingly, individuals in this subset reach smaller maximum sizes than other ENP whales do, despite having similar pre-maximum growth rates. Researchers hypothesize that this difference may be an adaptation to distinct resource opportunities in the PCFG foraging range.

Which finding, if true, would most directly support the researchers’ claim regarding the size of PCFG whales?

- A. The average body size of PCFG whales observed along the coasts of Northern California and British Columbia has remained relatively steady in recent decades, while the average body size of ENP whales in the main group has slightly decreased.
- B. When present along the coasts of Northern California and British Columbia, PCFG whales tend to forage in rocky kelp beds at shallow depths inaccessible to whales as large as those in the ENP main group.
- C. When foraging along the coasts of Northern California and British Columbia, PCFG whales are in closer proximity to major ports and urban populations than ENP whales in the main group are when foraging in Arctic waters.
- D. Certain crustacean prey species available along the coasts of Northern California and British Columbia where PCFG whales tend to forage are not available in the Arctic waters where ENP whales in the main group forage.

ID: cd3fbdde Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents a finding that, if true, would most directly support the researchers’ hypothesis that the smaller maximum size of PCFG whales is an adaptation to resource opportunities particular to their foraging range. The text explains that PCFG whales, a subgroup of ENP gray whales, forage along the coasts of Northern California and British Columbia rather than in the Arctic, where the main ENP group forages. The text goes on to state that PCFG whales reach smaller maximum sizes than other ENP gray whales despite having similar pre-maximum growth rates. If PCFG whales tend to forage in shallow, rocky kelp beds that whales as large as those in the main group cannot access, that would indicate that smaller body size confers a direct advantage in this foraging range—namely, access to a food source that larger whales cannot reach.

Choice A is incorrect because a finding describing recent trends in average body size for both groups of whales wouldn’t address whether the smaller maximum size of PCFG whales reflects an adaptation to their foraging environment. Recent stability or change in average size doesn’t speak to why the size difference between PCFG whales and the main ENP group exists. Choice C is incorrect because a finding about PCFG whales’ proximity to ports and urban populations wouldn’t address the resources available to PCFG whales or the relationship between body size and foraging. Proximity to human activity is irrelevant to a hypothesis about body size being an adaptation to resource opportunities. Choice D is incorrect. Although a finding about a certain prey species being available in the PCFG whales’ foraging waters but not in the main group of ENP whales’ foraging waters would establish that the PCFG foraging range offers distinct prey species, it wouldn’t connect the availability of those prey

species to body size in a way that would explain the PCFG whales' smaller size. Without indicating that the available prey in the PCFG range favors smaller whales, the finding falls short of supporting the hypothesis that smaller size is an adaptation to resource opportunities.

Question Difficulty: Hard

Question ID 17e6e0bf

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 17e6e0bf

The novelist Toni Morrison was the first Black woman to work as an editor at the publishing company Random House, from 1967 to 1983. A scholar asserts that one of Morrison’s likely aims during her time as an editor was to strengthen the presence of Black writers on the list of Random House’s published authors.

Which finding, if true, would most strongly support the scholar’s claim?

- A. The percentage of authors published by Random House who were Black rose in the early 1970s and stabilized throughout the decade.
- B. Black authors who were interviewed in the 1980s and 1990s were highly likely to cite Toni Morrison’s novels as a principal influence on their work.
- C. The novels written by Toni Morrison that were published after 1983 sold significantly more copies and received wider critical acclaim than the novels she wrote that were published before 1983.
- D. Works that were edited by Toni Morrison during her time at Random House displayed stylistic characteristics that distinguished them from works that were not edited by Morrison.

ID: 17e6e0bf Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents a finding that, if true, would support the scholar’s claim about Toni Morrison’s likely goal of strengthening the presence of Black writers on Random House’s list of published authors. The text explains that Morrison was the first Black woman to be an editor for Random House and that she was an editor there from 1967 to 1983. If it were true that Random House published a higher percentage of works by Black authors throughout the 1970s—during most of Morrison’s time working there—than it had previously published, that would suggest that Morrison may have made a deliberate effort to strengthen the presence of Black authors on the list of Random House’s published authors, thus supporting the scholar’s claim.

Choice B is incorrect because the scholar’s claim is about Morrison’s work as an editor at a publishing company and her likely effort to strengthen the presence of Black writers on that company’s list of published authors. It might be true that Black authors interviewed in the 1980s and 1990s often cited Morrison’s novels as an influence on their work, but that finding would simply suggest something about how those authors approached their work; it wouldn’t show that Morrison intended to increase the number of Black writers among the published authors specifically at Random House. Choice C is incorrect because the scholar’s claim is about Morrison’s work as an editor at a publishing company, not about her work as a novelist. Therefore, a finding that Morrison’s novels published after 1983 sold more copies and were more widely acclaimed than her earlier novels would have no bearing on the claim that as an editor Morrison made an effort to ensure that more Black writers were present on Random House’s list of published authors. Choice D is incorrect. Although the text discusses Morrison’s work as an editor at Random House, the scholar’s claim focuses on Morrison’s likely effort in that role to increase the number of Black writers present on

Random House's list of published authors, not on the influence she may have had on the content of the works she edited. Without knowing whether Morrison's stylistic influence led to more publications or if Morrison applied her influence specifically to works by Black writers, the finding that works edited by Morrison could be identified by stylistic characteristics would have no bearing on the claim that Morrison intended to strengthen the presence of Black writers among the published authors at Random House.

Question Difficulty: Hard

Question ID 7f5420a4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 7f5420a4

Incorporated and Unincorporated Self-Employment Rates in Four Occupational Fields, 2015

Occupational field	Incorporated self-employment rate	Unincorporated self-employment rate
Construction and resource extraction	4.4%	14.8%
Installation, maintenance, and repair	2.7%	6.2%
Management, business, and financial services	8.9%	9.7%
Sales and related	5.8%	7.8%

Self-employed workers—individuals who are not employees of other individuals or businesses but instead earn their income as business owners, independent contractors, or freelance workers—make up an important part of the US labor force. In order to receive legal and tax benefits enjoyed by corporations, self-employed individuals may choose to incorporate their business. A 2015 survey of incorporated and unincorporated self-employment rates in four occupational fields showed that the highest incorporated self-employment rate occurred among people working in _____

Which choice most effectively uses data from the table to complete the text?

- A. sales and related occupations.
- B. installation, maintenance, and repair occupations.
- C. construction and resource extraction occupations.
- D. management, business, and financial services occupations.

ID: 7f5420a4 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most effectively uses data from the table to complete the text. The text discusses self-employed workers in the US, and the table shows the US incorporated and unincorporated self-employment rates in four occupational fields in 2015. According to the table, the incorporated self-employment rate was 8.9% for the management, business, and financial services occupational field, which is higher than the incorporated self-employment rate shown for any other occupational field.

Choice A is incorrect because according to the table, the incorporated self-employment rate was 5.8% for the sales and related occupational field, which is lower than the 8.9% for the management, business, and financial services occupational field. Choice B is incorrect because according to the table, the incorporated self-employment rate was 2.7% for the installation, maintenance, and repair occupational field, which is lower than the 8.9% for the management, business, and financial services occupational field. Choice C is incorrect because according to the table, the incorporated self-employment rate was 4.4% for the construction and

resource extraction occupational field, which is lower than the 8.9% for the management, business, and financial services occupational field.

Question Difficulty: Hard

Question ID d4b75d29

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: d4b75d29

In the mountains of Brazil, *Barbacenia tomentosa* and *Barbacenia macrantha*—two plants in the Velloziaceae family—establish themselves on soilless, nutrient-poor patches of quartzite rock. Plant ecologists Anna Abrahão and Patricia de Britto Costa used microscopic analysis to determine that the roots of *B. tomentosa* and *B. macrantha*, which grow directly into the quartzite, have clusters of fine hairs near the root tip; further analysis indicated that these hairs secrete both malic and citric acids. The researchers hypothesize that the plants depend on dissolving underlying rock with these acids, as the process not only creates channels for continued growth but also releases phosphates that provide the vital nutrient phosphorus.

- Which finding, if true, would most directly support the researchers’ hypothesis?
- A. Other species in the Velloziaceae family are found in terrains with more soil but have root structures similar to those of *B. tomentosa* and *B. macrantha*.
 - B. Though *B. tomentosa* and *B. macrantha* both secrete citric and malic acids, each species produces the acids in different proportions.
 - C. The roots of *B. tomentosa* and *B. macrantha* carve new entry points into rocks even when cracks in the surface are readily available.
 - D. *B. tomentosa* and *B. macrantha* thrive even when transferred to the surfaces of rocks that do not contain phosphates.

ID: d4b75d29 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents a finding that, if true, would support the researchers’ hypothesis about the plants’ dependence on dissolving rock. The text indicates that the roots of the two plant species grow directly into quartzite rock, where hairs on the roots secrete acids that dissolve the rock. The researchers hypothesize that the plants depend on this process because dissolving rock opens spaces for the roots to grow and releases phosphates that provide the plants with phosphorus, a vital nutrient. If the plants carry out this process of dissolving rock even when the rock already has spaces into which the roots could grow, that would support the researchers’ hypothesis because it suggests that the plants are getting some advantage—such as access to phosphorus—from the action of dissolving rock. If the plants don’t benefit from dissolving rock, they would be expected to grow in the cracks that already exist, as doing so would mean that the plants don’t have to spend energy creating and secreting acids; if, however, the plants create new entry points by dissolving rock even when cracks already exist, that would support the hypothesis that they depend on dissolving rock for some benefit.

Choice A is incorrect because the existence of soil-inhabiting members of the Velloziaceae family with similar root structures to those of the two species discussed in the text wouldn’t support the researchers’ hypothesis that the species discussed in the text depend on dissolving rock. If other such members exist, that might suggest that the root structures can serve more functions than secreting acids to dissolve rock (since dissolving rock may not be necessary for plants living in soil), but that wouldn’t suggest anything about whether the species discussed in the text benefit from dissolving rock. Choice B is incorrect because

differences in the proportions of citric and malic acid secreted by the two species would be irrelevant to the hypothesis that the plants depend on dissolving rock. There's no information in the text to suggest that the proportion of each acid has any bearing on the process of dissolving rock or on any benefits the plants might receive from that process. Choice D is incorrect because if the two species thrive on rocks without phosphates, that would weaken the researchers' hypothesis that the plants depend on dissolving rock partly because dissolving rock gives them access to phosphates. If the plants can survive on rocks without getting a vital nutrient by dissolving those rocks, then either the nutrient isn't actually vital for those plants or they can get the nutrient in some way other than by dissolving rocks.

Question Difficulty: Hard

Question ID 69bb11f9

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 69bb11f9

“Ad recall” measures how memorable an advertising campaign is. To provide advertisers with information about their ads’ memorability, a social media site regularly surveys users about whether they remember ads they had recently interacted with on the site. In a study that drew on this survey data, advertising researcher Kristen Sussman and colleagues noted that different kinds of social media interactions involve different levels of cognitive engagement: commenting on or sharing a post is more cognitively demanding than is clicking on embedded links or on a “like” button. The researchers hypothesized that interactions indicating high levels of cognitive engagement with ad content would result in relatively high levels of ad recall.

Which finding, if true, would most directly support the researchers’ hypothesis?

- A. Users who interacted with an ad were much more likely to do so by clicking on the ad’s “like” button than they were to interact with the ad in any other way.
- B. Users who interacted with an ad were significantly more likely to purchase the advertised product at the time they saw the ad than were users who saw the ad but did not interact with it.
- C. Compared with users who clicked on links in an ad, users who commented on that same ad were significantly more likely to remember seeing the ad when surveyed two days later.
- D. Although users who shared an ad were highly likely to remember details from the ad when surveyed two days later, those same users tended to forget those details when surveyed again a week later.

ID: 69bb11f9 Answer

Correct Answer: C

Rationale

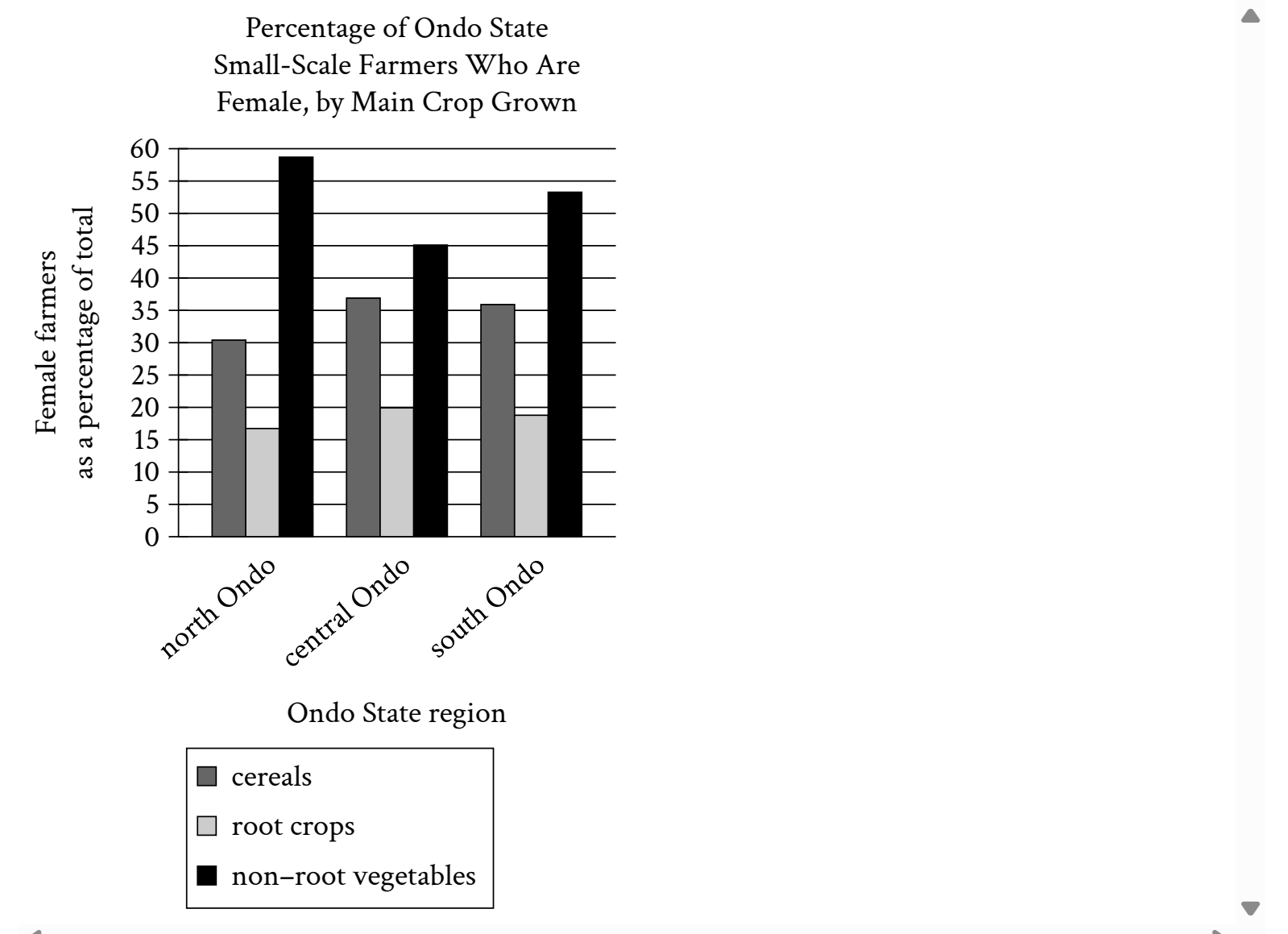
Choice C is the best answer because it details a finding that, if true, would most directly support the researchers’ hypothesis about ad recall. According to the text, the researchers found that commenting on an ad that appears as a social media post is more cognitively demanding for users than simply clicking on embedded links in such an ad. The researchers then hypothesized that a high level of cognitive engagement with ad content would result in a high level of ad recall, or memory of ad content. This hypothesis would be supported by the finding that users who had commented on an ad were more likely to recall its content when surveyed two days later than users who had simply clicked on links in the same ad.

Choice A is incorrect. Although the text compares one form of social media user interaction with ads—clicking on the ad’s “like” button—with other forms of interaction—commenting on the ad and sharing it through social media—it does so in order to determine which form of interaction is associated with a higher level of ad recall. The text doesn’t note whether users were more likely to click on the “like” button than they were to interact with the ad in other ways. Choice B is incorrect because the text doesn’t indicate that the study attempted to track whether social media users purchased the advertised product or to determine which form of interaction with ad content was more strongly associated with making a purchase. Choice D is incorrect. Finding that social media users who shared an ad forgot the content one week later would weaken, not support, the researchers’ hypothesis that cognitive engagement is associated with a high level of recall.

Question ID 73e904d4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 73e904d4



Geographer Adebayo Oluwole Eludoyin and his colleagues surveyed small-scale farmers in three locations in Ondo State, Nigeria—which has mountainous terrain in the north, an urbanized center, and coastal terrain in the south—to learn more about their practices, like the types of crops they mainly cultivated. In some regions, female farmers were found to be especially prominent in the cultivation of specific types of crops and even constituted the majority of farmers who cultivated those crops; for instance,

Which choice most effectively uses data from the graph to complete the example?

- A. most of the farmers who mainly cultivated cereals and most of the farmers who mainly cultivated non-root vegetables in south Ondo were women.

- B. more women in central Ondo mainly cultivated root crops than mainly cultivated cereals.
- C. most of the farmers who mainly cultivated non-root vegetables in north and south Ondo were women.
- D. a relatively equal proportion of women across the three regions of Ondo mainly cultivated cereals.

ID: 73e904d4 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it uses data from the graph to effectively complete the example of Eludoyin and his colleagues' findings concerning female farmers in some regions of Ondo State, Nigeria. The graph presents values for the percentage of Ondo State small-scale farmers who are female, by type of crop and region. The graph shows that of the farmers mainly cultivating non-root vegetables, approximately 57% in north Ondo and approximately 54% in south Ondo are female; in other words, most of those farmers are female, which exemplifies the idea that female farmers make up the majority (more than half) of the farmers cultivating specific types of crops in some regions.

Choice A is incorrect because it inaccurately cites data from the graph: the graph shows that in south Ondo, most of the farmers mainly cultivating non-root vegetables are women (approximately 54%), but that only about 35% (less than half) of the farmers mainly cultivating cereals are women. Choice B is incorrect because it inaccurately cites data from the graph: the graph shows that more women in central Ondo mainly cultivate cereals than mainly cultivate root crops (approximately 36% and 20%, respectively). Additionally, it doesn't effectively complete the example because the graph shows that female farmers don't make up the majority (more than half) of the farmers for any type of crop in central Ondo. Choice D is incorrect because it doesn't effectively complete the example; it simply states that a relatively equal proportion of women across the three regions mainly cultivate cereals, which doesn't address the value for that proportion and thus doesn't show that a majority (more than half) of the farmers cultivating certain crops are female.

Question Difficulty: Hard

Question ID c54cf15b

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: c54cf15b

In the twentieth century, ethnographers made a concerted effort to collect Mexican American folklore, but they did not always agree about that folklore’s origins. Scholars such as Aurelio Espinosa claimed that Mexican American folklore derived largely from the folklore of Spain, which ruled Mexico and what is now the southwestern United States from the sixteenth to early nineteenth centuries. Scholars such as Américo Paredes, by contrast, argued that while some Spanish influence is undeniable, Mexican American folklore is mainly the product of the ongoing interactions of various cultures in Mexico and the United States.

Which finding, if true, would most directly support Paredes’s argument?

- A. The folklore that the ethnographers collected included several songs written in the form of a *décima*, a type of poem originating in late sixteenth-century Spain.
- B. Much of the folklore that the ethnographers collected had similar elements from region to region.
- C. Most of the folklore that the ethnographers collected was previously unknown to scholars.
- D. Most of the folklore that the ethnographers collected consisted of *corridos*—ballads about history and social life—of a clearly recent origin.

ID: c54cf15b Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents a finding that, if true, would support Paredes’s argument that Mexican-American folklore is mostly the result of cultural interactions in Mexico and the United States rather than an adaptation of Spanish folklore. The text describes a disagreement among scholars about whether Mexican-American folklore mostly derived from the folklore of Spain or originated in Mexico and the United States as cultures there have interacted. The latter view is the argument that Paredes puts forward. If Mexican-American folklore collected in the twentieth century mostly consists of ballads about history and social life that originated recently, then that would support Paredes’s argument, since it would suggest that the folklore mostly arose after Spanish rule ended in the early nineteenth century and that the folklore reflects cultural interactions in Mexico and the United States rather than traditions from Spain.

Choice A is incorrect because the inclusion of songs influenced by sixteenth-century Spanish poetry among Mexican-American folklore collected in the twentieth century would not support Paredes’s view that the folklore was the result of cultural interactions in Mexico and the United States rather than an offshoot of Spanish folklore. If anything, the presence of such songs among the folklore collected in the twentieth century would weaken Paredes’s argument, since it would reflect the influence of Spanish culture on the folklore. Choice B is incorrect because the mere presence of similarities in Mexican-American folklore across regions would not be sufficient to draw a conclusion about where the folklore originated, let alone to support Paredes’s argument that the folklore reflects cultural interactions in Mexico and the United States. In fact, since Paredes argued that Mexican-American folklore is the product of various cultures interacting in Mexico and the United States, he would likely expect there to be regional variations in folklore as different cultures have interacted in different places. Choice C is incorrect because scholars’

previous ignorance of the folklore would have no bearing on Paredes's argument that Mexican-American folklore mostly reflects cultural interactions in Mexico and the United States. The folklore's origins are independent of scholars' knowledge of the folklore.

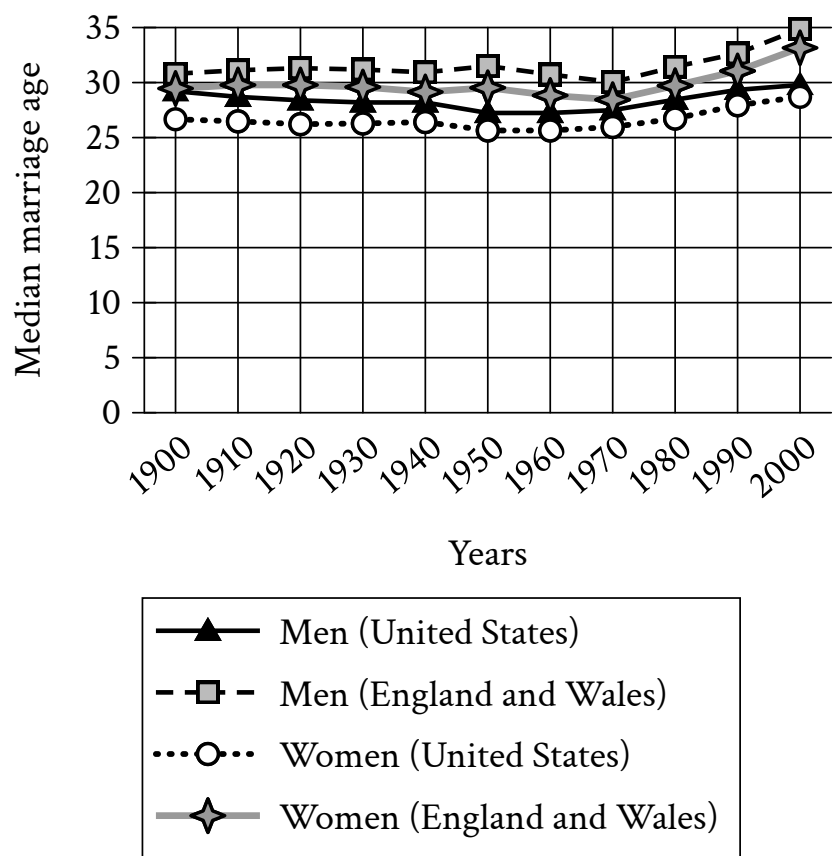
Question Difficulty: Hard

Question ID 0b1feef0

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 0b1feef0

Median Ages of First Marriage for Men and Women in the United States and in England and Wales, 1900–2000



A sociology student is reading an essay on the median age of first marriage in Western countries throughout the twentieth century. The author of the essay cites factors common to these countries that the author believes caused an increase in the median age of first marriage, such as new technologies that shortened the time needed for domestic chores, making two-person households less necessary and living alone more viable. The student asserts that beyond these factors there must be additional ones specific to particular Western countries that influenced the increase of age at first marriage.

Which choice most effectively uses data from the graph that support the student’s assertion?

- A. Between 1970 and 2000, the median age of first marriage rose more sharply for men in England and Wales than it did for men in the United States.
- B. The median age of first marriage for men in England and Wales was lower in 1970 than in 1950 or 1990.

- C. Between 1900 and 2000, the median age of first marriage for women in England and Wales was consistently higher than for women in the United States, as was the case for men.
- D. In England and Wales, the median age of first marriage was consistently higher for men than for women between 1900 and 2000, but this was not always the case in the United States.

ID: 0b1feef0 Answer

Correct Answer: A

Rationale

Choice A is the best answer. The student concluded that country-specific factors influence changes to median age of first marriage. This choice describes a time period when the rate of change differed between countries, suggesting that country-specific factors may have played a role in these changes.

Choice B is incorrect. The student concluded that country-specific factors influence changes to median age of first marriage. However, this choice doesn't provide any contrasts between countries and thus doesn't support the idea of country-specific factors influencing median age of first marriage. Choice C is incorrect. The students' conclusion is about changes that occurred during the 20th century. This choice provides broad information about the century as a whole, so it doesn't give insight into how median age at first marriage changed over time. Choice D is incorrect. This choice misreads the graph. The median age of first marriage was consistently higher for men than for women in the United States during the time period depicted.

Question Difficulty: Hard

Question ID 0ef811d9

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 0ef811d9

Early Earth is thought to have been characterized by a stagnant lid tectonic regime, in which the upper lithosphere (the outer rocky layer) was essentially immobile and there was no interaction between the lithosphere and the underlying mantle. Researchers investigated the timing of the transition from a stagnant lid regime to a tectonic plate regime, in which the lithosphere is fractured into dynamic plates that in turn allow lithospheric and mantle material to mix. Examining chemical data from lithospheric and mantle-derived rocks ranging from 285 million to 3.8 billion years old, the researchers dated the transition to 3.2 billion years ago.

Which finding, if true, would most directly support the researchers’ conclusion?

- A. Among rocks known to be older than 3.2 billion years, significantly more are mantle derived than lithospheric, but the opposite is true for the rocks younger than 3.2 billion years.
- B. Mantle-derived rocks older than 3.2 billion years show significantly more compositional diversity than lithospheric rocks older than 3.2 billion years do.
- C. There is a positive correlation between the age of lithospheric rocks and their chemical similarity to mantle-derived rocks, and that correlation increases significantly in strength at around 3.2 billion years old.
- D. Mantle-derived rocks younger than 3.2 billion years contain some material that is not found in older mantle-derived rocks but is found in older and contemporaneous lithospheric rocks.

ID: 0ef811d9 Answer

Correct Answer: D

Rationale

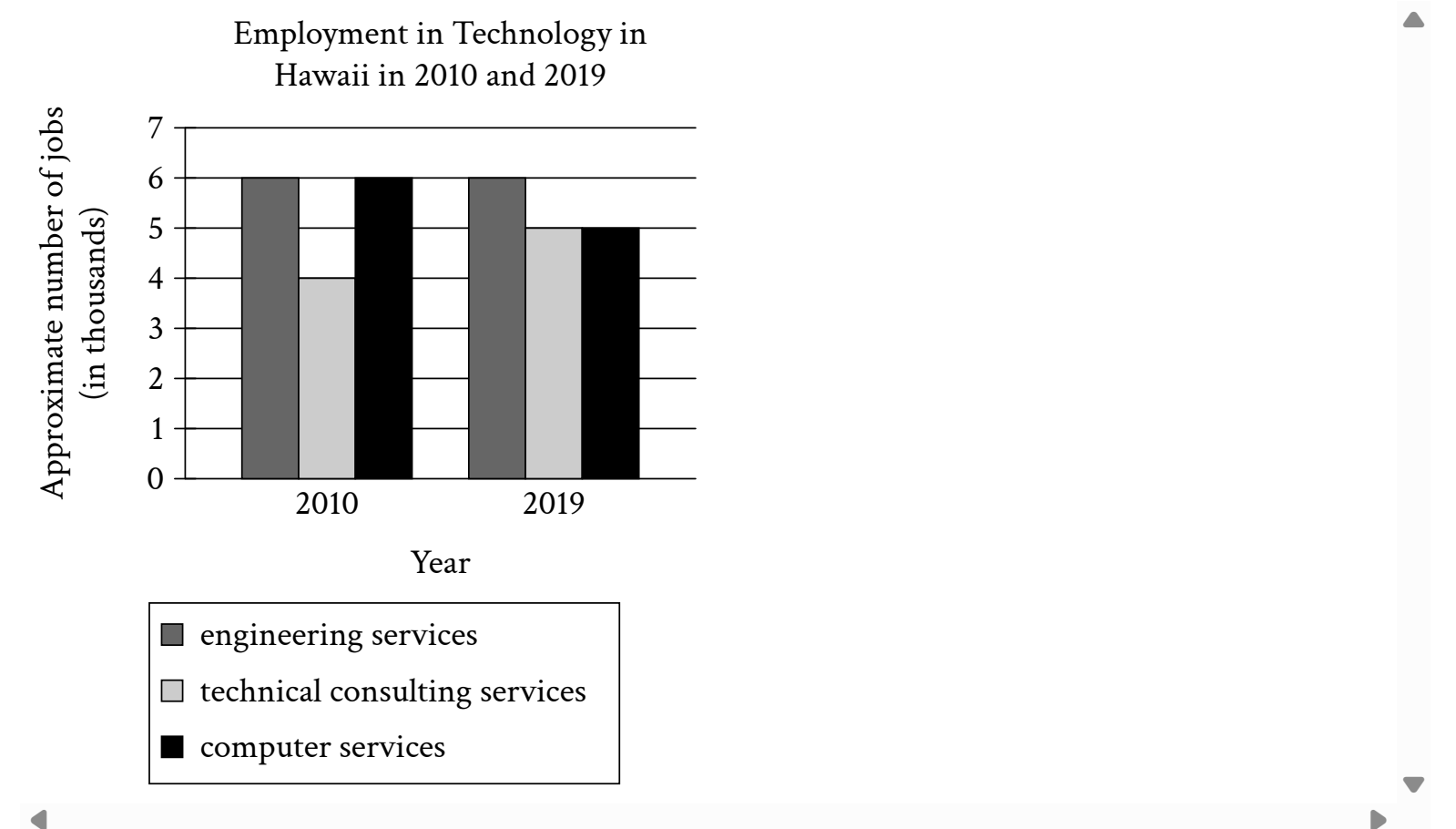
Choice D is the best answer because it presents a finding that, if true, would most directly support the researchers’ conclusion that the transition from a stagnant lid regime to a tectonic plate regime occurred around 3.2 billion years ago. The text explains that early in Earth’s history, Earth exhibited a stagnant lid regime in which there’s no interaction between the lithosphere and the underlying mantle. The text further explains that, by contrast, once Earth began to exhibit a tectonic plate regime, its lithospheric and mantle material began to mix. If mantle-derived rocks younger than 3.2 billion years contain material not found in older mantle-derived rocks, that material must have originated somewhere other than the mantle. And if this material is found in both older and contemporaneous lithospheric rocks, that would imply that the lithosphere was able to mix with mantle material beginning around 3.2 billion years ago, as the researchers concluded.

Choice A is incorrect. The text gives no basis for comparing the quantities of lithospheric and mantle-derived rocks. Choice B is incorrect. The text gives no basis for comparing the material makeup of lithospheric rocks to that of mantle-derived rocks. Choice C is incorrect. A positive correlation between the age of lithospheric rocks and these rocks’ chemical similarity to mantle-derived rocks would mean that the oldest rocks would be the most similar, which contradicts the text’s claim that lithospheric and mantle-derived rocks were completely separate until 3.2 billion years ago. If the researchers’ conclusion about the onset of tectonics on Earth is correct, then younger lithospheric rocks would show greater chemical similarity to mantle-derived rocks than older lithospheric rocks do.

Question ID 73fc8271

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 73fc8271



A student in Hawaii is interested in pursuing a career in technology and decides to do some research on local trends. The student notices that the number of jobs in computer services in 2010 was _____

- Which choice most effectively uses data from the graph to complete the statement?
- A. higher than the number of jobs in technical consulting services, and in 2019 was about the same as the number of jobs in engineering services.
 - B. about the same as the number of jobs in engineering services, and in 2019 was about the same as the number of jobs in technical consulting services.
 - C. lower than the number of jobs in engineering services, but in 2019 was higher than the number of jobs in engineering services.
 - D. about the same as the number of jobs in technical consulting services, but in 2019 was lower than the number of jobs in technical consulting services.

ID: 73fc8271 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it uses data from the graph to effectively complete the statement regarding what the student notices about the number of jobs in computer services in 2010. The graph shows that in 2010, the number of computer services jobs was approximately 6,000, which is the same approximate number of jobs in engineering services. Additionally, the graph shows that in 2019, the number of jobs in technical consulting services and the number of jobs in computer services were about the same, at approximately 5,000.

Choice A is incorrect. While the graph shows that in 2010 the number of computer services jobs (about 6,000) was higher than the number of technical consulting services jobs (about 4,000), in 2019 the number of computer services jobs (about 5,000) was not about the same as the number of engineering services jobs (about 6,000). Choice C is incorrect because according to the graph, the number of jobs in computer services was lower than the number of jobs in engineering services in 2019, not 2010. Additionally, the graph shows that in 2019, the number of computer services jobs (about 5,000) was not higher than the number of jobs in engineering services (about 6,000). Choice D is incorrect because the graph shows that the number of computer services jobs was about the same as the number of technical consulting services jobs in 2019, not 2010. This also means the number of computer services jobs could not have been lower than the technical consulting services jobs in 2019 if they were about the same.

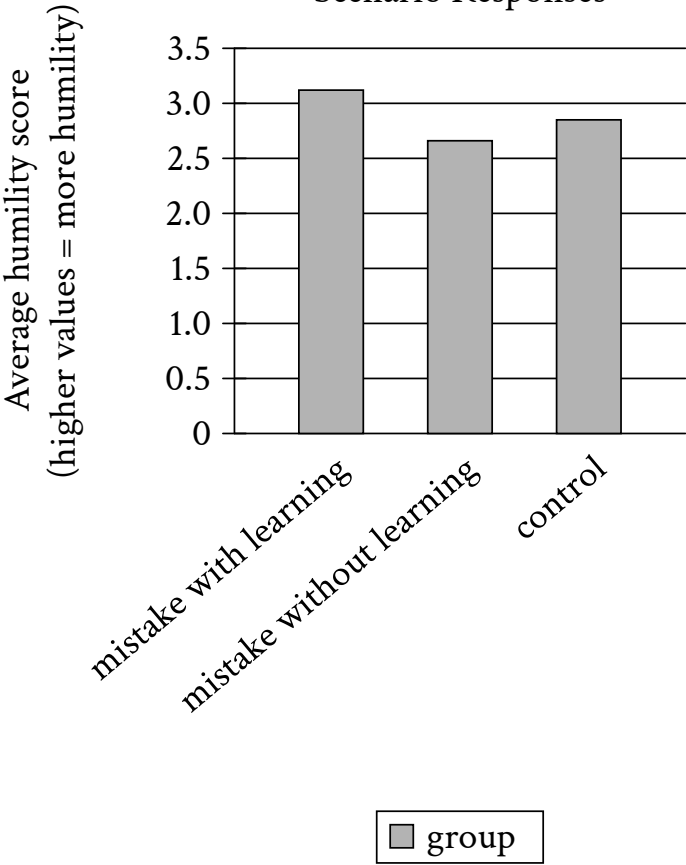
Question Difficulty: Hard

Question ID 40582207

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 40582207

Humility Scores for Participants' Scenario Responses



Jia Hu and colleagues hypothesized that workplace leaders who reflect on lessons learned from past mistakes are likely to exhibit more humility than leaders who don't engage in such reflection. To test this, the team placed 301 managers in one of three groups. Participants in two experimental groups were asked to reflect on a mistake, one group focusing on a mistake that resulted in learning and the other group focusing on a mistake that didn't result in learning. Participants in a control group were asked to reflect on their daily routine. All the participants then described how they would respond to a workplace scenario. After evaluating the responses for evidence of humility, the researchers concluded that their hypothesis was correct.

Which choice best describes data in the graph that support the researchers' conclusion?

- A. None of the three groups' average humility scores exceeded 3.5.
- B. The managers in the control group exhibited only slightly less humility on average than the managers in the two experimental groups did.
- C. The managers who reflected on a past mistake that resulted in learning exhibited more humility on average than the managers in the other two groups did.

D. All three groups exhibited less humility on average than the researchers expected.

ID: 40582207 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it describes data in the graph that support the researchers' conclusion that their hypothesis about workplace leaders and humility was correct. According to the text, Jia Hu and colleagues "hypothesized that workplace leaders who reflect on lessons learned from past mistakes are likely to exhibit more humility than leaders who don't engage in such reflection." The bar graph shows the humility scores for managers who participated in Jia Hu and colleagues' study. It shows average humility scores for managers who reflected on a past mistake that they learned from, managers who reflected on a past mistake that they didn't learn from, and managers who were in the control group that, according to the text, simply reflected on their daily routines. The graph shows that managers who reflected on a past mistake they learned from received an average humility score between 3.0 and 3.5. Both the control group and managers who reflected on a mistake they didn't learn from received a lower average humility score of between 2.5 and 3.0. Thus, the managers who reflected on a past mistake that resulted in learning exhibited more humility on average than the managers in the other two groups did. This supports the researchers' conclusion that their initial hypothesis that workplace leaders who reflect on past mistakes they learned from exercise greater humility was correct.

Choice A is incorrect. Although according to the graph it's true that none of the group's humility scores exceeded 3.5, this idea does not support the researchers' conclusion that their initial hypothesis was correct. The statement that none of the three groups' average humility scores exceeded 3.5 does not distinguish between those leaders who reflected on lessons learned from past mistakes and those who didn't, so it would not support Hu and colleagues' hypothesis that workplace leaders who reflect on past mistakes they learned from exercise greater humility. Choice B is incorrect. While the graph shows that managers in the control group did exhibit less humility than the experimental group of managers who reflected on a mistake they learned from, the graph also shows that the control group exhibited more (not less) humility than the experimental group that reflected on a mistake they didn't learn from. Furthermore, the idea that the managers in the control group exhibited only slightly less humility on average than the managers in the two experimental groups did would not support the researchers' conclusion that their initial hypothesis that workplace leaders who reflect on past mistakes they learned from exercise greater humility was correct. Choice D is incorrect because there is no indication in the graph that all three groups of participants exhibited less humility on average than the researchers expected. The graph and text don't cite any specific expectations that the researchers had with regard to the humility scores for each group.

Question Difficulty: Hard

Question ID 1f56dfbb

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 1f56dfbb

“Mrs. Spring Fragrance” is a 1912 short story by Sui Sin Far. In the story, Mrs. Spring Fragrance, a Chinese immigrant living in Seattle, is traveling in California. In letters to her husband and friend, she demonstrates her concern for what’s happening at her home in Seattle while she is away: _____

Which quotation from Mrs. Spring Fragrance’s letters most effectively illustrates the claim?

- A. “My honorable cousin is preparing for the Fifth Moon Festival, and wishes me to compound for the occasion some American ‘fudge,’ for which delectable sweet, made by my clumsy hands, you have sometimes shown a slight prejudice.”
- B. “Next week I accompany Ah Oi to the beauteous town of San José. There will we be met by the son of the Illustrious Teacher.”
- C. “Forget not to care for the cat, the birds, and the flowers. Do not eat too quickly nor fan too vigorously now that the weather is warming.”
- D. “I am enjoying a most agreeable visit, and American friends, as also our own, strive benevolently for the accomplishment of my pleasure.”

ID: 1f56dfbb Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents a quotation that illustrates the claim that Mrs. Spring Fragrance demonstrates concern for what’s happening at home while she’s in California. By giving reminders to “care for the cat, the birds, and the flowers,” “not eat too quickly,” and avoid engaging in strenuous activity in the heat, Mrs. Spring Fragrance shows that she’s thinking about what’s happening at home and wants to ensure everything is taken care of.

Choice A is incorrect because the quotation, while it does suggest that Mrs. Spring Fragrance has made fudge at home before, is focused on preparations for an upcoming festival, not on concerns for anything happening at home while Mrs. Spring Fragrance is away. Choice B is incorrect because the quotation has to do with an upcoming event during Mrs. Spring Fragrance’s trip—visiting San José and meeting someone new—rather than her concern for what’s happening at home. Choice D is incorrect because the quotation is focused on how Mrs. Spring Fragrance feels about her trip and the friends she’s seeing, not on her concern for what’s happening at home.

Question Difficulty: Hard

Question ID d7e1dbac

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: d7e1dbac

Average Nitrate and Phosphate Concentrations in Seawater after Volcanic Eruption

Nutrient	Seawater in lava-affected area, 5–45 meters below surface	Seawater in lava-affected area, 75–125 meters below surface	Seawater outside of lava-affected area, 5–45 meters below surface	Seawater outside of lava-affected area, 75–125 meters below surface
Nitrate (micromoles per liter)	3.1	0.4	≤0.03	≤0.01
Phosphate (micromoles per liter)	0.17	0.09	0.14	0.06

After a volcanic eruption spilled lava into North Pacific Ocean waters, a dramatic increase of diatoms (a kind of phytoplankton) near the surface occurred. Scientists assumed the diatoms were thriving on nutrients such as phosphate from the lava, but analysis showed these nutrients weren’t present near the surface in forms diatoms can consume. However, there was an abundance of usable nitrate, a nutrient usually found in much deeper water and almost never found in lava. Microbial oceanographer Sonya Dyhrman and colleagues believe that as the lava plunged nearly 300 meters below the surface it dislodged pockets of this nutrient, releasing it to float upward, given that _____

Which choice most effectively uses data from the table to complete the statement?

- A. at 5–45 meters below the surface, the average concentration of phosphate was about the same in the seawater in the lava-affected area as in the seawater outside of the lava-affected area.
- B. for both depth ranges measured, the average concentrations of nitrate were substantially higher in the seawater in the lava-affected area than in the seawater outside of the lava-affected area.
- C. for both depth ranges measured in the seawater in the lava-affected area, the average concentrations of nitrate were substantially higher than the average concentrations of phosphate.
- D. in the seawater outside of the lava-affected area, there was little change in the average concentration of nitrate from 75–125 meters below the surface to 5–45 meters below the surface.

ID: d7e1dbac Answer

Correct Answer: B

Rationale

Choice B is the best answer. The claim is that the lava freed the deep nitrate, allowing it to float upward. The table supports this by showing that there was more nitrate in the lava-affected seawater at various depths above 300 meters (the depth to which the

lava plunged) than in unaffected seawater.

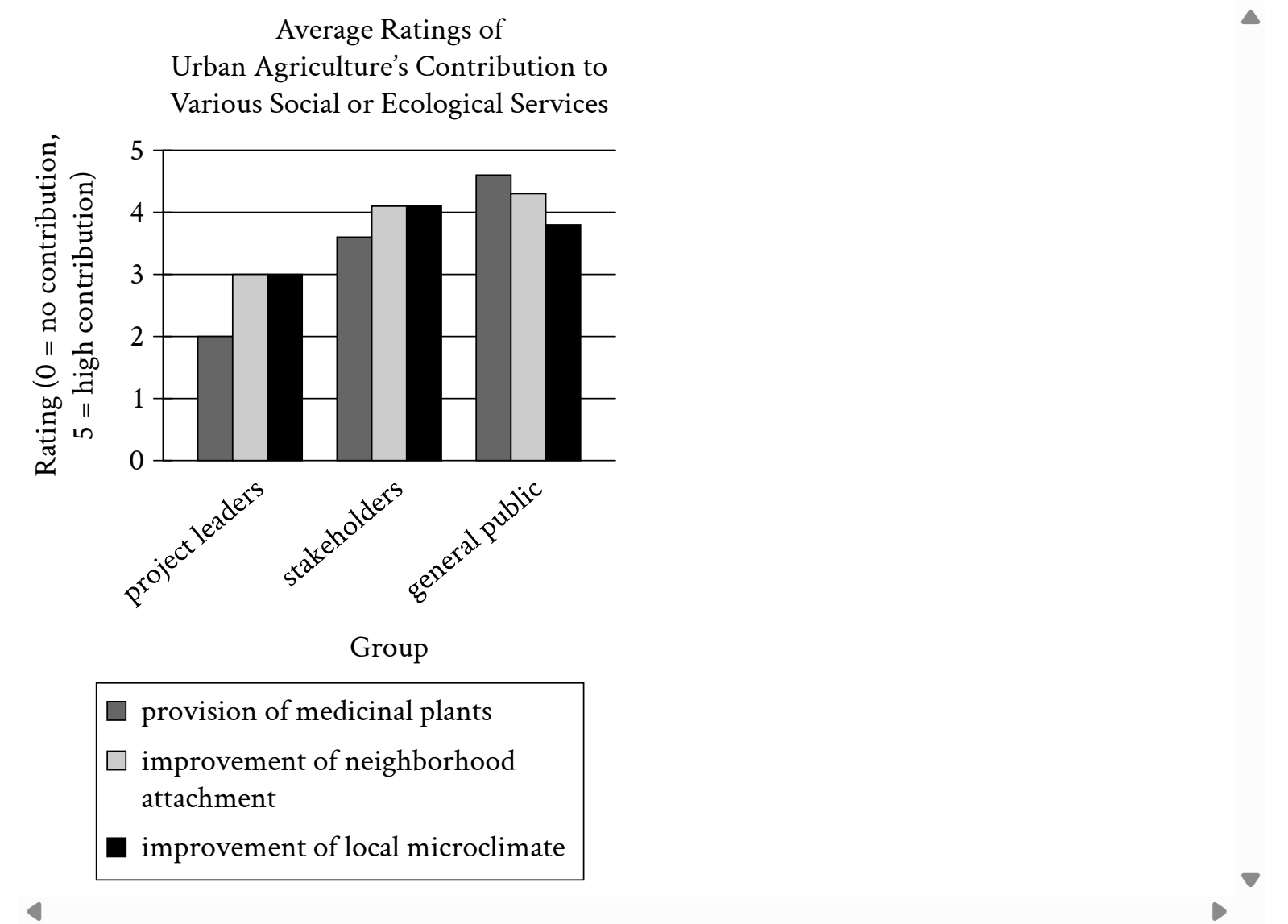
Choice A is incorrect. This choice doesn't complete the statement in a way that supports the claim. The claim is about nitrate, not phosphate. Choice C is incorrect. This choice doesn't complete the statement in a way that supports the claim. The claim is only about nitrate—the concentrations of phosphate aren't relevant. Choice D is incorrect. This choice doesn't complete the statement in a way that supports the claim. It doesn't say anything about the seawater inside the lava-affected area.

Question Difficulty: Hard

Question ID a301a5e2

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: a301a5e2



Urban agriculture is the practice of growing plant- or animal-based products in urban settings such as community gardens and rooftop farms. Esther Sanyé-Mengual, Kathrin Specht, and their team surveyed three groups of people in Bologna, Italy—leaders of urban agriculture projects, stakeholders in urban agriculture (e.g., food researchers and urban farming associations), and the general public—to compare their views about the extent to which urban agriculture contributes to 25 social or ecological services that the team identified. The survey results show that, on average, project leaders rated urban agriculture as contributing less to

Which choice most effectively uses data from the graph to complete the assertion?

- A. providing medicinal plants than to improving the local microclimate.
- B. improving community members’ sense of attachment to the neighborhood than to offering educational opportunities.

C. improving the local microclimate than to providing medicinal plants.

D. improving the local microclimate than to providing tourist attractions.

ID: a301a5e2 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most effectively uses data from the graph to complete the assertion about urban agriculture. The graph shows the average survey ratings, on a scale of 0 to 5, from three groups of people—project leaders, stakeholders, and the general public—concerning the contributions of urban agriculture. According to the graph, project leaders gave an average rating of approximately 2 to urban agriculture’s contributions to the provision of medicinal plants, which is lower than the average rating of approximately 3 that project leaders gave to urban agriculture’s contributions to both improving the local microclimate and improving a sense of attachment to the neighborhood. This shows that project leaders rated urban agriculture as contributing less to providing medicinal plants than to improving the local microclimate.

Choice B is incorrect because the graph doesn’t provide data about urban agriculture’s contribution to educational opportunities; therefore, this comparison can’t be made. Choice C is incorrect because it contradicts the data shown in the graph. On average, project leaders gave a rating of approximately 3 to urban agriculture’s contributions to improving the local microclimate, which is higher, not lower, than the average rating of approximately 2 that they gave to its contributions to providing medicinal plants. Choice D is incorrect because the graph doesn’t provide data about urban agriculture’s contribution to providing tourist attractions; therefore, this comparison can’t be made.

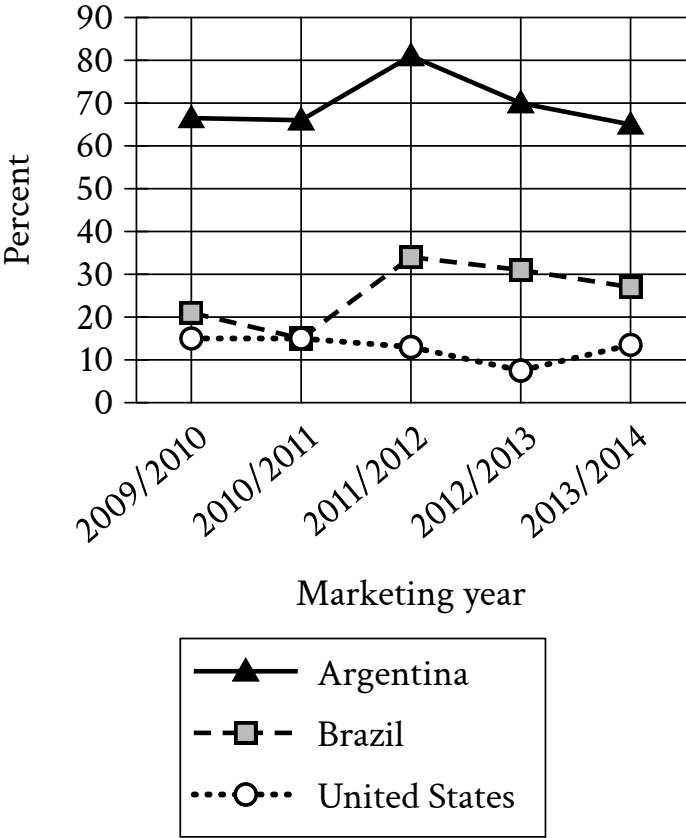
Question Difficulty: Hard

Question ID b25f59f7

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: b25f59f7

Percentage of Maize Exported
by Three Countries for Marketing
Years 2009/2010–2013/2014



Argentina, Brazil, and the United States are among the world’s leading producers of maize (corn), and each country exports a certain percentage of maize each marketing year, which runs from March to February in Argentina and Brazil and from September to August in the United States. A student is researching those percentages and finds that for the marketing year 2012/2013, the percentage of maize exported by _____

- Which choice most effectively uses data from the graph to complete the text?
- A. Brazil increased from the previous marketing year but remained lower than the percentage exported by the United States.
 - B. Brazil exceeded the percentage exported by Argentina for the first time.
 - C. Argentina decreased from the previous marketing year but remained the highest among the three countries.
 - D. the United States reached its highest point during the five marketing years.

Correct Answer: C

Rationale

Choice C is the best answer because it most effectively uses data from the graph to complete the text's discussion of the percentages of maize exported in the marketing year 2012/2013. The graph presents percentages of maize exported by Argentina, Brazil, and the United States in marketing years 2009/2010 to 2013/2014 and indicates that for the marketing year 2012/2013, the percentage of maize exported by Argentina decreased to about 70 percent from about 80 percent in the previous marketing year. The graph also shows that the percentage of maize exported by Argentina remained highest among the three countries in the marketing year 2012/2013, surpassing the percentage exported by Brazil (about 31 percent) and by the United States (about 8 percent).

Choice A is incorrect because for the marketing year 2012/2013, the graph indicates that the percentage of maize exported by Brazil didn't increase from the previous year; rather, it decreased from about 34 percent to about 31 percent. Moreover, the graph shows that the percentage of maize exported by Brazil remained higher, not lower, than the percentage exported by the United States in the marketing year 2012/2013. Choice B is incorrect because the graph indicates that the percentage of maize exported by Brazil never exceeded the percentage exported by Argentina for any of the marketing years represented. Choice D is incorrect because the graph indicates that the percentage of maize exported by the United States reached its lowest point, not its highest, during the five marketing years in 2012/2013, with the United States exporting only about 8 percent of its maize in that marketing year.

Question Difficulty: Hard

Question ID df6497ac

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: df6497ac

In addition to her technical skill and daring feats, American stunt pilot Bessie Coleman was also known for dazzling the crowds that came to watch her air shows in the 1920s with her exuberant personality. During her career, she was careful and purposeful about how she crafted her public persona. An aviation researcher has claimed that Coleman intentionally defied social norms of the time by how she chose to present herself to the public.

Which quotation from an article about Coleman would most directly support the aviation researcher’s claim?

- A. “For her air shows, Coleman frequently used the Curtiss JN-4, or ‘Jenny,’ which at that time was one of the most well-known types of planes.”
- B. “While Coleman was beloved by spectators for her charisma, she had a more complicated relationship with her managers and staff, who at times found her behavior too impulsive and demanding.”
- C. “Coleman once considered leaving her career as a stunt pilot to focus her efforts on giving speeches, which she felt would better support her public image.”
- D. “Although female pilots were typically expected to wear traditional but impractical attire that included dresses or skirts, photographs of Coleman show her wearing pants and leather jackets.”

ID: df6497ac Answer

Correct Answer: D

Rationale

Choice D is the best answer. This choice supports the claim of Coleman’s intentional defiance of social norms: female pilots were expected to wear skirts, but Coleman wore pants and leather jackets instead.

Choice A is incorrect. Coleman flew a well-known, common plane, which would not have defied social norms among pilots. Choice B is incorrect. Her complicated relationship with managers and staff would not have been a component of Coleman’s public persona. This choice also fails to mention any “social norms of the time.” Choice C is incorrect. While this quotation suggests that Coleman was careful and purposeful about her public image, it doesn’t directly mention anything about “social norms of the time.”

Question Difficulty: Hard

Question ID 11634e18

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 11634e18

“Often Rebuked, Yet Always Back Returning” is an 1846 poem by Emily Brontë. The poem conveys the speaker’s determination to experience the countryside around her: _____

Which quotation from the poem most effectively illustrates the claim?

- A. “Often rebuked, yet always back returning / To those first feelings that were born with me, / And leaving busy chase of wealth and learning / For idle dreams of things which cannot be.”
- B. “I’ll walk, but not in old heroic traces, / And not in paths of high morality, / And not among the half-distinguished faces, / The clouded forms of long-past history.”
- C. “I’ll walk where my own nature would be leading: / It vexes me to choose another guide: / Where the grey flocks in ferny glens are feeding; / Where the wild wind blows on the mountain side.”
- D. “To-day, I will seek not the shadowy region; / Its unsustaining vastness waxes drear; / And visions rising, legion after legion, / Bring the unreal world too strangely near.”

ID: 11634e18 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents the quotation that best illustrates the claim that the speaker is determined to experience the countryside around her. In the quotation, the speaker makes it clear that she plans to walk somewhere based on her own wishes (“where my own nature would be leading”) rather than follow anything else (“another guide”), and that she’ll walk “in ferny glens” alongside the mountain.

Choice A is incorrect because this quotation suggests that the speaker wants to avoid pursuing money and education (“busy chase of wealth and learning”) and instead return to some earlier interests (her “first feelings”); the quotation doesn’t address her determination to experience the countryside. Choice B is incorrect because the speaker is describing the circumstances under which she won’t walk, which doesn’t address her determination to experience the countryside. Choice D is incorrect because rather than conveying her determination to experience the countryside, the speaker is explaining a particular thing she won’t do (“seek not the shadowy region”).

Question Difficulty: Hard

Question ID 3d8453ea

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 3d8453ea

Five of the Responses to Survey about Actions to Conserve Energy		
Action	Action category	Percentage of respondents selecting action (%)
Use efficient cars/hybrids	efficiency	2.8
Change thermostat setting	curtailment	6.3
Use bike or public transportation instead of car	curtailment	12.9
Use efficient light bulbs	efficiency	3.6
Turn off lights	curtailment	19.6

In a survey of public perceptions of energy use, researcher Shahzeen Attari and her team asked respondents to name the most effective action ordinary people can take to conserve energy. The team categorized each action as either an efficiency or a curtailment and found that respondents tended to name curtailments more often than they did efficiencies. For example, 19.6% of respondents stated that the most effective way to conserve energy is to turn off the lights, while only _____

- Which choice most effectively uses data from the table to complete the text?
- A. 6.3% of respondents said it was most effective to use efficient cars or hybrids.
 - B. 2.8% of respondents said it was most effective to change the thermostat setting.
 - C. 12.9% of respondents said it was most effective to use a bike or public transportation.
 - D. 3.6% of respondents said it was most effective to use efficient light bulbs.

ID: 3d8453ea Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most effectively uses data from the table to complete the text’s discussion of Attari and her team’s survey results. The text states that the team asked respondents to identify the most effective action people can take to save energy, with the team classifying each action as either an efficiency or a curtailment. According to the text, respondents named curtailments more often than they did efficiencies. The text then offers an example that begins by citing a curtailment, turning off the lights, that was selected by a relatively high percentage of respondents (19.6%). Given that the example is presented in support of the idea that more respondents selected curtailments than efficiencies, the most effective way to complete the example is by citing an efficiency, using efficient light bulbs, that was selected by a relatively low percentage of respondents (only 3.6%).

Choice A is incorrect because it inaccurately describes data in the table. The data indicate that 6.3% of respondents said the most effective action was to change the thermostat setting, not to use efficient cars or hybrids. Choice B is incorrect because it inaccurately describes data in the table. The data indicate that 2.8% of respondents said the most effective action was to use efficient cars/hybrids, not to change the thermostat setting. Choice C is incorrect because it mentions a curtailment (using a bike or public transportation) and not an efficiency. The text states that a research team asked respondents to identify the most effective action people can take to save energy, with the team classifying each action as either an efficiency or a curtailment. According to the text, respondents named curtailments more often than they did efficiencies. The text then offers an example that begins by citing a curtailment, turning off the lights, that was selected by a relatively high percentage of respondents (19.6%). Given that the example is presented in support of the idea that more people selected curtailments than efficiencies, the most effective way to complete the example is not by referring to another curtailment but rather by referring to an efficiency that was selected by a relatively low percentage of respondents.

Question Difficulty: Hard

Question ID cb016233

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: cb016233

In a series of experiments, Julio Sevilla and Claudia Townsend showed that manipulating the space between products in store displays can influence consumers’ views of those products. Participants in several of the experiments regarded the same products in the same (generic) retail settings as significantly more valuable when the product-to-space ratio was low than when it was high. But in one of the experiments, Sevilla and Townsend arranged the same jewelry with different levels of intervening space at an upscale retailer (Tiffany & Co.) and a relatively inexpensive retailer (Forever 21). The result of this experiment suggests that a store context associated with inexpensive products may moderate the effect Sevilla and Townsend observed in their other experiments.

Which finding from the experiment with Tiffany & Co. and Forever 21, if true, would most directly support the conclusion presented in the text?

- A. At Tiffany & Co., participants judged jewelry spaced far apart to be substantially more valuable than jewelry spaced close together, but at Forever 21, participants judged jewelry spaced far apart to be only slightly more valuable than jewelry spaced close together.
- B. At both Tiffany & Co. and Forever 21, participants judged jewelry spaced far apart to be less valuable than jewelry spaced close together, but the difference in perceived value was significantly greater at Tiffany & Co. than at Forever 21.
- C. Participants judged jewelry spaced far apart at Tiffany & Co. to be similar in value to jewelry spaced far apart at Forever 21, but participants judged jewelry spaced close together at Tiffany & Co. to be more valuable than jewelry spaced close together at Forever 21.
- D. When jewelry was spaced far apart, participants judged the jewelry at Tiffany & Co. to be more valuable than the jewelry at Forever 21, but when jewelry was spaced close together, participants judged the jewelry at Tiffany & Co. to be less valuable than the jewelry at Forever 21.

ID: cb016233 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents a finding that, if true, would support the text’s conclusion about the results of the experiment with Tiffany & Co. and Forever 21. According to the text, Sevilla and Townsend found in several experiments that when products in a generic retail setting are displayed with a low product-to-space ratio (that is, with lots of space between them), consumers view those products as significantly more valuable than when the same products are displayed with a higher product-to-space ratio (less space between them). The text then states that the results of an experiment specifically using the contexts of an inexpensive store (Forever 21) and an upscale one (Tiffany & Co.) suggest that an inexpensive store context may moderate, or lessen, that effect. If Sevilla and Townsend found that participants in the experiment with Tiffany & Co. and Forever 21 judged the same jewelry items as substantially more valuable when there was lots of space between them than when there was little space between them in the upscale store (Tiffany & Co.) but judged the same jewelry items as only slightly more valuable when there was lots of space between them than when there was little space between them in the inexpensive store (Forever 21), that finding

would demonstrate that increased space between products was associated with less of an increase in those products' perceived value at the inexpensive store than at the upscale store. Thus, the finding would support the text's conclusion that a store context associated with inexpensive goods moderates the effect Sevilla and Townsend observed in their earlier experiments.

Choice B is incorrect because if Sevilla and Townsend found that at both upscale and inexpensive stores, participants judged jewelry spaced far apart to be less valuable than jewelry spaced close together, that would show the opposite of the effect the researchers observed in their earlier experiments, not show that an inexpensive store context merely moderates, or lessens, that effect. Choice C is incorrect because this finding wouldn't show that the effect Sevilla and Townsend observed in their initial experiments (that products spaced far apart were perceived as more valuable than the same products spaced close together) is present but lessened in inexpensive retail contexts, as the text suggests. The conclusion in the text rests on determining the difference in jewelry items' perceived value between two spacing conditions within each store and then comparing the difference for the inexpensive store (Forever 21) to the difference for the upscale store (Tiffany & Co.); a finding that compares perceptions of the jewelry items' value between the two stores but for only one type of spacing condition at a time wouldn't provide information about the degree of difference between spacing conditions within each type of store context. Choice D is incorrect because this finding wouldn't show that the effect Sevilla and Townsend observed in their initial experiments (that products spaced far apart were perceived as more valuable than the same products spaced close together) is present but lessened in inexpensive retail contexts, as the text suggests. The conclusion in the text rests on determining the difference in jewelry items' perceived value between two spacing conditions within each store and then comparing the difference for the inexpensive store (Forever 21) to the difference for the upscale store (Tiffany & Co.); a finding that compares perceptions of the relative value of jewelry items between the two stores and for only one type of spacing condition at a time wouldn't provide information about the degree of difference between spacing conditions within each type of store context.

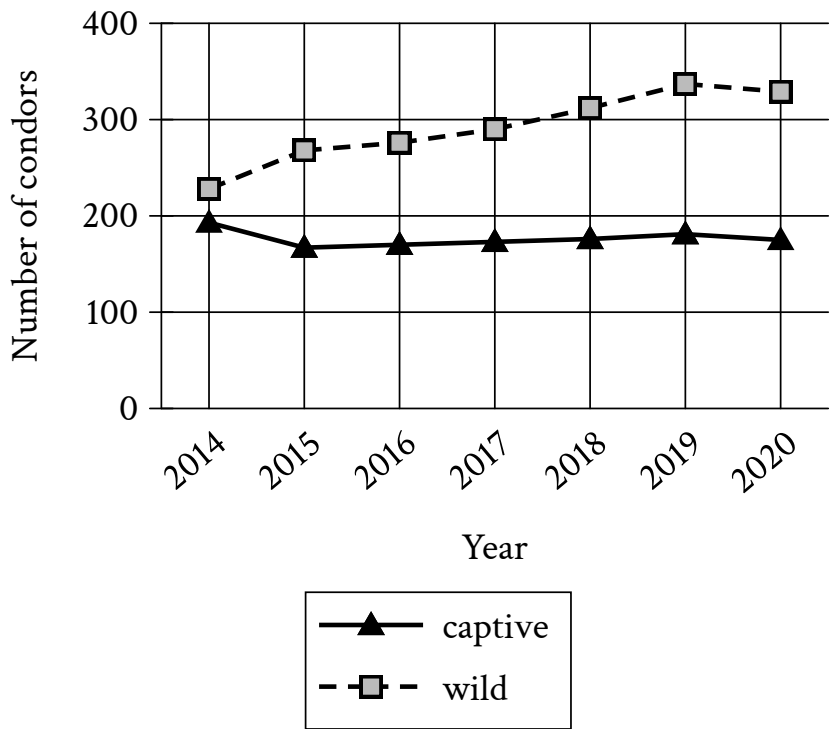
Question Difficulty: Hard

Question ID 0767006b

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 0767006b

California Condor Populations
2014–2020



The California Condor Recovery Program is working to protect this large, rare American vulture from extinction. The program captured 27 wild condors in 1987 in order to protect and breed them. Captive birds have been reintroduced into the wild since 1992. Although the California condor is still a rare species, many biologists claim that the program has been reasonably successful.

Which choice best describes data from the graph that support the biologists’ claim?

- A. The number of captive California condors steadily decreased between 2014 and 2020.
- B. The numbers of California condors living both in captivity and in the wild decreased only slightly from 2019 to 2020.
- C. The difference between the number of captive and wild California condors remained relatively steady between 2014 and 2017.
- D. The number of wild California condors increased overall from 2014 to 2020 and exceeded the number of those living in captivity.

ID: 0767006b Answer

Correct Answer: D

Rationale

Choice D is the best answer because it best describes data from the graph that support the biologists' claim. The text accompanying the graph describes the efforts of the California Condor Recovery Program, which is working to protect the condor from extinction. The program captured some condors in 1987 in order to breed them and has been reintroducing captive birds into the wild since 1992. Many biologists claim the program has been a success, as the text explains, and it is reasonable to infer that an indication of the program's success would be an increase in the wild condor population compared to the captive condor population. The graph shows the wild and captive condor populations in California between 2014 and 2020. In 2014 there were slightly more than 200 wild condors in California, but by 2020 there were more than 300. Meanwhile, over the same period the captive condor population remained under 200. Thus, the biologists' claim about the program's success is supported by data from the graph showing that the number of wild California condors increased overall from 2014 to 2020 and exceeded the number of those living in captivity.

Choice A is incorrect because it does not accurately describe data from the graph. The number of captive California condors did not steadily decrease between 2014 and 2020: rather, it increased slightly during some years and decreased slightly during others, generally remaining at slightly less than 200. Choice B is incorrect. Even though the graph does show a slight decrease in both the captive and wild condor populations from 2019 to 2020, such a decrease during a particular year would not demonstrate the program's success. Choice C is incorrect because it does not accurately describe data from the graph. The difference between the number of captive and wild California condors did not remain relatively steady between 2014 and 2017. While the number of captive condors remained roughly the same during that period, the number of wild condors increased, so the difference between the number of captive and wild condors increased as well.

Question Difficulty: Hard

Question ID 7bdd4654

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 7bdd4654

The presence of other individuals of the same species has been observed to mitigate stress in highly social mammals. To investigate whether this phenomenon, known as social buffering, also occurs in reptiles, researchers led by Chelsea E. Martin monitored stress responses in wild southern Pacific rattlesnakes (*Crotalus helleri*) in three experimental treatments: when alone, with a rope, and with a companion *C. helleri*. The researchers compared the percent change between baseline and peak heart rate in response to a (harmless) disturbance, with higher values indicating higher stress levels.

Which finding, if true, would most directly support the idea that social buffering occurs among *C. helleri*?

- A. The average percent change in heart rate was lower among *C. helleri* with a companion than among solitary *C. helleri* and *C. helleri* with a rope.
- B. Average peak heart rates were highest among solitary *C. helleri*, but no differences were observed in average peak heart rates between *C. helleri* with a companion and *C. helleri* with a rope.
- C. *C. helleri* with a companion displayed a lower average baseline heart rate and lower average peak heart rate than did solitary *C. helleri* or *C. helleri* with a rope.
- D. Solitary *C. helleri* had higher average baseline heart rates than did *C. helleri* in the other treatments, but the average percent change in heart rate was smaller among solitary *C. helleri* than among *C. helleri* with a companion.

ID: 7bdd4654 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents a finding that, if true, would most directly support the idea that social buffering—the mitigation of stress by the presence of other animals of the same species—occurs among *C. helleri*. According to the text, the researchers quantified the amount of stress in *C. helleri* as the percent change between baseline and peak heart rate, with higher values indicating greater stress. The text also describes the researchers’ three treatments: snakes alone, snakes with a rope, and snakes with a companion *C. helleri*. If the average percent change in heart rate was lower among snakes with a companion than among either solitary snakes or snakes with a rope, that would indicate two things: snakes accompanied by a companion experienced less stress than they did when alone, and the reduction wasn’t simply the result of any object being present, since the rope didn’t produce the same effect. Together, these results would directly support the conclusion that the companion’s presence mitigated stress, as the social buffering hypothesis predicts.

Choice B is incorrect because the finding compares peak heart rates among the three treatments rather than the percent change in heart rates among those treatments. The finding also indicates that snakes with a companion and snakes with a rope showed no differences in peak heart rates. If a rope produced the same effect as a companion did, that would suggest that the effect, whatever its extent, isn’t caused specifically by the presence of another individual of the same species and so wouldn’t support the social buffering hypothesis. Choice C is incorrect because the finding addresses absolute baseline and peak heart rates rather than the percent change between them, which is the measure of stress response the researchers used. Lower absolute heart

rates in companion-present snakes could reflect a generally calmer state but wouldn't show that the stress response to the disturbance was reduced and so wouldn't directly demonstrate social buffering as defined in the study. Choice D is incorrect because the finding states that the percent change in heart rate was smaller among solitary snakes than among snakes with a companion, which would indicate a smaller stress response when alone. This pattern would directly contradict the social buffering hypothesis rather than support it. Furthermore, a comparison of baseline heart rates would be immaterial for determining whether social buffering occurs among *C. helleri* because the text indicates that a change in heart rate, not average baseline heart rate, indicates a stress response.

Question Difficulty: Hard

Question ID 018b3508

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 018b3508

Born in 1891 to a Quechua-speaking family in the Andes Mountains of Peru, Martín Chambi is today considered to be one of the most renowned figures of Latin American photography. In a paper for an art history class, a student claims that Chambi’s photographs have considerable ethnographic value—in his work, Chambi was able to capture diverse elements of Peruvian society, representing his subjects with both dignity and authenticity.

Which finding, if true, would most directly support the student’s claim?

- A. Chambi took many commissioned portraits of wealthy Peruvians, but he also produced hundreds of images carefully documenting the peoples, sites, and customs of Indigenous communities of the Andes.
- B. Chambi’s photographs demonstrate a high level of technical skill, as seen in his strategic use of illumination to create dramatic light and shadow contrasts.
- C. During his lifetime, Chambi was known and celebrated both within and outside his native Peru, as his work was published in places like Argentina, Spain, and Mexico.
- D. Some of the peoples and places Chambi photographed had long been popular subjects for Peruvian photographers.

ID: 018b3508 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents a finding that, if true, would support the claim about Chambi’s photographs. The text describes a student advancing the claim that Chambi’s photographs “have considerable ethnographic value”—meaning that they are valuable as records of cultures—and that they “capture diverse elements of Peruvian society” in a respectful way. If it’s true that Chambi carefully photographed people from a range of different communities in Peru as well as photographed the customs and sites of different communities, that would lend support to the claim that the photographs have ethnographic value as depictions of diverse elements of society in Peru.

Choice B is incorrect because the student’s claim is that Chambi’s photographs have considerable ethnographic value because they depict diverse elements of Peruvian society; the student doesn’t claim anything about the technical skill demonstrated in the photographs. Choice C is incorrect because neither Chambi’s reputation nor the locations where his photographs may have been published would be relevant to the student’s claim that his photographs are valuable as an ethnographic record of Peru’s diverse society. Choice D is incorrect because the popularity among other photographers of the people and places that Chambi photographed would be irrelevant to the student’s claim that Chambi’s photographs are valuable as an ethnographic record of Peru’s diverse society.

Question Difficulty: Hard

Question ID bd37ecaa

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: bd37ecaa

“Loon Point” is a 1912 poem by Amy Lowell. In the poem, which presents a nighttime scene on a body of water, Lowell describes an element of nature as an active participant in the experience, writing, _____

Which quotation from “Loon Point” most effectively illustrates the claim?

- A. “Through the water the moon writes her legends / In light, on the smooth, wet sand.”
- B. “Softly the water ripples / Against the canoe’s curving side.”
- C. “Or like the snow-white petals / Which drop from an overblown rose.”
- D. “But the moon in her wayward beauty / Is ever and always the same.”

ID: bd37ecaa Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most effectively illustrates the claim that Lowell describes an element of nature as an active participant in the experience of a nighttime scene on a body of water. The quotation presents the image of the moon shining on a body of water. However, instead of describing the moon in passive terms or simply stating that it reflects through the water and onto the sandy shore, the quotation portrays the moon as being engaged in the humanlike action of writing a legend. In other words, the moon is participating actively in the nighttime scene.

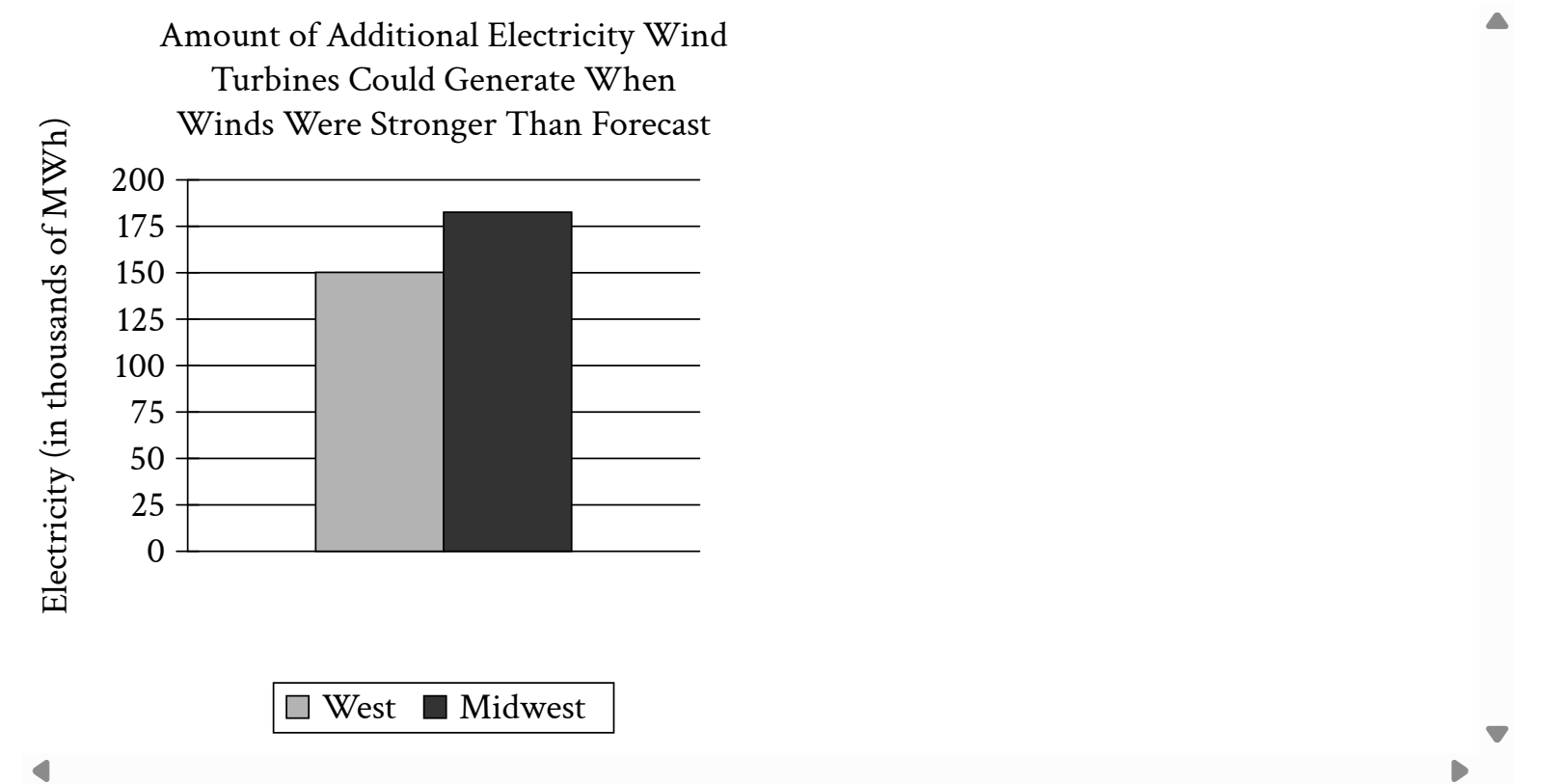
Choice B is incorrect. Although the quotation describes a nighttime scene on a body of water, the element of nature in these lines—the waves—isn’t portrayed as an active participant in an experience; instead, the waves merely ripple softly against a canoe, as waves would normally do. Choice C is incorrect because the quotation doesn’t present a nighttime scene on a body of water; instead, it describes petals falling from a rose. Choice D is incorrect. Although the quotation presents an image of an element of nature—the moon—it doesn’t mention a body of water; moreover, it portrays the moon not as an active participant in a scene but instead as static or unchanging (“ever and always the same”).

Question Difficulty: Hard

Question ID 5ed70699

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 5ed70699



Electric companies that use wind turbines rely on weather forecasts to predict the maximum amount of power, in megawatt-hours (MWh), they can generate using wind so that they can determine how much they'll need to generate from other sources. When winds are stronger than they were forecast to be, however, the predicted maximum amount of electricity wind turbines could generate will be too low. For example, the graph shows that for the West region, the winds were _____

- Which choice most effectively uses data from the graph to complete the example?
- A. strong enough to generate about 150 thousand more MWh of electricity from wind turbines.
 - B. so weak that the electricity from wind turbines was about 175 thousand MWh less than predicted.
 - C. so weak that the electricity from wind turbines was about 150 thousand MWh less than predicted.
 - D. strong enough to generate about 175 thousand more MWh of electricity from wind turbines.

ID: 5ed70699 Answer

Correct Answer: A

Rationale

Choice A is the best answer. The claim is that when winds are stronger than forecasted, wind turbines can generate more energy than predicted. The supporting graph shows the additional amount (above the predicted amount) that the turbines generated under those conditions, with the West generating about 150 thousand additional MWh.

Choice B is incorrect. This choice doesn't complete the example. The graph shows the additional amount of electricity that the wind turbines generated. The West bar is greater than 0, so the West generated more than the predicted amount. Choice C is incorrect. This choice doesn't complete the example. The graph shows the additional amount of electricity that the wind turbines generated. The West bar is greater than 0, so the West generated more than the predicted amount. Choice D is incorrect. This choice misreads the graph. The graph shows us that the West (the bar on the left) generated about 150 thousand additional MWh.

Question Difficulty: Hard

Question ID bec04f6a

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: bec04f6a

Three Studies' Estimated Average Velocity of LMC

Researchers	Study year	Estimated average velocity
Murai and Fujimoto	1980	344 km/s
Kallivayalil and colleagues	2006	378 km/s
Gardiner and colleagues	1994	297 km/s

In 2006, Nitya Kallivayalil and colleagues calculated the most accurate estimate yet of the average velocity (in kilometers per second) of the Large Magellanic Cloud (LMC) galaxy. Before the 2006 study, estimates of the average velocity were low enough for the LMC to maintain an orbit around the Milky Way galaxy, but according to an analysis by Gurtina Besla and colleagues, the estimated velocity from the 2006 study is too high for the LMC to maintain such an orbit. Therefore, if Besla and colleagues are correct, the maximum average velocity for the LMC that would allow it to maintain orbit around the Milky Way is likely _____

Which choice most effectively uses data from the table to complete the statement?

- A. above 344 km/s but below 378 km/s.
- B. above 297 km/s but below 344 km/s.
- C. above 378 km/s.
- D. below 297 km/s.

ID: bec04f6a Answer

Correct Answer: A

Rationale

Choice A is the best answer because it uses data from the table to give the range of velocities for the LMC from the 1980 value (344 km/s) to the 2006 value (378 km/s), thereby effectively completing the text. The text indicates that before 2006, all the estimated velocities of the LMC were within the range necessary to maintain orbit around the Milky Way galaxy. It then indicates that, according to Besla and colleagues, the 2006 estimate of 378 km/s is too high to maintain that orbit. This strongly implies that if the 1980 value (344 km/s) is below the orbital threshold, and if Besla and colleagues are correct that the 2006 value (378 km/s) is above that threshold, the maximum orbital velocity for the LMC must be somewhere in the range from above 344 km/s to below 378 km/s.

Choice B is incorrect. The text indicates that the 2006 velocity estimate for the LMC (378 km/s) was the first estimate that exceeded the velocity needed to maintain orbit around the Milky Way. Thus, the 1980 estimate of 344 km/s and the 1994 estimate of 297 km/s must both be below the maximum possible orbital velocity for the LMC. Choice C is incorrect. The text states that Besla and colleagues’ analysis found that the velocity from the 2006 study (378 km/s) was too high for the LMC to maintain orbit

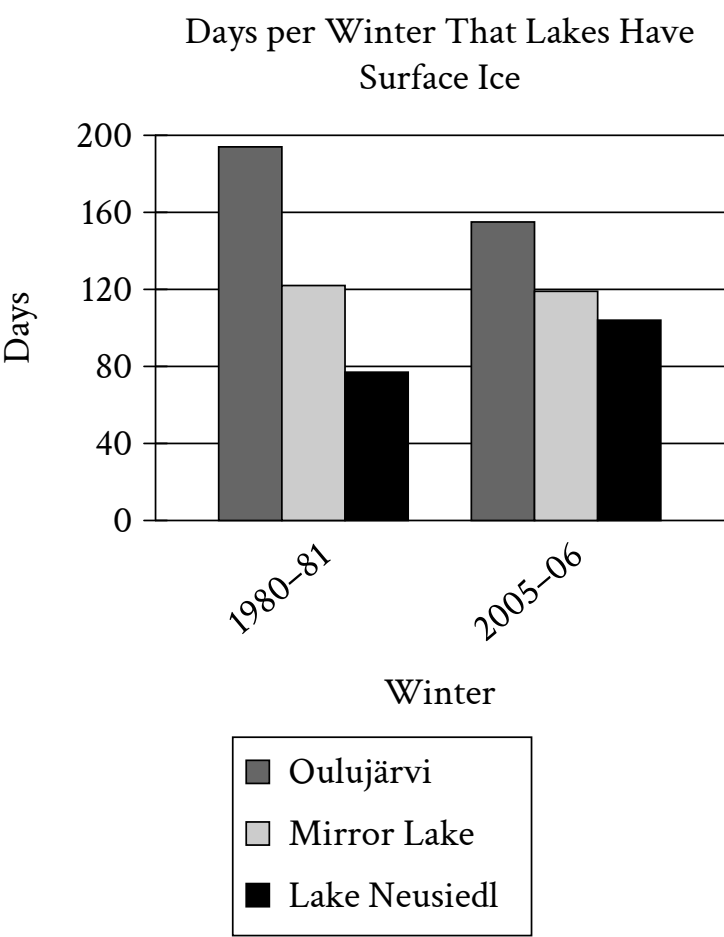
around the Milky Way. Therefore, if a velocity of 378 km/s is too high, an even higher velocity will also be too high. Choice D is incorrect. The text indicates that the 2006 velocity estimate for the LMC (378 km/s) was the first to exceed the velocity range required to maintain orbit around the Milky Way. Thus, the 1994 estimate of 297 km/s must be below the maximum possible orbital velocity for the LMC.

Question Difficulty: Hard

Question ID 4c83517e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 4c83517e



It is common for freshwater lakes near or above a latitude of 45° north of the equator, like Lake Mjøsa in Norway, to accumulate surface ice in winter. The amount and duration of ice depends on many factors, including local weather conditions as well as the lake’s depth, volume, and surface area, but a climate researcher claims that some lakes in these latitudes have seen a decline in the duration of ice between the early 1980s and the mid-2000s. She cites as a typical example _____

- Which choice most effectively uses data from the graph to complete the researcher’s example?
- A. both Lake Neusiedl and Oulujärvi, which had fewer than 195 days of ice in the winter of 1980–81.
 - B. Lake Neusiedl, which had more days of ice in the winter of 2005–06 than it did in the winter of 1980–81.
 - C. Oulujärvi, which had fewer days of ice in the winter of 2005–06 than it did in the winter of 1980–81.
 - D. both Lake Neusiedl and Oulujärvi, which had more than 105 days of ice in the winter of 2005–06.

ID: 4c83517e Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most effectively uses data from the graph to exemplify the researcher's claim—namely, that the duration of ice on some lakes has declined between the early 1980s and the mid-2000s. According to the graph, Oulujärvi had surface ice for nearly 200 days in the winter of 1980–81 but only about 160 days of ice in the more recent winter of 2005–06, evidence of a clear decline in the duration of surface ice between these time periods.

Choice A is incorrect because it focuses on only one period of time (the early 1980s). Thus, the data it cites don't support the researcher's claim, which compares the duration of surface ice across two specific periods of time (the early 1980s and the mid-2000s). Choice B is incorrect because although it accurately describes data from the graph, it contradicts the researcher's claim about declining surface ice duration. It describes an increase, not a decline, in the duration of surface ice on Lake Neusiedl between the early 1980s and the mid-2000s (from about 80 days in 1980–81 to about 100 days in 2005–06). Therefore, the example of Lake Neusiedl wouldn't logically support the claim that some lakes have seen a decline in the duration of surface ice. Choice D is incorrect because it provides information that doesn't support the researcher's claim about declining ice duration. The graph could indicate that both Lake Neusiedl and Oulujärvi had more than 105 days of ice in the winter of 2005–06, but on its own, this information doesn't demonstrate a decline in ice duration between the early 1980s and the mid-2000s.

Question Difficulty: Hard

Question ID 19d3f40d

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 19d3f40d

Archaeologists have held that the Casarabe culture, which emerged in the southwestern Amazon basin in the first millennium CE, was characterized by a sparse, widely distributed population and little intervention in the surrounding wilderness. Recently, however, archaeologist Heiko Prümers and colleagues conducted a study of the region using remote-sensing technology that enabled them to create three-dimensional images of the jungle-covered landscape from above, and the researchers concluded that the Casarabe people developed a form of urbanism in the Amazon basin.

- Which finding about the remote-sensing images, if true, would most directly support Prümers and colleagues’ conclusion?
- A. They show shapes consistent with widely separated settlements of roughly equal small size surrounded by uncultivated jungle.
 - B. They show shapes consistent with long-distance footpaths running from Casarabe territories to large cities outside the region inhabited by the Casarabe people.
 - C. They show shapes consistent with scattered small farms created by clearing jungle areas near sources of fresh water.
 - D. They show shapes consistent with monumental platforms and dense central settlements linked to smaller settlements by a system of canals and roadways.

ID: 19d3f40d Answer

Correct Answer: D

Rationale

Choice D is the best answer. This finding, if true, would support the archaeologists’ conclusion. Dense central settlements linked to smaller ones would provide evidence of cities and suburbs—in other words, “a form of urbanism.”

Choice A is incorrect. This finding, if true, would weaken the archaeologists’ conclusion. Widely separated, small settlements with jungle in between would support the long-held belief that the Casarabe culture “was characterized by a sparse, widely distributed population and little intervention in the surrounding wilderness.” Choice B is incorrect. This choice wouldn’t support the researchers’ conclusion. These large cities are located outside Casarabe territory, which doesn’t show evidence of Casarabe urbanism. Choice C is incorrect. This finding wouldn’t support the archaeologists’ conclusion. Scattered small farms in jungle clearings are not good evidence to support the existence of cities (“a form of urbanism”).

Question Difficulty: Hard

Question ID 8db9c8ee

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 8db9c8ee

A student performs an experiment testing her hypothesis that a slightly acidic soil environment is more beneficial for the growth of the plant *Brassica rapa parachinensis* (a vegetable commonly known as choy sum) than a neutral soil environment. She plants sixteen seeds of choy sum in a mixture of equal amounts of coffee grounds (which are highly acidic) and potting soil and another sixteen seeds in potting soil without coffee grounds as the control for the experiment. The two groups of seeds were exposed to the same growing conditions and monitored for three weeks.

Which finding, if true, would most directly weaken the student’s hypothesis?

- A. The choy sum planted in the soil without coffee grounds were significantly taller at the end of the experiment than the choy sum planted in the mixture of soil and coffee grounds.
- B. The choy sum grown in the soil without coffee grounds weighed significantly less at the end of the experiment than the choy sum grown in the mixture of soil and coffee grounds.
- C. The choy sum seeds planted in the soil without coffee grounds sprouted significantly later in the experiment than did the seeds planted in the mixture of soil and coffee grounds.
- D. Significantly fewer of the choy sum seeds planted in the soil without coffee grounds sprouted plants than did the seeds planted in the mixture of soil and coffee grounds.

ID: 8db9c8ee Answer

Correct Answer: A

Rationale

Choice A is the best answer because it describes an experimental outcome that would most directly weaken the student’s hypothesis. According to the text, the student hypothesizes that *Brassica rapa parachinensis* (choy sum) will benefit more from acidic soil than it will from neutral soil. The text then explains that the student planted 16 choy sum seeds in potting soil with coffee grounds added to increase acidity and another 16 seeds in soil without coffee grounds as a control (a group identical to the experimental group except for the experimental modification being tested). If the hypothesis were correct, the plants in the more acidic soil-and-coffee-grounds mixture would grow faster than those in the control group. However, choice A proposes a scenario in which the plants in soil without coffee grounds were “significantly taller” than those in the more acidic mixture—an outcome that weakens the hypothesis that higher acidity is beneficial to the plants’ growth.

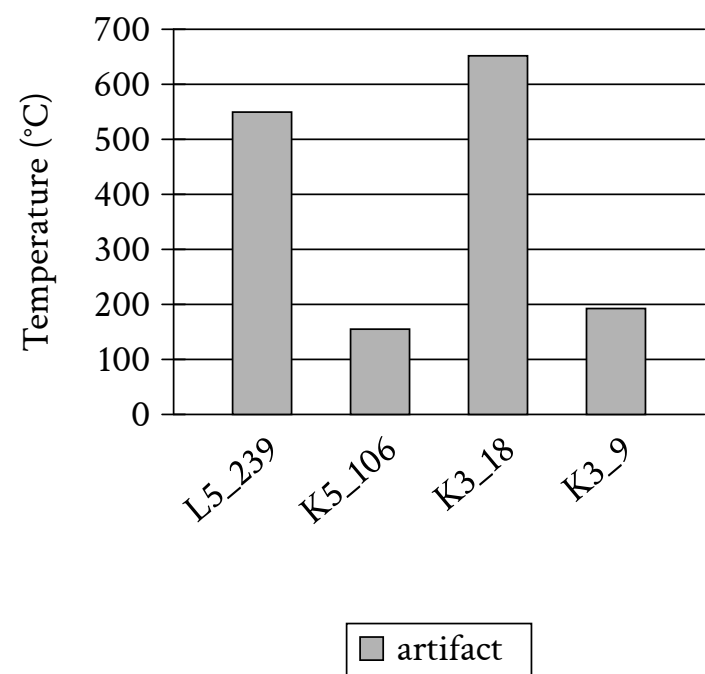
Choice B is incorrect. If the choy sum planted in the neutral soil produced less plant matter and therefore weighed less than the choy sum planted in the acidic soil-and-coffee-grounds mixture, this finding would strengthen the student’s hypothesis, not weaken it. Choice C is incorrect. If seeds planted in neutral soil (without coffee grounds) sprouted significantly later than seeds planted in the acidic soil-and-coffee-grounds mixture, this finding would strengthen, not weaken, the student’s hypothesis that acidic soil benefits choy sum. Choice D is incorrect. If seeds planted in the neutral soil (without coffee grounds) sprouted significantly fewer plants than seeds planted in the acidic soil-and-coffee-grounds mixture did, this finding would strengthen, not weaken, the student’s hypothesis that choy sum benefits from acidic soil.

Question ID 388069c6

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 388069c6

Estimated Temperatures to which
Evron Quarry Artifacts Were Exposed



Flint artifacts dating to 800,000 to 1,000,000 years ago have been recovered from the Evron Quarry in Israel. Likely created by the hominin *Homo erectus*, the artifacts have no visual features suggesting that they were exposed to fire, leading some scholars to conclude that these hominins had not acquired control of fire. But Zane Stepka and colleagues recently used a new method to determine whether these artifacts had been exposed to temperatures above 400°C (the typical temperature campfires reach) and concluded that the hominins who inhabited the site may have had control of fire.

Which choice best describes data in the graph that support the team’s conclusion?

- A. Artifacts K5_106 and K3_9 were exposed to temperatures above 400°C.
- B. Artifacts L5_239 and K3_18 were exposed to temperatures of approximately 550°C and 650°C, respectively.
- C. All of the artifacts were exposed to temperatures above 100°C.
- D. Artifact K3_9 was exposed to a higher temperature than was artifact K5_106.

ID: 388069c6 Answer

Correct Answer: B

Rationale

Choice B is the best answer. Campfires typically reach over 400°C, so human artifacts that were exposed to temperatures higher than this may indicate some human control over fire.

Choice A is incorrect. This choice misreads the graph. Neither artifact K3_9 nor K5_106 was exposed to temperatures above even 200°C. Choice C is incorrect. This choice doesn't support the claim. Campfires typically reach over 400°C, so exposure to temperatures of 100°C wouldn't demonstrate exposure to fire. Choice D is incorrect. This choice doesn't support the claim. Both artifacts K3_9 and K5_106 were exposed to temperatures of less than 200°C. Since campfires typically reach over 400°C, this wouldn't demonstrate exposure to fire.

Question Difficulty: Hard

Question ID 8db96060

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 8db96060

Plants like potatoes, tomatoes, and soybeans are susceptible to bacterial wilt disease caused by the bacteria *Ralstonia solanacearum*. A multinational team of scientists led by Zhong Wei studied whether other microbes in the soil might influence the degree to which plants are affected by the disease. The team sampled soil surrounding individual tomato plants over time and compared the results of plants that became diseased with those that remained healthy. They concluded that the presence of certain microbes in the soil might explain the difference between healthy and diseased plants.

Which finding, if true, would most directly support the team’s conclusion?

- A. The soil surrounding healthy plants contained significantly higher concentrations of microbes known to inhibit *Ralstonia solanacearum* than the soil surrounding diseased plants did.
- B. The soil surrounding the plants contained high concentrations of *Ralstonia solanacearum* regardless of whether the plants were affected by wilt disease.
- C. The soil surrounding healthy plants tended to have significantly higher moisture levels than the soil surrounding diseased plants did.
- D. By the end of the experiment, over half the plants had been affected by wilt disease regardless of differences in the types and concentrations of microbes in the surrounding soil.

ID: 8db96060 Answer

Correct Answer: A

Rationale

Choice A is the best answer. This choice provides evidence that directly links the presence of *R. solanacearum*-inhibiting microbes in the soil to the health of tomato plants.

Choice B is incorrect. This choice would weaken the team’s conclusion. It suggests that the presence of the disease-causing bacteria had no effect on the health of the tomato plants. Choice C is incorrect. This choice doesn’t support the team’s conclusion. The conclusion is about microbes, not soil moisture. Choice D is incorrect. This choice would weaken the team’s conclusion. It suggests that the presence of the bacteria-inhibiting microbe in soil had no effect on the health of the tomato plants.

Question Difficulty: Hard

Question ID a0c38e0b

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: a0c38e0b

Properties of Select Rotating Radio Transients

Name	Right ascension (hours)	Period (seconds)	Frequency (hertz)
J0545-03	5:45	1.074	0.931
J1654-2335	16:54:03	0.545	1.834
J0103+54	1:03:37	0.354	2.822
J0121+53	1:21	2.725	0.367
J0614-03	6:15	0.136	7.353

A student is researching rotating radio transients (RRATs), a subclass of pulsar stars characterized by short pulses of radio waves. The time between consecutive pulses of an RRAT is referred to as a period. Looking at the table, the student determines that _____

Which choice most effectively uses data from the table to complete the statement?

- A. J0614-03 has the shortest amount of time between consecutive pulses of all the RRATs in the table.
- B. J0545-03 and J0121+53 have the same amount of time between consecutive pulses.
- C. J1654-2335 has the longest amount of time between consecutive pulses of all the RRATs in the table.
- D. J0103+54 and J0121+53 both have more than one second of time between consecutive pulses.

ID: a0c38e0b Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most accurately uses data from the table to complete the statement about certain rotating radio transients (RRATs). The table contains information about the right ascensions, periods, and frequencies of various pulsar stars called RRATs. According to the text, the period of an RRAT is defined as the time between consecutive pulses. The table shows that the period of RRAT J0614-03 is 0.136 seconds, which is the lowest number of all the periods of the RRATs listed in the table. If the period is the time between consecutive pulses, and J0614-03 has the shortest period, then J0614-03 has the shortest amount of time between consecutive pulses of all the RRATs in the table.

Choice B is incorrect because according to the table, J0545-03 has a period of 1.074 seconds and J0121+53 has a period of 2.725 seconds. According to the text, the period of an RRAT is the time between consecutive pulses. Therefore, since J0545-03 and J0121+53 have different periods, they do not have the same amount of time between consecutive pulses. Choice C is incorrect because according to the table, J1654-2335 has a period of 0.545 seconds, which is not the longest period of all the

RRATs listed in the table. According to the text, the period of an RRAT is the time between consecutive pulses, and both J0545-03 and J0121+53 have longer periods than J1654-2335, so J1654-2335 does not have the longest time between consecutive pulses of all the RRATs in the table. Choice D is incorrect because according to the table, J0103+54 has a period of 0.354 seconds, and J0121+53 has a period of 2.725 seconds. According to the text, the period of an RRAT is the time between consecutive pulses, and only J0121+53 has more than one second of time between consecutive pulses, not J0103+54.

Question Difficulty: Hard

Question ID 79809ef0

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 79809ef0

Icebergs generally appear to be mostly white or blue, depending on how the ice reflects sunlight. Ice with air bubbles trapped in it looks white because much of the light reflects off the bubbles. Ice without air bubbles usually looks blue because the light travels deep into the ice and only a little of it is reflected. However, some icebergs in the sea around Antarctica appear to be green. One team of scientists hypothesized that this phenomenon is the result of yellow-tinted dissolved organic carbon in Antarctic waters mixing with blue ice to produce the color green.

Which finding, if true, would most directly weaken the team’s hypothesis?

- A. White ice doesn’t change color when mixed with dissolved organic carbon due to the air bubbles in the ice.
- B. Dissolved organic carbon has a stronger yellow color in Antarctic waters than it does in other places.
- C. Blue icebergs and green icebergs are rarely found near each other.
- D. Blue icebergs and green icebergs contain similarly small traces of dissolved organic carbon.

ID: 79809ef0 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents a finding that, if true, would weaken the scientists’ hypothesis about icebergs that appear to be green. The text indicates that most icebergs are either mostly white or blue in color but that some icebergs in Antarctica appear to be green. The text goes on to say that the scientists hypothesized that this green color occurs when yellow-tinted dissolved organic carbon in ocean waters mixes with blue ice. A finding that both blue icebergs and green icebergs contain similarly small traces of dissolved organic carbon would suggest that something other than yellow-tinted organic carbon causes some icebergs’ green color, since the blue icebergs that contain yellow-tinted organic carbon remained blue instead of turning green.

Choice A is incorrect because, according to the text, the scientists’ hypothesis was that blue icebergs, not white ones, change color when their ice mixes with yellow-tinted dissolved organic carbon. A finding that white ice, because of its air bubbles, doesn’t change color when it’s mixed with dissolved organic carbon would therefore have no bearing on the scientists’ hypothesis. Choice B is incorrect because the text focuses only on Antarctic icebergs that appear to be green. It doesn’t indicate that icebergs in locations other than Antarctica have been found to have a green hue. A finding that dissolved organic carbon has a stronger yellow color in Antarctic waters than in other places would therefore have no bearing on the scientists’ hypothesis that green color in icebergs in Antarctica is caused by yellow-tinted dissolved organic carbon mixing with blue ice. Choice C is incorrect because, according to the text, the scientists’ hypothesis was that blue icebergs turn green when their ice mixes with yellow-tinted dissolved organic carbon in the sea around them. If that’s correct, one would expect blue icebergs and green icebergs to be located at a distance from each other since all blue icebergs in an area where the waters contain yellow-tinted dissolved organic carbon would take on a green hue. A finding that blue icebergs and green icebergs are rarely found near each other would therefore strengthen, not weaken, the researchers’ hypothesis.

Question ID 4339eb9c

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 4339eb9c

Although it’s clear that Mars once had liquid water on its surface, astronomers have debated whether the evidence of ancient water reflects a prolonged phase of warm, wet conditions—the so-called wet and warm scenario—or a brief period of melting in an otherwise consistently frozen environment. Researchers Benjamin T. Cardenas and Michael P. Lamb recently added to this debate by using data from NASA and the Mars Orbiter Laser Altimeter to map the topography of what is now a large basin in Mars’s northern hemisphere. Cardenas and Lamb concluded that the wet and warm scenario is likely correct.

Which finding about the basin, if true, would most directly support Cardenas and Lamb’s conclusion?

- A. Its dimensions and shape indicate that it is unlikely to have formed as the result of an asteroid or comet impact.
- B. It has features suggesting that it once held an ocean that underwent gradual sea-level changes over an extended time.
- C. Its physical characteristics are most consistent with it having formed as a result of a massive but short-lived influx of liquid water.
- D. It is surrounded by channels that could have been formed either by running water or by flowing lava.

ID: 4339eb9c Answer

Correct Answer: B

Rationale

Choice B is the best answer. This choice provides direct support for the researchers’ conclusion. If the basin once held an ocean of liquid water for "an extended time," that supports the "wet and warm scenario" on Mars, which involved a "prolonged" period of temperate conditions (and not just a "brief period of melting").

Choice A is incorrect. This choice doesn’t provide support for the researchers’ conclusions. The dimensions of the basin have little bearing on whether or not it was filled with liquid water, and for how long, and that’s the evidence that would support the "wet and warm" theory. Similarly, whether or not the basin was formed by an asteroid or a comet is irrelevant to the question of whether or not there was water in the basin for a long period. Choice C is incorrect. This choice does not provide support for the researchers’ conclusions, but rather the opposite. A "massive but short lived influx" of liquid water is not the same as a "prolonged phase of warm, wet conditions." It more reflects the opposing theory, a "brief period of melting." Choice D is incorrect. This choice does not support Cardenas and Lamb’s conclusion. Both theories about liquid water on Mars ("wet and warm" and "brief period of melting") involve flowing water, but lava isn’t mentioned at all in the text. Therefore, this choice doesn’t provide exclusive support for either theory.

Question Difficulty: Hard

Question ID 74d5b39d

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 74d5b39d

The Land of Enchantment is a 1906 travel book by Lilian Whiting. In the book, which describes the experience of traveling through the southwestern United States by train, Whiting reflects on the escape from everyday life that such a journey provides: _____

Which quotation from *The Land of Enchantment* most effectively illustrates the claim?

- A. "The opportunities and advantages already offered and constantly increasing are greater than would at first be considered possible."
- B. "The social and the picturesque charm of the long journey is singularly enhanced by the leisurely stops made for refreshment."
- C. "The real journey begins, of course, at Chicago, and as these trains leave in the evening the traveller fares forth in the seclusion of his berth."
- D. "One experiences a certain sense of detachment from ordinary day and daylight duties that is exhilarating."

ID: 74d5b39d Answer

Correct Answer: D

Rationale

Choice D is the best answer because. This quotation specifically describes a "sense of detachment from ordinary day," which matches the claim's focus on "escape from everyday life."

Choice A is incorrect. While this quotation describes new opportunities associated with Whiting's experience, it doesn't frame these opportunities as "an escape," and it doesn't directly compare Whiting's journey with "everyday life." Choice B is incorrect. While this quotation includes a positive characterization of Whiting's journey, it doesn't specifically address the idea of an "escape from everyday life," which is the focus of the claim. Choice C is incorrect. This quotation focuses on where the journey begins, not on how it feels like an "escape from everyday life."

Question Difficulty: Hard

Question ID 1df549b4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 1df549b4

Properties of TRAPPIST-1 Exoplanets Compared to Earth's Properties

Planet	Orbital period (days)	Planet radius (Earth radii)
Earth	365.26	1
TRAPPIST-1b	1.51	1.09
TRAPPIST-1d	4.05	0.77
TRAPPIST-1e	6.1	0.92
TRAPPIST-1f	9.21	1.04

TRAPPIST-1 is a planetary system with a central red dwarf star and several Earth-sized exoplanets. Each planet in this system is so close in orbit to the star that the gravitational forces acting between the planet and the star cause the planet’s rotational period around its axis and orbital period around the star to be equal. For example, the orbital period of TRAPPIST-1e is _____

Which choice most effectively uses data from the table to complete the example?

- A. 1.51 days, which is the shortest rotational period of any of the TRAPPIST planets.
- B. 6.1 days, and its rotational period is also 6.1 days.
- C. 9.21 days, which is the same as the rotational period of TRAPPIST-1f.
- D. 6.1 days, and its rotational period is 0.92 days.

ID: 1df549b4 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it correctly uses data from the table to illustrate the relationship between orbital and rotational periods described in the text. For Earth and each of four TRAPPIST-1 exoplanets, the table provides the orbital period and radius (in relation to the radius of Earth). The text explains that for each TRAPPIST-1 exoplanet, gravitational forces cause the rotational period (how long the planet takes to spin once on its axis) to equal the orbital period (how long the planet takes to orbit the star). According to the table, TRAPPIST-1e has an orbital period of 6.1 days. Since the text states that the orbital and rotational periods are equal for these planets, TRAPPIST-1e’s rotational period must also be 6.1 days.

Choice A is incorrect because the table shows that TRAPPIST-1e has an orbital period (and thus a rotational period) of 6.1 days, not 1.51 days, which is the orbital period (and thus the rotational period) of TRAPPIST-1b. Furthermore, comparing the length of TRAPPIST-1e’s rotational period to those of the other exoplanets would not logically complete the example, which should illustrate

how the orbital and rotational periods of a planet in TRAPPIST-1 are the same length. Choice C is incorrect because the table shows that TRAPPIST-1e has an orbital period (and thus a rotational period) of 6.1 days, not 9.21 days, which the table shows is the orbital period (and thus rotational period) of TRAPPIST-1f. Additionally, comparing the rotational periods of two exoplanets would not logically complete the example, which should illustrate how the orbital and rotational periods of a planet in TRAPPIST-1 are the same length. Choice D is incorrect because although it correctly identifies TRAPPIST-1e’s orbital period as 6.1 days, it incorrectly states that its rotational period is 0.92 days. This contradicts the text’s statement that the orbital and rotational periods are equal for TRAPPIST-1 exoplanets. The value 0.92 actually represents TRAPPIST-1e’s radius in relation to Earth’s radius, not its rotational period.

Question Difficulty: Hard

Question ID 473a21a7

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 473a21a7

Fish whose DNA has been modified to include genetic material from other species are known as transgenic. Some transgenic fish have genes from jellyfish that result in fluorescence (that is, they glow in the dark). Although these fish were initially engineered for research purposes in the 1990s, they were sold as pets in the 2000s and can now be found in the wild in creeks in Brazil. A student in a biology seminar who is writing a paper on these fish asserts that their escape from Brazilian fish farms into the wild may have significant negative long-term ecological effects.

Which quotation from a researcher would best support the student’s assertion?

- A. “In one site in the wild where transgenic fish were observed, females outnumbered males, while in another the numbers of females and males were equivalent.”
- B. “Though some presence of transgenic fish in the wild has been recorded, there are insufficient studies of the impact of those fish on the ecosystems into which they are introduced.”
- C. “The ecosystems into which transgenic fish are known to have been introduced may represent a subset of the ecosystems into which the fish have actually been introduced.”
- D. “Through interbreeding, transgenic fish might introduce the trait of fluorescence into wild fish populations, making those populations more vulnerable to predators.”

ID: 473a21a7 Answer

Correct Answer: D

Rationale

Choice D is the best answer because this quotation would best support the student’s assertion that the escape of transgenic fish from Brazilian fish farms into the wild may have significant negative long-term ecological effects. The text explains that transgenic fish have DNA that includes genetic material from other species, that some transgenic fish have genes from jellyfish that make them glow in the dark, and that glow-in-the-dark transgenic fish can now be found in the wild in Brazilian creeks. The quotation indicates why the escape of these fish may have negative long-term ecological effects: glow-in-the-dark transgenic fish might introduce fluorescence into wild fish populations by breeding with wild fish, causing wild fish to glow in the dark and thereby allowing predators to prey on them much more easily.

Choice A is incorrect because this quotation doesn’t mention any negative effects of the introduction of fluorescent transgenic fish into the wild. The quotation merely compares the ratio of females to males at two sites in the wild where transgenic fish have been observed. Choice B is incorrect because this quotation doesn’t support the idea that the escape of fluorescent transgenic fish from Brazilian fish farms may have significant negative long-term ecological effects. Rather, the quotation suggests that more research is needed to understand the effects. Choice C is incorrect because this quotation supports the idea that transgenic fish may be present in more ecosystems than has been observed; it doesn’t address whether the presence of fluorescent transgenic fish affects these ecosystems.

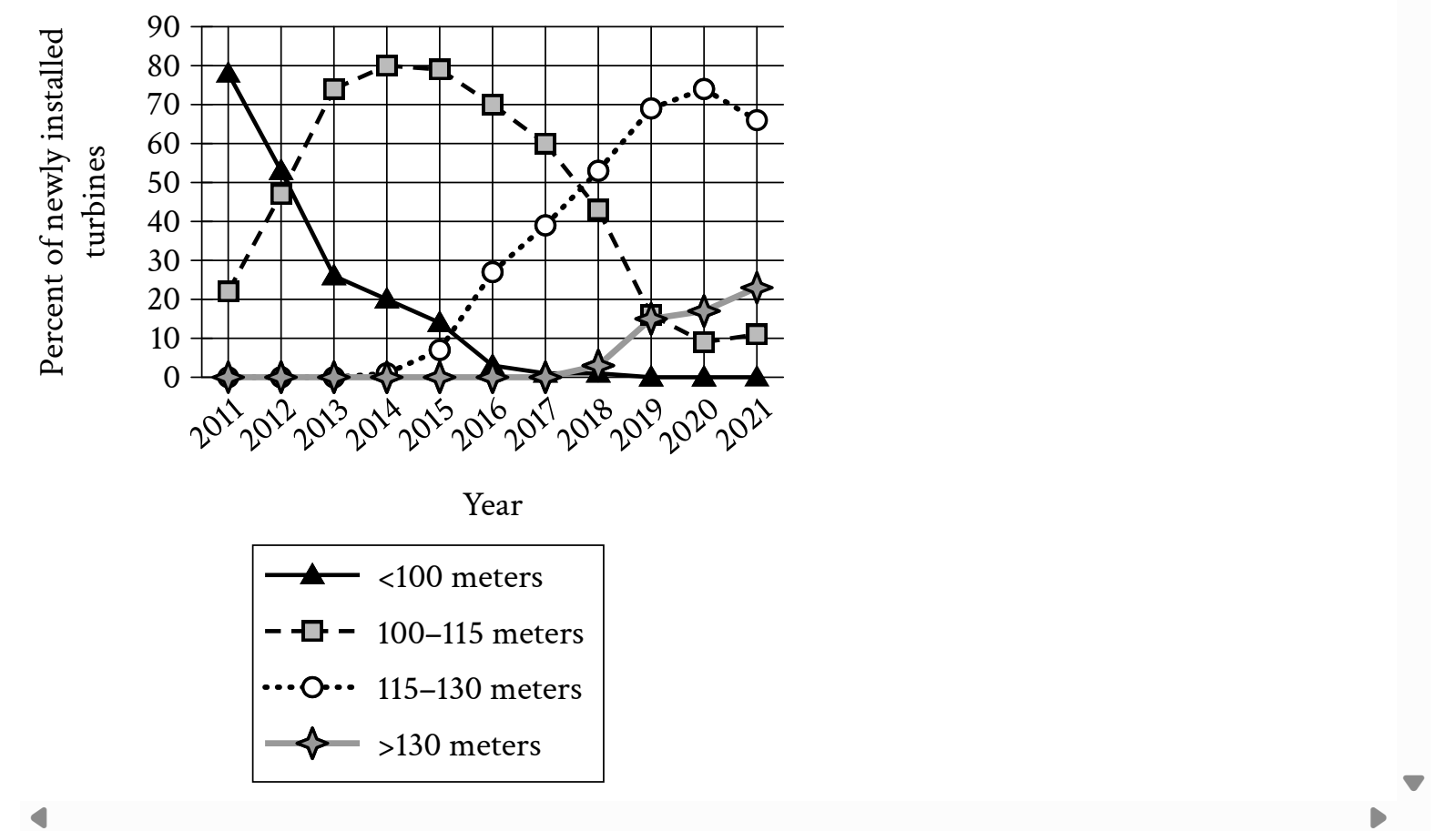
Question Difficulty: Hard

Question ID 6f7e22d0

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div></div> <div></div> <div></div>

ID: 6f7e22d0

Rotor Diameters of Newly Installed Wind Turbines in the United States, 2011–2021



All other things being equal, the larger a wind turbine’s rotor diameter (the diameter of the imaginary circle swept by the turbine’s rotating blades), the greater amount of energy the turbine can generate. In a research paper on wind power, a student claims that in the United States, the amount of energy generated per newly installed turbine increased substantially between 2011 and 2021.

Which choice best describes data in the graph that support the student’s claim?

- A. No turbines installed in 2011 had rotor diameters greater than 115 meters, whereas the majority of turbines installed in 2021 had rotor diameters greater than 130 meters.
- B. Most turbines installed in 2011 had rotor diameters of less than 100 meters, whereas most turbines installed in 2021 had rotor diameters of at least 115 meters.
- C. In 2011, nearly 80% of turbines installed had rotor diameters of less than 100 meters, whereas only a little more than 20% of turbines installed that year had rotor diameters of 100–115 meters.

D. The percentage of newly installed turbines with rotor diameters greater than 130 meters increased every year between 2011 and 2021.

ID: 6f7e22d0 Answer

Correct Answer: B

Rationale

Choice B is the best answer. The text tells us that turbines with larger rotor diameters produce more energy, so if rotor diameters have generally gotten larger between 2011 and 2021, then turbines created in 2021 should produce more energy than those created in 2011.

Choice A is incorrect. This choice misreads the graph. In 2021, only about 25% of turbines installed in 2021 had rotor diameters greater than 130 meters. Choice C is incorrect. This choice doesn't justify the claim. The claim is about increasing energy output from 2011 to 2021, but this choice only discusses 2011, so it can't show evidence of change over time. Choice D is incorrect. This choice misreads the graph. The percentage of newly installed turbines with rotor diameters greater than 130 meters didn't show any visible increase until 2018.

Question Difficulty: Hard

Question ID 50cd34a8

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 50cd34a8

Employment by Sector in France and the United States, 1800–2012 (% of total employment)

Year	Agriculture in France	Manufacturing in France	Services in France	Agriculture in US	Manufacturing in US	Services in US
1800	64	22	14	68	18	13
1900	43	29	28	41	28	31
1950	32	33	35	14	33	53
2012	3	21	76	2	18	80

Rows in table may not add up to 100 due to rounding.

Over the past two hundred years, the percentage of the population employed in the agricultural sector has declined in both France and the United States, while employment in the service sector (which includes jobs in retail, consulting, real estate, etc.) has risen. However, this transition happened at very different rates in the two countries. This can be seen most clearly by comparing the employment by sector in both countries in _____

Which choice most effectively uses data from the table to complete the statement?

- A. 1900 with the employment by sector in 1950.
- B. 1800 with the employment by sector in 2012.
- C. 1900 with the employment by sector in 2012.
- D. 1800 with the employment by sector in 1900.

ID: 50cd34a8 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents data from the table that most effectively complete the statement about the rates at which employment shifted in France and the United States. The text states that over the last two hundred years employment in the agricultural sector has declined while employment in the service sector has risen in both France and the US, and the data from the table reflect these trends. The text asserts, however, that the transition from agriculture to services “happened at very different rates in the two countries.” This assertion is best supported by a comparison of data from 1900 and 1950: the table shows that in those years, employment in agriculture went from 43% to 32% in France (a decline of 11 percentage points) and from 41% to 14% in the US (a decline of 27 percentage points), and that employment in services went from 28% to 35% in France (an increase of 7 percentage points) and from 31% to 53% in the US (an increase of 22 percentage points). In other words, the rate of change was greater in the US than in France for both sectors.

Choice B is incorrect because comparing the data for 1800 and 2012 would suggest a similar rate of change in the two countries, not very different rates: employment in agriculture went from 64% in 1800 to 3% in 2012 in France, which is close to the change from 68% in 1800 to 2% in 2012 in the US, while employment in services went from 14% in 1800 to 76% in 2012 in France, which is close to the change from 13% in 1800 to 80% in 2012 in the US. Choice C is incorrect because comparing the data for 1900 and 2012 would suggest a similar rate of change in the two countries rather than very different rates: employment in agriculture went from 43% in 1900 to 3% in 2012 in France, which is close to the change from 41% in 1900 to 2% in 2012 in the US, while employment in services went from 28% in 1900 to 76% in 2012 in France, which is close to the change from 31% in 1900 to 80% in 2012 in the US. Choice D is incorrect because comparing the data for 1800 and 1900 would suggest a similar rate of change in the two countries, not very different rates: employment in agriculture went from 64% in 1800 to 43% in 1900 in France, which is fairly close to the change from 68% in 1800 to 41% in 1900 in the US, while employment in services went from 14% in 1800 to 28% in 1900 in France, which is close to the change from 13% in 1800 to 31% in 1900 in the US.

Question Difficulty: Hard

Question ID 117629bc

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 117629bc

“John of God, the Water-Carrier” is a 1913 short story by María Cristina Mena. In the story, the narrator presents John as being a hard worker who is fully dedicated to his job as water carrier, or *aguador*: _____

Which quotation from “John of God, the Water-Carrier” most effectively illustrates the claim?

- A. “Very happy, he would jog home, the heavy silver pieces in his leather pockets making a discreet and dulcet ‘trink-trak’ between his jugs and his body.”
- B. “He learned that the city *aguador* may not blow his whistle to halt the traffic while he gravely crosses the street, but must wait for the passing of many vehicles, some with horses and some outlandishly without.”
- C. “From early morn to the fall of the afternoon he would go from fountain to fountain and from portal to portal, his lean body so accustomed to bending that he never thought of straightening it, his head bowed as if in prayer.”
- D. “When his first jugs had worn out—the sweet-scented, porous red clay becomes perforated in time—he had buried them to their necks in the corner where he slept, and they were now his treasury.”

ID: 117629bc Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most effectively illustrates the claim in the text that John is hard-working and dedicated to his job. In the quotation, John is portrayed as spending “early morn to the fall of the afternoon” working hard as a water carrier. John is also described as “so accustomed to bending” while doing his work “that he never thought of straightening” his body, instead remaining deeply focused on his work. These details portray John as a dedicated worker.

Choice A is incorrect because this quotation portrays John as happy about heading home after being paid. It doesn’t showcase John being hard at work. Choice B is incorrect because this quotation doesn’t pertain to John’s commitment to his work; it describes difficulties the traffic in the city causes John in the performance of his work. Choice D is incorrect because this quotation doesn’t pertain to John’s commitment to his work; it discusses what John does with his worn-out water jugs.

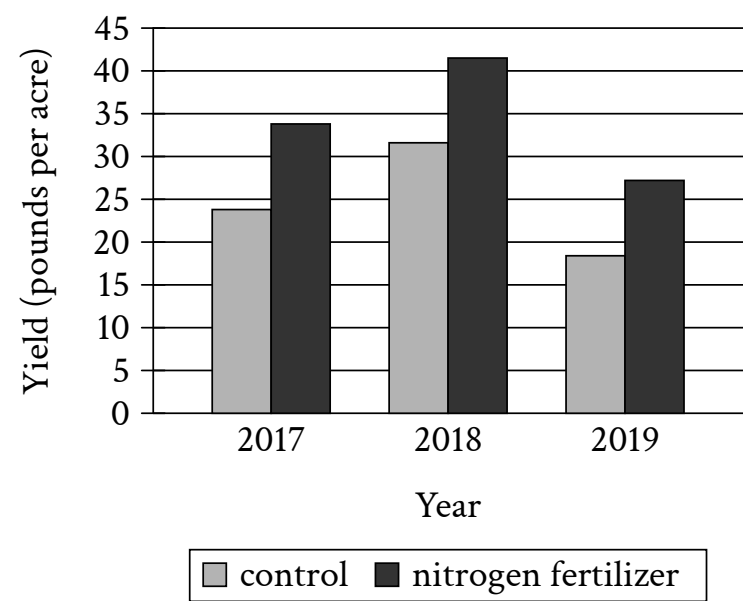
Question Difficulty: Hard

Question ID b4e2a3a9

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: b4e2a3a9

Cantaloupe Yield



To test the effects of a nitrogen fertilizer on cantaloupe production, researchers grew cantaloupe plants and harvested their fruit over three years. In each year, half the plants were grown using a nitrogen fertilizer, and the other half were grown using a control fertilizer that contained no nitrogen. The researchers concluded that the nitrogen fertilizer increases cantaloupe yield.

Which choice best describes data in the graph that support the researchers' conclusion?

- A. In every year of the experiment, plants treated with the nitrogen fertilizer had a yield of at least 30 pounds per acre.
- B. In every year of the experiment, plants treated with the nitrogen fertilizer had a greater yield than did plants treated with the control fertilizer.
- C. The 2018 yield for plants treated with the control fertilizer was greater than was the 2019 yield for plants treated with the nitrogen fertilizer.
- D. The yield for plants treated with the nitrogen fertilizer increased from 2017 to 2018.

ID: b4e2a3a9 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it describes data from the graph that support the researchers' conclusion that using nitrogen fertilizer increases cantaloupe production. The bar graph shows the cantaloupe yield for plants grown with nitrogen fertilizer and

for those grown with a control fertilizer (without nitrogen) for three consecutive years (2017–2019). For each year in the graph, the yield for the nitrogen group is greater than the yield for the control group. In pounds per acre, the value in 2017 for the nitrogen-group yield is greater than 30 while the control-group yield is less than 25; in 2018 the nitrogen-group yield is greater than 40 while the control-group yield is less than 35; and in 2019 the nitrogen-group yield is greater than 25 while the control-group yield is less than 20. Thus, these data from the graph strongly support the conclusion that using nitrogen fertilizer increases cantaloupe yield.

Choice A is incorrect because the bar graph shows that in 2019 the nitrogen group had a yield below 30 pounds per acre. Choice C is incorrect. Although this choice accurately describes data in the bar graph—in 2018, the control-group yield is greater than 30 pounds per acre, and in 2019 the nitrogen-group yield is less than 30 pounds per acre—a claim that the control-group yield exceeds that of the nitrogen group strongly conflicts with the researchers’ conclusion that nitrogen fertilizer produces larger yields. Choice D is incorrect. Although it is true that the bar graph shows a higher yield for the nitrogen group in 2018 than in 2017, without the control to compare against, it is impossible to know whether the increase is due to the fertilizer and not, for example, more favorable weather in 2018 than in 2017.

Question Difficulty: Hard

Question ID 568dd356

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 568dd356

Researchers hypothesized that a decline in the population of dusky sharks near the mid-Atlantic coast of North America led to a decline in the population of eastern oysters in the region. Dusky sharks do not typically consume eastern oysters but do consume cownose rays, which are the main predators of the oysters.

Which finding, if true, would most directly support the researchers’ hypothesis?

- A. Declines in the regional abundance of dusky sharks’ prey other than cownose rays are associated with regional declines in dusky shark abundance.
- B. Eastern oyster abundance tends to be greater in areas with both dusky sharks and cownose rays than in areas with only dusky sharks.
- C. Consumption of eastern oysters by cownose rays in the region substantially increased before the regional decline in dusky shark abundance began.
- D. Cownose rays have increased in regional abundance as dusky sharks have decreased in regional abundance.

ID: 568dd356 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents a finding that, if true, would most directly support the researchers’ hypothesis about the connection between the dusky shark population decline and the eastern oyster population decline. The text indicates that although dusky sharks don’t usually eat eastern oysters, they do consume cownose rays, which are the main predators of eastern oysters. An increase in the abundance of cownose rays in the region in response to a decline in the abundance of dusky sharks would directly support the researchers’ hypothesis: a higher number of cownose rays would consume more eastern oysters, driving down the oyster population.

Choice A is incorrect because a finding that there’s an association between a decline in the regional abundance of some of dusky sharks’ prey and the regional abundance of dusky sharks wouldn’t directly support the researchers’ hypothesis that a decline in dusky sharks has led to a decline in eastern oysters in the region. Although such a finding might help explain why shark abundance has declined, it would reveal nothing about whether the shark decline is related to the oyster decline. Choice B is incorrect because a finding that eastern oyster abundance tends to be greater when dusky sharks and cownose rays are present than when only dusky sharks are present wouldn’t support the researchers’ hypothesis that a decline in dusky sharks has led to a decline in eastern oysters in the region. The text indicates that the sharks prey on the rays, which are the main predators of the oysters; if oyster abundance is found to be greater when rays are present than when rays are absent, that would suggest that rays aren’t keeping oyster abundance down, and thus that a decline in rays’ predators, which would be expected to lead to an increase in the abundance of rays, wouldn’t bring about a decline in oyster abundance as the researchers hypothesize. Choice C is incorrect because a finding that consumption of eastern oysters by cownose rays increased substantially before dusky sharks declined in regional abundance wouldn’t support the researchers’ hypothesis that the decline in dusky sharks has led to a decline

in eastern oysters in the region. Such a finding would suggest that some factor other than shark abundance led to an increase in rays' consumption of oysters and thus to a decrease in oyster abundance, thereby weakening the researchers' hypothesis.

Question Difficulty: Hard

Question ID 20b53829

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 20b53829

Characteristics of Five Recently Discovered Gas Exoplanets

Exoplanet designation	Mass (Jupiters)	Radius (Jupiters)	Orbital period (days)	Distance from the Sun (parsecs)
TOI-640 b	0.88	1.771	5.003	340
TOI-1601 b	0.99	1.239	5.331	336
TOI-628 b	6.33	1.060	3.409	178
TOI-1478 b	0.85	1.060	10.180	153
TOI-1333 b	2.37	1.396	4.720	200

“Hot Jupiters” are gas planets that have a mass of at least 0.25 Jupiters (meaning that their mass is at least 25% of that of Jupiter) and an orbital period of less than 10 days (meaning that they complete one orbit around their star in less than 10 days), while “warm Jupiters” are gas planets that meet the same mass criterion but have orbital periods of more than 10 days. In 2021, Michigan State University astronomer Joseph Rodriguez and colleagues announced the discovery of five new gas exoplanets and asserted that four are hot Jupiters and one is a warm Jupiter.

- Which choice best describes data from the table that support Rodriguez and colleagues’ assertion?
- A. None of the planets have an orbital period of more than 10 days, and TOI-628 b has a mass of 6.33 Jupiters.
 - B. TOI-1478 b has an orbital period of 153 days, and the masses of all the planets range from 0.85 to 6.33 Jupiters.
 - C. All the planets have a radius between 1.060 and 1.771 Jupiters, and only TOI-1333 b has an orbital period of more than 10 days.
 - D. Each of the planets has a mass greater than 0.25 Jupiters, and all except for TOI-1478 b have an orbital period of less than 10 days.

ID: 20b53829 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it accurately describes data from the table that support Rodriguez and colleagues’ assertion about the classifications of the five new gas exoplanets. The text describes two categories of gas planets: hot Jupiters, which have a mass of at least 0.25 Jupiters and an orbital period of less than 10 days, and warm Jupiters, which have the same mass characteristic but have orbital periods of more than 10 days. According to the table, four of the gas exoplanets discovered by Rodriguez and colleagues have a mass of at least 0.25 Jupiters and an orbital period of less than 10 days, while one of the planets has a mass of at least 0.25 Jupiters and an orbital period of more than 10 days. These data therefore support Rodriguez and colleagues’ assertion that four of the new exoplanets are hot Jupiters and one is a warm Jupiter.

Choice A is incorrect because it doesn't accurately describe the data from the table. Although the table shows that TOI-628 b has a mass equivalent to 6.33 Jupiters, the table also shows that one of the planets—TOI-1478 b—does indeed have an orbital period of more than 10 days. Choice B is incorrect because it doesn't accurately describe the data from the table. Although the table does show that the masses of the five planets range from 0.85 to 6.33 Jupiters, the table also shows that TOI-1478 b has an orbital period of 10.180 days, not 153 days. Choice C is incorrect. According to the table, TOI-1333 b has an orbital period of only 4.720 days, not more than 10 days. Additionally, although the table does show that all the planets have a radius between 1.060 and 1.771 Jupiters, the text indicates that a planet may be classified as a hot Jupiter or a warm Jupiter based on its mass and orbital period, not on its radius, making the information about the range of the five planets' radius values irrelevant.

Question Difficulty: Hard

Question ID 48a3293e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 48a3293e

ALSOL is a microcredit program in Mexico that makes small loans to female entrepreneurs who lack the collateral and credit history to secure financing from conventional banks. Borrowers use their business proceeds to repay loans in equal weekly installments and incur no penalty for missed payments other than lack of access to larger loans. Economists Gustavo Barboza and Sandra Trejos analyzed ALSOL data and found that rural borrowers, who mostly make and sell handicrafts, miss payments more often than urban borrowers do, partly because they sell their goods less frequently than they could. Barboza and Trejos claim that this behavior reflects strategic decisions that enable rural women to increase their profits per unit sold.

Which finding, if true, would most directly support Barboza and Trejos’s claim?

- A. Many marketplaces require entrepreneurs to pay marketplace operators a fixed percentage of each day’s proceeds in exchange for permission to sell goods there.
- B. Rural entrepreneurs can typically sell their goods for higher prices in cities than in their home areas, but the number of people selling competing goods tends to be higher in cities.
- C. Due to the lower costs they incur, rural entrepreneurs tend to require smaller initial loans than urban entrepreneurs do.
- D. The cost to rural entrepreneurs to bring their goods to towns with marketplaces is high but largely independent of the number of goods they bring.

ID: 48a3293e Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents a finding that, if true, would most directly support Barboza and Trejos’s claim that rural female entrepreneurs who have received small loans from ALSOL are strategic in selling their goods less frequently than they could, even if it means missing payments. The text explains that borrowers in the ALSOL program use proceeds from their businesses to repay loans in equal weekly payments, with almost no penalty for missed payments. According to the text, Barboza and Trejos found that rural borrowers miss weekly payments in part because they don’t sell their goods as often as they could, a move the researchers claim allows the entrepreneurs to help increase profits for the goods they sell. Finding that the cost of bringing goods to towns with marketplaces is high for rural entrepreneurs but is largely independent of how many goods are brought would support the researchers’ claim: traveling to marketplaces less frequently would mean that a rural entrepreneur spends less on travel overall, and taking a large load of goods to a marketplace for essentially the same cost as taking a small load would allow the entrepreneur to more substantially offset the cost of travel with greater overall sales at the marketplace, resulting in more profit per good sold—even if those profits are earned less frequently and don’t support weekly loan payments.

Choice A is incorrect because the finding that many marketplaces require entrepreneurs to pay the operators of the marketplace a fixed percentage of proceeds to be able to sell goods there wouldn’t explain why rural entrepreneurs strategically choose to sell their goods less frequently than they could in order to increase their profits per unit sold. With a fixed percentage of proceeds due to operators, the amount entrepreneurs have to pay operators would also be fixed regardless of frequency of selling. Choice B is

incorrect because the finding that rural entrepreneurs can usually sell their goods for higher prices in cities than in their local areas but also face higher competition to sell goods in cities wouldn't explain why rural entrepreneurs strategically choose to sell their goods less frequently than they could in order to increase their profits per unit sold. This is because both the higher prices and higher competition in cities would be stable factors—meaning there would be no clear reason for the rural entrepreneurs not to take every available chance to sell their goods in cities and to instead sell their goods in cities only sometimes. Choice C is incorrect because the finding that rural entrepreneurs have lower costs and thus tend to require smaller initial loans than urban entrepreneurs do has no bearing on rural borrowers strategically choosing to sell their goods less frequently than they could specifically to increase their profits per unit sold. The cost of producing goods doesn't depend on the frequency with which an entrepreneur sells those goods, so lower frequency alone wouldn't affect profits, and the initial loan amount is set and has nothing to do with how much profit is earned from each sale.

Question Difficulty: Hard

Question ID de13d3f5

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: de13d3f5

The Intertropical Convergence Zone (ITCZ), a band of clouds that encircles Earth in the tropics and is a major rainfall source, shifts position in response to temperature variations across Earth’s hemispheres. Data from Huagapo Cave in Peru suggest the ITCZ shifted south during the Little Ice Age (circa 1300–1850), but a shift as far into South America as Huagapo should have led to dry conditions in Central America, which is inconsistent with climate models. To resolve the issue, geologist Yemane Asmerom and colleagues collected data from Yok Balum Cave in Central America and compared them with the Huagapo data. They concluded that during the Little Ice Age, the ITCZ may have expanded northward and southward rather than simply shifted.

Which finding from Asmerom and colleagues’ study, if true, would most directly support their conclusion?

- A. Neither the Yok Balum data nor the Huagapo data show significant local variations in temperature during the Little Ice Age.
- B. Both the Yok Balum data and the Huagapo data show increased temperatures and prolonged dry conditions during the Little Ice Age.
- C. The Yok Balum data show prolonged dry conditions during the same portions of the Little Ice Age in which the Huagapo data show heightened levels of rainfall.
- D. The Yok Balum data and the Huagapo data show strongly correlated patterns of high rainfall during the Little Ice Age.

ID: de13d3f5 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents a finding that, if true, would support Asmerom and colleagues’ conclusion that the ITCZ may have expanded northward and southward rather than shifting south during the Little Ice Age. The text indicates that the ITCZ, a band of clouds in the tropics that is a significant rainfall source, can change position. Data from Peru’s Huagapo Cave suggest that the ITCZ shifted south during the Little Ice Age. But according to the text, if the ITCZ moved into South America in that way, then Central America should have been drier than climate models suggest it was. In other words, rainfall should have been reduced in Central America because the ITCZ, a significant rainfall source, had shifted into South America, but climate models do not show such a reduction in Central America. The text goes on to say that Asmerom and colleagues tried to resolve this apparent conflict by collecting data from Yok Balum cave in Central America and comparing them with data from Huagapo, which led the researchers to conclude that the ITCZ may have expanded both northward and southward rather than simply shifting south. If it is true that Yok Balum in Central America and Huagapo in South America show strongly correlated patterns of high rainfall during the Little Ice Age, such a finding would support Asmerom and colleagues’ conclusion by suggesting that the two areas were affected by the same rainfall source, and thus that the ITCZ may have expanded rather than shifted.

Choice A is incorrect because there is no information in the text about how, if at all, the ITCZ affects temperature in areas where it is located. Rather, the text states that temperature variations across Earth’s hemispheres can shift the position of the ITCZ. Finding that neither Yok Balum nor Huagapo data show evidence of significant local variations in temperature during the Little Ice Age would have no clear bearing on Asmerom and colleagues’ claim. Choice B is incorrect because finding that both Yok Balum

and Huagapo experienced prolonged dry conditions during the Little Ice Age would not support Asmerom and colleagues' conclusion that the ITCZ, a major source of rainfall, may have expanded northward and southward rather than simply shifting south. Dry conditions in both locations would suggest that the ITCZ did not cover either location. Additionally, finding that temperatures were elevated in both locations would have no clear bearing on Asmerom and colleagues' conclusion, since there is no information in the text that indicates how, if at all, the ITCZ affects temperature. Choice C is incorrect because finding that Yok Balum experienced prolonged dry conditions at the same time that Huagapo experienced high rainfall would weaken Asmerom and colleagues' conclusion, not strengthen it. Such a finding would suggest that the ITCZ shifted south and left Central America dry rather than expanding both northward and southward.

Question Difficulty: Hard

Question ID af3cbcd8

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: af3cbcd8

“To You” is an 1856 poem by Walt Whitman. In the poem, Whitman suggests that he deeply understands the reader, whom he addresses directly, writing, _____

Which quotation from “To You” most effectively illustrates the claim?

- A. “Your true soul and body appear before me.”
- B. “Whoever you are, now I place my hand upon you, that you be my poem.”
- C. “I should have made my way straight to you long ago.”
- D. “Whoever you are, I fear you are walking the walks of dreams.”

ID: af3cbcd8 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most directly illustrates the text’s claim about Whitman’s poem, “To You.” The text says that in this poem, Whitman suggests that he deeply understands the poem’s reader. This quotation says that the reader’s “true soul and body appear before” Whitman, thereby asserting that he can see the reader as the reader truly is, suggesting that he deeply understands the reader.

Choice B is incorrect because this quotation describes Whitman making the reader the subject of the poem (“you be my poem”), not Whitman deeply understanding the reader. Choice C is incorrect because instead of suggesting that Whitman deeply understands the reader, it emphasizes Whitman’s regret at not having addressed the reader sooner. Choice D is incorrect. Although this quotation shows Whitman directly addressing the reader and expressing concern about the reader, it doesn’t illustrate the idea that Whitman suggests that he deeply understands the reader. The quotation is simply expressing concern about the reader, which doesn’t necessarily imply deep understanding of the reader.

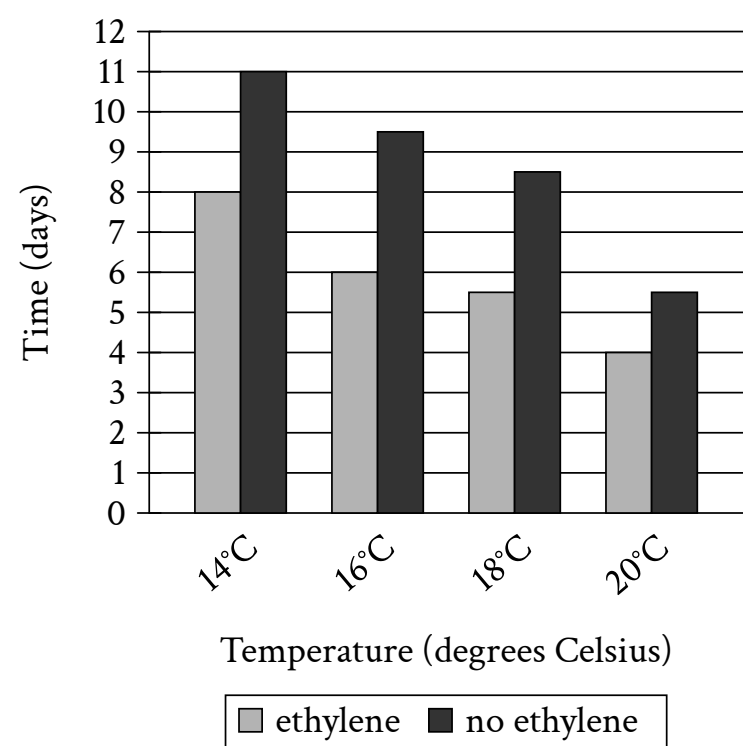
Question Difficulty: Hard

Question ID 4b524463

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 4b524463

Banana Ripening Time at Different Temperatures with and without Ethylene Treatment



A student is conducting an experiment to test the effect of temperature and ethylene treatment on the ripening speed of bananas. The student treated some bananas with ethylene while leaving others untreated, then allowed both types of bananas to ripen at one of four different temperatures. Comparing the data for bananas with and without ethylene, the student concluded that _____

Which choice most effectively uses data from the graph to complete the student’s conclusion?

- A. 20°C is the ideal temperature at which to store bananas to slow ripening time.
- B. for those bananas that were not treated with ethylene, differences in temperature were not associated with absolute differences in ripening time.
- C. bananas treated with ethylene ripen faster at 14°C and 16°C than at 18°C and 20°C.
- D. ethylene was associated with a greater absolute change in ripening time at 14°C, 16°C, and 18°C than at 20°C.

ID: 4b524463 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most effectively uses data from the graph to complete the student's conclusion about banana ripening time with and without ethylene at different temperatures. The graph shows that at 20°C, the gap between the two bars showing ripening times for ethylene-treated bananas and untreated bananas crosses fewer than 2 gridlines (from about 4 days for ethylene-treated bananas to about 5.5 days for untreated bananas). Meanwhile, the graph shows that at 14°C, 16°C, and 18°C, the gap between the bars crosses more than 2 gridlines (from about 8 days for treated bananas to about 11 days for untreated bananas at 14°C; from about 6 days for treated bananas to about 9.5 days for untreated bananas at 16°C; and from about 5.5 days for treated bananas to about 8.5 days for untreated bananas at 18°C). Since the gap between the bars at each of these temperatures crosses more than 2 gridlines, and since each of these gaps is larger than the gap between the bars at 20°C, it can be concluded that ethylene was associated with a greater absolute change in ripening time at 14°C, 16°C, and 18°C than at 20°C.

Choice A is incorrect because the graph shows that ethylene-treated bananas stored at 20°C ripen more quickly than ethylene-treated bananas stored at the other temperatures do (about 4 days at 20°C vs. about 5.5, 6, and 8 days at 18°C, 16°C, and 14°C, respectively) and that untreated bananas stored at 20°C ripen more quickly than untreated bananas stored at the other temperatures do (about 5.5 days at 20°C vs. about 8.5, 9.5, and 11 days at 18°C, 16°C, and 14°C, respectively). The information in the graph therefore indicates that storing bananas at 20°C speeds up ripening time relative to storing bananas at the other temperatures shown, not that this storage temperature slows ripening time. Choice B is incorrect because the graph shows that as temperature increases, the ripening time of untreated bananas decreases, from about 11 days at 14°C to about 5.5 days at 20°C, with no exceptions to this trend. The graph therefore shows that differences in temperature were associated with absolute differences in ripening time, not that there was no association between differences in temperature and differences in ripening time. Choice C is incorrect because the graph shows that ripening times of ethylene-treated bananas at 14°C and 16°C were about 8 and 6 days, respectively, which is greater than, not less than, ripening times of ethylene-treated bananas at 18°C and 20°C, which were about 5.5 and 4 days, respectively. In other words, bananas treated with ethylene ripen more slowly, not faster, at 14°C and 16°C than at 18°C and 20°C.

Question Difficulty: Hard

Question ID c3c85eb7

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: c3c85eb7

As a monthly newsletter formed in 1969 by a group of Asian American students at the University of California, Los Angeles, *Gidra* helped raise awareness about social and political issues concerning the Asian American community on campus and at large. The newsletter had an expansive reach for a publication of its kind: around 4,000 copies were published each month. A student writing a history paper, however, hypothesizes that *Gidra*’s influence cannot be measured by the number of newsletters published monthly alone.

Which finding, if true, would most directly support the student’s hypothesis?

- A. The students who initially formed *Gidra* each contributed financially to its creation.
- B. In addition to covering current events, *Gidra* also featured works of art and literature.
- C. *Gidra* was initially based out of the Asian American Studies Center at UCLA.
- D. People would often give their copies of *Gidra* to others once they had finished reading an issue.

ID: c3c85eb7 Answer

Correct Answer: D

Rationale

Choice D is the best answer. If there were more *Gidra* readers than there were copies of the newsletter, then the newsletter’s influence would be much greater than its 4,000 monthly copies.

Choice A is incorrect. Information about the newsletter’s initial funding doesn’t tell us about the influence that the newsletter eventually had. Choice B is incorrect. While the content of *Gidra* was undoubtedly related to the newsletter’s influence, this information isn’t relevant to the specific hypothesis about monthly circulation numbers. Choice C is incorrect. Where the publishers of *Gidra* were initially based doesn’t tell us about the newsletter’s overall influence.

Question Difficulty: Hard

Question ID 11367761

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 11367761

Body Length, Filter Time, and Lunges per Dive for Four Whale Species

Whale species	Typical adult body length (meters)	Average time to filter all engulfed water (seconds)	Average number of lunges per dive deeper than 50 meters
fin	18–22	31.30	3.95
humpback	11–17	17.12	6.28
minke	7–10	8.88	7.48
blue	24–34	60.27	4.02

Some whale species practice lunge feeding, in which they lunge toward prey with their mouths open at wide angles, collect the prey and the surrounding water, and then filter out the water through baleen plates in their mouths. Although the volume of water engulfed increases with whales’ body length, the surface area of whales’ baleen plates, which influences the rate at which water can be filtered, does not increase with body length to the same degree, which helps explain why _____

Which choice most effectively uses data from the table to complete the statement?

- A. minke whales and humpback whales show similar average filter times.
- B. humpback whales show an average of 6.28 lunges per dive.
- C. fin whales show a longer average filter time than minke whales do.
- D. blue whales show the longest average filter time and the highest average number of lunges per dive.

ID: 11367761 Answer

Correct Answer: C

Rationale

Choice C is the best answer. To support the claim, we need to show that longer whales take more time to filter all the water they engulf than shorter whales do. This choice accurately reflects that a longer whale (the fin whale) takes more time to filter engulfed water (31.30 seconds on average) compared to a shorter whale (the minke whale, which only took 8.88 seconds on average).

Choice A is incorrect. The table shows that minke whales take an average of 8.88 seconds to filter engulfed water, while humpback whales take an average of 17.12 seconds to complete the same task. Choice B is incorrect. This choice doesn’t reflect the claim about baleen plates. The claim explains why whales of differing lengths take different amounts of time to filter engulfed water. This choice doesn’t compare whales of different lengths, and it focuses on the number of lunges, which isn’t shown to be relevant to filter time. Choice D is incorrect. The table shows that blue whales average 4.02 lunges per dive, which is not the highest average among the whales in the table.

Question ID b773c3b4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: b773c3b4

Percentages of New Year’s Resolution Makers Who Make Certain
Kinds of Resolutions

Type of resolution	Age 18-29	Age 30-49	Age 50-64	Age 65+
Health and exercise	79	80	79	76
Finances	68	63	56	47
Personal relationships	63	53	58	52
Hobbies	65	53	51	45

A Pew Research Center survey conducted in January 2024 found that three out of ten US adults make at least one New Year’s resolution (a promise for the year ahead), while half of those who make a resolution make more than one. The survey asked participants what kinds of resolutions they made and separated them into several categories. The table presents percentages of people who make particular kinds of New Year’s resolutions among those who choose to make them, indexed by age bracket.

Which choice best presents a conclusion about the habits of New Year’s resolution makers that is best supported by information in the text and the table?

- A. Resolution makers between the ages of 50 and 64 are more likely to make resolutions related to personal relationships and less likely to make resolutions related to finances than resolution makers between the ages of 30 and 49 are.
- B. Resolution makers between the ages of 18 and 29 are more likely to make resolutions about health and exercise than resolution makers between the ages of 30 and 49 are.
- C. The majority of US adults who make resolutions related to health and exercise also make resolutions in multiple additional categories.
- D. Among all US adults, people become less likely to make New Year’s resolutions as they age, regardless of the type of resolution.

ID: b773c3b4 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents a conclusion about the habits of New Year’s resolution makers that is best supported by information in the text and the table. The table presents percentages of resolution makers who make particular kinds of resolutions, indexed by age bracket. According to the table, 58 percent of resolution makers ages 50 to 64 made resolutions related to personal relationships, compared to 53 percent of resolution makers ages 30 to 49—indicating that the older group is more likely to make such resolutions. The table also shows that 56 percent of resolution makers ages 50 to 64

made resolutions related to finances, compared to 63 percent of resolution makers ages 30 to 49—indicating that the older group is less likely to make financial resolutions. Thus, the data support the conclusion that resolution makers between the ages of 50 and 64 are more likely to make resolutions related to personal relationships and less likely to make resolutions related to finances than resolution makers between the ages of 30 and 49 are.

Choice B is incorrect because according to the table, 79 percent of resolution makers ages 18 to 29 made resolutions about health and exercise, while 80 percent of resolution makers ages 30 to 49 made such resolutions. Therefore, resolution makers ages 18 to 29 are slightly less likely, not more likely, to make resolutions about health and exercise than resolution makers ages 30 to 49 are. Choice C is incorrect because neither the text nor the table provides information about whether resolution makers who make resolutions related to health and exercise also make resolutions in multiple additional categories. The text indicates that half of those who make a resolution make more than one, but it doesn't specify how many or in which categories, and the table presents only the percentages of resolution makers in each age bracket who made particular kinds of resolutions. Choice D is incorrect because the table presents data only about people who chose to make resolutions, not about all US adults; the table therefore can't support a conclusion about whether US adults overall become less likely to make resolutions as they age. Furthermore, although percentages of resolution makers generally decline as age bracket increases in some resolution categories, the table shows that the percentage of resolution makers who made health and exercise resolutions remains relatively stable across age brackets; thus, even among resolution makers, there isn't a consistent age-related decline across all types of resolutions.

Question Difficulty: Hard

Question ID add96ee3

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: add96ee3

The Post Office is a 1912 play by Rabindranath Tagore, originally written in Bengali. The character Amal is a young boy who imagines that the people he sees passing the window of his home are carefree even when engaged in work or chores, as is evident when he says to the daughter of a flower seller, _____

Which quotation from *The Post Office* most effectively illustrates the claim?

- A. "I see, you don't wish to stop; I don't care to stay on here either."
- B. "Oh, flower gathering? That is why your feet seem so glad and your anklets jingle so merrily as you walk."
- C. "I'll pay when I grow up—before I leave to look for work out on the other side of that stream there."
- D. "Wish I could be out too. Then I would pick some flowers for you from the very topmost branches right out of sight."

ID: add96ee3 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it most effectively illustrates the claim that Amal imagines the people he sees are carefree even when engaged in work. In the quotation, Amal observes that the flower seller's daughter is "flower gathering," or working, as the text indicates. Moreover, Amal notes that the daughter's feet "seem so glad" and her "anklets jingle so merrily," suggesting that Amal believes that the flower seller's daughter is cheerful.

Choice A is incorrect because the quotation makes no observation about the cheerful mood of the flower seller's daughter. Choice C is incorrect because the quotation discusses how Amal envisions his future, not the feelings of the flower seller's daughter. Choice D is incorrect because the quotation discusses Amal's wishes, not the feelings of the flower seller's daughter.

Question Difficulty: Hard

Question ID ceafbde4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: ceafbde4

“Ghosts of the Old Year” is an early 1900s poem by James Weldon Johnson. In the poem, the speaker describes experiencing an ongoing cycle of anticipation followed by regretful reflection: _____

Which quotation from “Ghosts of the Old Year” most effectively illustrates the claim?

- A. “What does this brazen tongue declare, / That falling on the midnight air / Brings to my heart a sense of care / Akin to fright?”
- B. “The snow has ceased its fluttering flight, / The wind sunk to a whisper light, / An ominous stillness fills the night, / A pause—a hush.”
- C. “It tells of many a squandered day, / Of slighted gems and treasured clay, / Of precious stores not laid away, / Of fields unreaped.”
- D. “And so the years go swiftly by, / Each, coming, brings ambitions high, / And each, departing, leaves a sigh / Linked to the past.”

ID: ceafbde4 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents the quotation that most effectively illustrates the claim that the speaker of the poem describes experiencing an ongoing cycle of anticipation followed by regretful reflection. In this quotation, the speaker notes that as years go by, “Each, coming”—that is, each new year as it comes—“brings ambitions high.” In other words, the speaker begins each new year with large goals. But the speaker goes on to say that as each year ends (“each, departing”), it “leaves a sigh / Linked to the past.” A sigh is an expression of longing or regret, so in the context of the whole quotation, this portion suggests that at the end of each year, the speaker regretfully reflects on not having achieved the ambitions formed at the beginning of the year. The phrases “the years go swiftly by,” “Each, coming,” and “each, departing” indicate that this experience happens over and over again: the speaker experiences a cycle of anticipation followed by regretful reflection.

Choice A is incorrect because this quotation does not describe an ongoing cycle of anticipation followed by regretful reflection. Instead, the speaker describes experiencing a sensation similar to fright as a result of something that has occurred at midnight. Specifically, the speaker has heard a “brazen tongue,” a figurative way of saying that the speaker has heard the clang of a bronze bell being rung. Choice B is incorrect because although this quotation does convey a sense of anticipation through its reference to “ominous stillness,” there is no suggestion of regretful reflection or any indication that the speaker is describing an ongoing cycle of anticipation followed by such reflection. Instead, the speaker is describing a particular moment when a winter storm appears to have momentarily calmed. Choice C is incorrect because although this quotation does convey a sense of regret (“many a squandered day”), nothing in the quotation suggests an ongoing cycle of anticipation followed by regret. Instead, the speaker is simply lamenting wasted time and opportunities.

Question Difficulty: Hard

Question ID a90c497f

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: a90c497f

Political scientists who favor the traditional view of voter behavior claim that voting in an election does not change a voter’s attitude toward the candidates in that election. Focusing on each US presidential election from 1976 to 1996, Ebonya Washington and Sendhil Mullainathan tested this claim by distinguishing between subjects who had just become old enough to vote (around half of whom actually voted) and otherwise similar subjects who were slightly too young to vote (and thus none of whom voted). Washington and Mullainathan compared the attitudes of the groups of subjects toward the winning candidate two years after each election.

Which finding from Washington and Mullainathan’s study, if true, would most directly weaken the claim made by people who favor the traditional view of voter behavior?

- A. Subjects’ attitudes toward the winning candidate two years after a given election were strongly predicted by subjects’ general political orientation, regardless of whether subjects were old enough to vote at the time of the election.
- B. Subjects who were not old enough to vote in a given election held significantly more positive attitudes towards the winning candidate two years later than they held at the time of the election.
- C. Subjects who voted in a given election held significantly more polarized attitudes toward the winning candidate two years later than did subjects who were not old enough to vote in that election.
- D. Two years after a given election, subjects who voted and subjects who were not old enough to vote were significantly more likely to express negative attitudes than positive attitudes toward the winning candidate in that election.

ID: a90c497f Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents a finding that, if true, would weaken the claim made by people who favor the traditional view of voter behavior. According to the text, people who favor that view believe that voting in an election doesn’t change a voter’s attitude toward the candidates in that election. If Washington and Mullainathan found that two years after an election, attitudes toward the winning candidate were significantly more polarized among subjects who had voted than among subjects who had been too young to vote, that would suggest that the act of voting did have an effect on the voters’ attitudes toward the candidates, which would undermine the claim that voting doesn’t change voters’ attitudes.

Choice A is incorrect because a finding about links between subjects’ attitudes and general political orientation, regardless of age and ability to vote, wouldn’t address the presence or absence of changes in attitudes among those subjects who did actually vote. Therefore, the finding wouldn’t have any bearing on the claim that voting in an election doesn’t change a voter’s attitude toward the candidates in that election. Choice B is incorrect because a finding that positive attitudes toward a winning candidate significantly increased in the two years after the election among subjects who had been too young to vote would involve only people who didn’t vote; therefore, the finding wouldn’t have any bearing on the claim that when people do vote, the act of voting doesn’t change their attitudes toward the candidates. Choice D is incorrect because the finding that subjects in both groups were

more likely to have negative attitudes than positive attitudes toward the winning candidate two years after an election would reflect all subjects' attitudes at one particular time whether they voted or not, rather than the presence or absence of a change in voters' attitudes after voting. Therefore, the finding would neither weaken nor strengthen the claim that voting in an election doesn't change a voter's attitude toward the candidates.

Question Difficulty: Hard

Question ID 5c89bb94

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 5c89bb94

Baltimore, Maryland, has installed engineered structures along 71% of its shoreline to protect infrastructure from wave erosion and other hazards, a practice known as shoreline hardening. To evaluate the responses of waterbirds to two types of hardening structures—riprap and bulkheads—Diann Prosser et al. surveyed waterbird communities consisting of the tundra swan, the great blue heron, and 62 other species at different sites in the Chesapeake Bay on the US East Coast. Utilizing the Index of Waterbird Community Integrity (IWCI), on which a high score corresponds to high community integrity, the researchers found that bulkheads are more strongly negatively correlated with waterbird community integrity than is riprap.

Which finding, if true, would most directly illustrate the researchers’ finding?

- A. The difference in average IWCI scores for waterbird communities at Stony and Old Road, two sites with a higher percentage of shoreline consisting of bulkheads than of riprap, was statistically insignificant.
- B. Waterbird communities at Old Road, a site with a relatively high percentage of shoreline consisting of bulkheads, had lower average IWCI scores than did waterbird communities at Miles, a site with a relatively high percentage of shoreline consisting of riprap.
- C. Waterbird communities at Curtis, a site with a high percentage of shoreline consisting of bulkheads and riprap, had lower average IWCI scores than did waterbird communities at Onancock, a site with a low percentage of shoreline consisting of bulkheads and riprap.
- D. Waterbird communities at Curtis, a site with equal percentages of shoreline consisting of bulkheads and riprap, had higher average IWCI scores than did waterbird communities at Miles, a site with different percentages of shoreline consisting of bulkheads and riprap.

ID: 5c89bb94 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents a finding that, if true, would most directly illustrate the researchers’ finding about waterbird responses to shoreline hardening structures. The text explains that using the IWCI, an index on which higher scores indicate higher community integrity, researchers found that bulkheads are more strongly negatively correlated with waterbird community integrity than riprap is—that is, that bulkheads reduce the integrity of waterbird communities more than riprap does. The finding that waterbird communities at a site with a relatively high percentage of bulkheads along the shoreline (Old Road) had lower average IWCI scores than waterbird communities at a site with a relatively high percentage of riprap along the shoreline (Miles) did would illustrate the researchers’ finding, since it would be an example of lower waterbird community integrity in a location with substantial bulkhead presence than in a location with substantial riprap presence.

Choice A is incorrect because a finding of similar waterbird community integrity in two sites predominated by bulkheads wouldn’t reveal anything about waterbird community integrity at sites predominated by riprap or how waterbird community integrity compares between the two types of sites. Thus, the finding wouldn’t illustrate the discovery of a difference in how bulkheads and

riprap correlate with waterbird community integrity. Choice C is incorrect because it presents a finding that compares waterbird community integrity at sites with different overall amounts of shoreline hardening but without distinguishing between bulkheads and riprap. Such a distinction would be necessary to illustrate the researchers' finding of a difference in how bulkheads and riprap each correlate with waterbird community integrity. Choice D is incorrect because it presents a finding that addresses a difference in waterbird community integrity between one site with equal percentages of bulkheads and riprap along its shoreline (Curtis) and one site with unequal percentages of bulkheads and riprap (Miles) but without indicating whether bulkheads or riprap were more prevalent at Miles. This finding wouldn't provide any clear information about how bulkheads and riprap each correlate with waterbird community integrity, so it wouldn't illustrate the researchers' finding of a difference between those correlations.

Question Difficulty: Hard

Question ID 86e8847c

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 86e8847c

Psychologists Dacher Keltner and Jonathan Haidt have argued that experiencing awe—a sensation of reverence and wonder typically brought on by perceiving something grand or powerful—can enable us to feel more connected to others and thereby inspire us to act more altruistically. Keltner, along with Paul K. Piff, Pia Dietze, and colleagues, claims to have found evidence for this effect in a recent study where participants were asked to either gaze up at exceptionally tall trees in a nearby grove (reported to be a universally awe-inspiring experience) or stare at the exterior of a nearby, nondescript building. After one minute, an experimenter deliberately spilled a box of pens nearby.

Which finding from the researchers’ study, if true, would most strongly support their claim?

- A. Participants who had been looking at the trees helped the experimenter pick up significantly more pens than did participants who had been looking at the building.
- B. Participants who helped the experimenter pick up the pens used a greater number of positive words to describe the trees and the building in a postexperiment survey than did participants who did not help the experimenter.
- C. Participants who did not help the experimenter pick up the pens were significantly more likely to report having experienced a feeling of awe, regardless of whether they looked at the building or the trees.
- D. Participants who had been looking at the building were significantly more likely to notice that the experimenter had dropped the pens than were participants who had been looking at the trees.

ID: 86e8847c Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents a finding that, if true, would most strongly support the researchers’ claim that they found evidence that experiencing awe can make people feel more connected to others and thus more likely to behave altruistically (with beneficial and unselfish concern for others). According to the text, the researchers tested for this effect by first having participants look at either something known to be awe-inspiring (very tall trees) or something ordinary (a plain building) and then purposely spilling pens near the participants. The finding that participants who had looked at the trees helped pick up significantly more pens than did participants who had looked at the building would support the researchers’ claim by demonstrating that the people who had experienced awe behaved more altruistically when the experimenter needed help than the other participants did.

Choice B is incorrect because a finding about helpful participants using positive words to describe the trees and the building after the experiment was over wouldn’t have any bearing on the researchers’ claim that experiencing awe increases altruistic behavior. The text doesn’t address the use of positive words to describe things or suggest any connection between using such words and having experienced awe, so that behavior wouldn’t serve as evidence that experiencing awe played a role in promoting helpful behavior. Choice C is incorrect because a finding that participants who didn’t help the experimenter were significantly more likely than others to report having experienced awe whether they had looked at the building or the trees would weaken the researchers’

claim that experiencing awe increases altruistic behavior by suggesting that the opposite might be true—that experiencing awe is in fact linked to choosing not to act in a way that benefits someone else. Choice D is incorrect because a finding about participants noticing that the experimenter had dropped the pens wouldn't have any bearing on the researchers' claim about people behaving altruistically. Being aware of a challenge or problem isn't necessarily beneficial on its own and isn't the same as offering help, so the finding wouldn't support the idea that experiencing awe increases altruistic behavior.

Question Difficulty: Hard

Question ID 8896f808

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 8896f808

Some residents in a neighborhood in Atlanta recently founded a community garden inside a local park. The residents agreed to volunteer to take care of the garden together. Students at a local high school surveyed some of the volunteers as part of a project to understand the impact of the new garden. The students concluded that the new garden benefited the community overall by fostering connections and relationships between the volunteers and other residents of the neighborhood who weren't volunteering at the garden.

Which quotation from a survey respondent would best illustrate the students' conclusion?

- A. "Our first challenge was deciding what plants would be most suitable to the climate and soil here in Atlanta. We needed plants that could survive the hot and humid summers."
- B. "We're lucky to have a few expert gardeners living in the neighborhood. Some volunteers and I have gone to them a few times with questions, and they've been eager to help us and to learn more about the project."
- C. "I love getting the opportunity to be outside and around nature, especially on days when the weather is nice."
- D. "My favorite thing about the garden is the feeling of pride I get when I walk by each day. As I see the plants growing, I feel good knowing I had a small part in creating this beautiful space in the neighborhood."

ID: 8896f808 Answer

Correct Answer: B

Rationale

Choice B is the best answer. This choice shows how volunteers have been interacting with nonvolunteer neighbors and benefiting from their gardening expertise: proof of the connections enabled by the garden.

Choice A is incorrect. This volunteer describes the challenges of developing the garden, which isn't connected to the conclusion about the garden fostering connections between volunteers and neighbors. Choice C is incorrect. While the volunteer expresses enthusiasm for the garden, they don't mention any interactions with other people, which is what the students need to show for their conclusion. Choice D is incorrect. The respondent enjoys and takes pride in the garden, but they don't mention interacting with neighbors or other volunteers.

Question Difficulty: Hard

Question ID 573dd8d8

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 573dd8d8

“Odalie” is an 1899 short story by Alice Dunbar-Nelson. In the story, a young woman named Odalie attends the annual Mardi Gras carnival in New Orleans, where she lives with her guardian Tante Louise. Dunbar-Nelson portrays Odalie as eager to escape the monotony of her everyday life: _____

Which quotation from “Odalie” most effectively illustrates the claim?

- A. “Mardi Gras was a tiresome day, after all, she sighed, and Tante Louise agreed with her for once.”
- B. “In the old French house on Royal Street, with its quaint windows and Spanish courtyard green and cool, and made musical by the plashing of the fountain and the trill of caged birds, lived Odalie in convent-like seclusion.”
- C. “When one is shut up in a great French house with a grim sleepy tante and no companions of one’s own age, life becomes a dull thing, and one is ready for any new sensation.”
- D. “It was Mardi Gras day at last, and early through her window Odalie could hear the jingle of folly bells on the [participants’] costumes, the tinkle of music, and the echoing strains of songs.”

ID: 573dd8d8 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most effectively uses a quotation from “Odalie” to illustrate the claim that Odalie is eager to escape the monotony, or tedious lack of variety, of her everyday life. In the quotation, Odalie describes feeling “shut up” and complains that she has “no companions” except for her “sleepy tante.” Odalie goes on to say that, as a result, her life is “dull” and she is “ready for any new sensation,” meaning she wants a change. This suggests that Odalie wishes to get away from her monotonous everyday life.

Choice A is incorrect. Although this quotation includes the word “tiresome,” which means dull, it does so to suggest Odalie’s negative feelings about Mardi Gras, which is a once-a-year celebration, not her feelings about her everyday life. This quotation therefore doesn’t express that Odalie’s everyday life is monotonous or that she wishes to escape. Choice B is incorrect. Although this quotation ends by saying that Odalie lives in seclusion, or isolation, it doesn’t express that Odalie’s everyday life is monotonous or that she wishes to escape. Instead, it describes the pleasant qualities of the house Odalie lives in, saying that it has “quaint windows” and a “green and cool” courtyard that is “made musical” by the sounds of a fountain and pet birds. Choice D is incorrect because this quotation describes the lively sounds of a Mardi Gras celebration that Odalie hears through her window, not the monotony of Odalie’s everyday life or her wish to escape.

Question Difficulty: Hard

Question ID 91f6e2cf

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 91f6e2cf

A student is examining a long, challenging poem that was initially published in a quarterly journal without explanatory notes, then later republished in a stand-alone volume containing only that poem and accompanying explanatory notes written by the poet. The student asserts that the explanatory notes were included in the republication primarily as a marketing device to help sell the stand-alone volume.

Which statement, if true, would most directly support the student’s claim?

- A. The text of the poem as published in the quarterly journal is not identical to the text of the poem published in the stand-alone volume.
- B. Many critics believe that the poet’s explanatory notes remove certain ambiguities of the poem and make it less interesting as a result.
- C. The publishers of the stand-alone volume requested the explanatory notes from the poet in order to make the book attractive to readers who already had a copy of the poem in a journal issue.
- D. Correspondence between the poet and the publisher reveals that the poet’s explanatory notes went through several drafts.

ID: 91f6e2cf Answer

Correct Answer: C

Rationale

Choice C is the best answer because it would most directly support the student’s claim about the motivation for including explanatory notes with the stand-alone volume of the poem. The text explains that the poem had previously been published without the notes in a quarterly journal. It stands to reason that readers who had purchased the journal issue containing the poem would be unlikely to purchase an unchanged version of the poem in a stand-alone volume. However, the inclusion of notes in that volume would encourage the purchase of a stand-alone volume, since the later text would differ from the original by including the author’s own explanation of the poem. Therefore, if it were true that the publishers of the stand-alone volume had requested the notes to make the book attractive to readers who already had a copy of the journal issue, this fact would support the student’s claim that the notes were included primarily as a marketing device.

Choice A is incorrect because the student’s claim is about the motivation for including the explanatory notes in the stand-alone volume, not about changes that might have been made to the poem itself for publication in that volume; moreover, the text never suggests that such changes were made. Choice B is incorrect because the student’s claim is about why the explanatory notes were included in the stand-alone volume, not about how the notes affected readers’ and critics’ subsequent experience of the poem. Choice D is incorrect because the fact that the poet drafted multiple versions of the explanatory notes doesn’t directly address the issue of whether the notes were intended as a marketing device, as the student claims; the correspondence would support this claim only if it showed that the poet had revised the notes specifically to make them useful to the marketing of the stand-alone volume.

Question Difficulty: Hard

Question ID 94bafe57

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 94bafe57

In subtropical Asia, *Apis dorsata* (giant honeybee) plays an essential role in pollinating a wide variety of crops and wild plants. To study how different agricultural land covers affect the species, Rika Raffiudin and colleagues monitored the foraging activity of the bees as well as the pollen content of the honey from *A. dorsata* colonies at two sites in Indonesia: Kampar, characterized by its surrounding monoculture farms (growing a single crop), and Kerinci, a forest-agriculture site where multiple crops, including hot peppers and coffee, are grown nearby. The researchers concluded that a lack of crop variety may reduce total pollen collection by *A. dorsata*.

Which finding, if true, would most directly support the researchers’ conclusion?

- A. Pollen in honey samples from Kampar bee colonies was predominantly sourced from a single plant species, whereas pollen in honey samples from Kerinci bee colonies was sourced from multiple different plant species.
- B. In one Kerinci bee colony, a greater proportion of bees returned to their nests with pollen than returned without pollen, whereas the inverse was observed in a second Kerinci bee colony.
- C. Significantly fewer bees were observed engaging in foraging activities with the crops surrounding Kerinci than with the crops surrounding Kampar.
- D. Honey samples from Kerinci bee colonies contained significantly higher concentrations of pollen than honey samples from Kampar bee colonies did.

ID: 94bafe57 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents a finding that, if true, would most directly support the researchers’ conclusion that a lack of crop variety may reduce total pollen collection by *A. dorsata*. The text explains that the researchers compared two sites: Kampar, which is surrounded by farms all growing the same crop, and Kerinci, which is a forest-agriculture site with multiple crops. If honey samples from Kerinci bee colonies contained significantly higher pollen concentrations than honey samples from Kampar bee colonies did, this finding would suggest that bees in the multiple-crop environment collected more pollen overall, thereby supporting the conclusion that the low crop variety at the Kampar site corresponds with reduced total pollen collection.

Choice A is incorrect because this finding addresses the diversity of pollen sources—single species at the Kampar site versus multiple species at the Kerinci site—not the total quantity of pollen collected. Choice B is incorrect because this finding compares two colonies within Kerinci rather than comparing the two sites and it concerns whether bees returned with pollen, which doesn’t address the total quantity of pollen collected. Choice C is incorrect because the finding that fewer bees foraged at Kerinci—the higher-variety site—than at Kampar doesn’t address the conclusion about total pollen collected. If anything, a lower number of foraging bees would suggest reduced activity and hence a lower amount of pollen collected in the variety-rich environment, which would undermine rather than support the researchers’ conclusion.

Question Difficulty: Hard

Question ID bdc6a49b

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: bdc6a49b

Credited Film Output of James Young Deer, Dark Cloud, Edwin Carewe, and Lillian St. Cyr

Individual	Years active	Number of films known and commonly credited
James Young Deer	1909–1924	33 (actor), 35 (director), 10 (writer)
Dark Cloud	1910–1920	35 (actor), 1 (writer)
Edwin Carewe	1912–1934	47 (actor), 58 (director), 20 (producer), 4 (writer)
Lillian St. Cyr (Red Wing)	1908–1921	66 (actor)

Some researchers studying Indigenous actors and filmmakers in the United States have turned their attention to the early days of cinema, particularly the 1910s and 1920s, when people like James Young Deer, Dark Cloud, Edwin Carewe, and Lillian St. Cyr (known professionally as Red Wing) were involved in one way or another with numerous films. In fact, so many films and associated records for this era have been lost that counts of those four figures’ output should be taken as bare minimums rather than totals; it’s entirely possible, for example, that _____

Which choice most effectively uses data from the table to complete the example?

- A. Dark Cloud acted in significantly fewer films than did Lillian St. Cyr, who is credited with 66 performances.
- B. Edwin Carewe’s 47 credited acting roles includes only films made after 1934.
- C. Lillian St. Cyr acted in far more than 66 films and Edwin Carewe directed more than 58.
- D. James Young Deer actually directed 33 films and acted in only 10.

ID: bdc6a49b Answer

Correct Answer: C

Rationale

Choice C is the best answer because it uses data from the table to effectively exemplify the idea that the film outputs of the four individuals included in the table should be considered bare minimums—that is, that we should assume that the individuals actually had higher outputs than those recorded. The table presents the years during which the individuals were active and the number of known films the individuals are credited in. The table indicates that Lillian St. Cyr has 66 film credits as an actor and that Edwin Carewe has 58 film credits as a director; it follows that if some films and records for the era were lost, it’s possible that Lillian St. Cyr acted in far more than 66 films and that Edwin Carewe directed more than 58 films.

Choice A is incorrect because it doesn’t effectively exemplify the idea that the film outputs of the four individuals included in the table should be considered bare minimums. Rather than addressing the idea that the individuals likely had higher outputs than those presented in the table, this choice simply compares data from the table to make the point that Dark Cloud has fewer credited acting roles than Lillian St. Cyr (35 and 66, respectively). Choice B is incorrect because it misrepresents data from the

table, even though it may exemplify the idea that the film outputs of the four individuals included in the table should be considered bare minimums by implying that Edwin Carewe acted in more than 47 films. The table indicates that Edwin Carewe was active from 1912 to 1934, meaning that his 47 credited acting roles were in films made before or during 1934, not after that time. Choice D is incorrect because it doesn't effectively exemplify the idea that the film outputs of the four individuals included in the table should be considered bare minimums. Instead of addressing the idea that the individuals likely had higher outputs than those recorded, this choice suggests that James Young Deer actually acted in and directed fewer films than presented in the table (only 33 known films as a director instead of 35, and only 10 known films as an actor instead of 33).

Question Difficulty: Hard

Question ID d70d05db

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: d70d05db

External shopping cues are a type of marketing that uses obvious messaging—a display featuring a new product, for example, or a “buy one, get one free” offer—to entice consumers to make spontaneous purchases. In a study, data scientist Sam K. Hui and colleagues found that this effect can also be achieved with a less obvious cue: rearranging a store’s layout. The researchers explain that trying to find items in new locations causes shoppers to move through more of the store, exposing them to more products and increasing the likelihood that they’ll buy an item they hadn’t planned on purchasing.

- Which response from a survey given to shoppers who made a purchase at a retail store best supports the researchers’ explanation?
- A. “I needed to buy some cleaning supplies, but they weren’t in their regular place. While I was looking for them, I saw this interesting notebook and decided to buy it, too.”
 - B. “I didn’t buy everything on my shopping list today. I couldn’t find a couple of the items in the store, even though I looked all over for them.”
 - C. “The store sent me a coupon for a new brand of soup, so I came here to find out what kinds of soup that brand offers. I decided to buy a few cans because I had the coupon.”
 - D. “This store is larger than one that’s closer to where I live, and it carries more products. I came here to buy some things that the other store doesn’t always have.”

ID: d70d05db Answer

Correct Answer: A

Rationale

Choice A is the best answer because it best supports the researchers’ explanation of the results of rearranging a store’s layout. According to the text, Sam K. Hui and colleagues found that rearranging a store’s layout can encourage customers to make spontaneous purchases. The text states that the researchers explain that a change in layout causes shoppers to hunt for items’ new locations, which exposes the shoppers to more products and increases the likelihood that they’ll make an unplanned purchase. This quotation from a surveyed shopper indicates that the shopper spontaneously purchased a notebook while looking for cleaning supplies that weren’t in their usual place. The quotation therefore supports the researchers’ explanation that rearranging a store’s layout can lead shoppers to make unanticipated purchases.

Choice B is incorrect because it doesn’t support the researchers’ explanation that rearranging a store’s layout can lead shoppers to make unanticipated purchases. Instead of attributing an unplanned purchase to a change in layout, the quotation notes that the shopper searched for but couldn’t find some items, and as a result the shopper purchased less, not more, than what was anticipated. Choice C is incorrect because the quotation attributes what was purchased to coupons that the shopper received, not to a new store layout. Thus, the quotation doesn’t support the researchers’ explanation that rearranging a store’s layout can lead shoppers to make unanticipated purchases. Choice D is incorrect because the quotation attributes what was purchased to the size and stock of the store, not to a new store layout. The shopper simply purchased products that the shopper wanted in a

particular store because other stores didn't carry those products, so the quotation doesn't support the researchers' explanation that rearranging a store's layout can lead shoppers to make spontaneous purchases.

Question Difficulty: Hard

Question ID f2341118

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: f2341118

Data Sources for Neptune Temperature Analysis

Instrument	Observatory	Data type	Observation years
TEXES (Texas Echelon Cross Echelle Spectrograph)	Gemini Observatory	spectroscopy	2007, 2019
T-ReCS (Thermal-Region Camera Spectrograph)	Gemini Observatory	infrared imaging	2007, 2010
LWS (Long Wavelength Spectrometer)	Keck Observatory	infrared imaging	2003
VISIR (VLT Imager and Spectrometer for mid-InfraRed)	European Southern Observatory	spectroscopy	2006

Julianne I. Moses and colleagues have reported that Neptune may have cooled significantly between 2003 and 2020. The team reached this conclusion by analyzing existing infrared imaging and spectroscopy data about the planet obtained from various instruments in different years. Of the team’s sources listed in the table, the earliest example of spectroscopy data included in the analysis was obtained in _____

Which choice most effectively uses data from the table to complete the text?

- A. 2007 using TEXES at the Gemini Observatory.
- B. 2007 using T-ReCS at the Gemini Observatory.
- C. 2006 using VISIR at the European Southern Observatory.
- D. 2003 using LWS at the W.M. Keck Observatory.

ID: f2341118 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it effectively completes the text’s discussion of Moses and colleagues’ analysis of changes in Neptune’s temperature by using data from the table to identify the source of the earliest example of spectroscopy data included in this analysis. The text indicates that Moses and colleagues analyzed infrared imaging and spectroscopy data about Neptune obtained in different years by various instruments. The table lists the observatories where these instruments are housed, the type of data each instrument collected (infrared imaging or spectroscopy), and the years in which the instruments’ observations were made. According to the table, only two of these instruments obtained spectroscopy data: VISIR at the European Southern Observatory, which made its observations in 2006, and TEXES at the Gemini Observatory, which made its observations in later years (2007 and 2019). Although two other instruments are also included in the table, they obtained infrared imaging data, not spectroscopy data. Therefore, the earliest example of spectroscopy data included in the researchers’ analysis is the data obtained by VISIR at the European Southern Observatory in 2006.

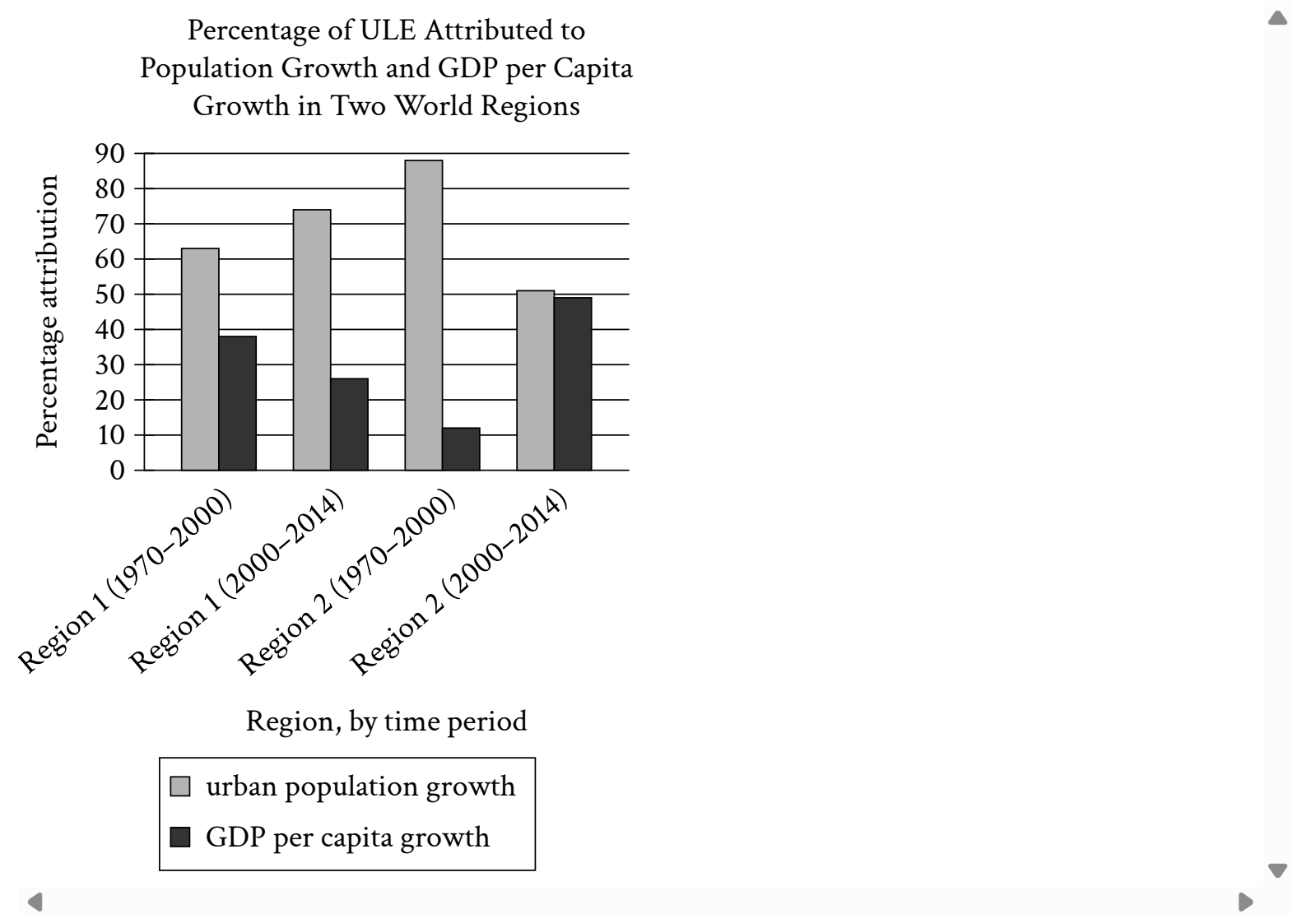
Choice A is incorrect. Although the table indicates that TEXES at the Gemini Observatory collected spectroscopy data in 2007 and 2019, the table also indicates that this type of data was collected in 2006 by VISIR at the European Southern Observatory. Because the VISIR data were collected in the previous year, the data obtained in 2007 by TEXES are not the earliest example of spectroscopy data included in Moses and team’s analysis of Neptune’s temperature. Choice B is incorrect because the table indicates that T-ReCS at the Gemini Observatory collected infrared imaging data, not spectroscopy data. T-ReCS therefore cannot be the source of the earliest example of spectroscopy data that is included in Moses and colleagues’ analysis of Neptune’s temperature. Additionally, the T-ReCS data were collected in 2007, meaning that these data were obtained later than any type of data collected in 2006. Choice D is incorrect. Although the table indicates that data from LWS at the W.M. Keck Observatory were obtained in 2003, making these data the earliest example of any type of data included in the analysis, the table also indicates that LWS collected infrared imaging data, not spectroscopy data. LWS therefore cannot be the source of the earliest example of spectroscopy data included in Moses and team’s analysis of Neptune’s temperature.

Question Difficulty: Hard

Question ID f77024db

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: f77024db



In a study of urban physical expansion, Richa Mahtta et al. conducted a meta-analysis of more than 300 cities worldwide to determine whether urban land expansion (ULE) was more strongly influenced by urban population growth or by growth in gross domestic product (GDP) per capita, a measure of economic activity. Because efficient national government is necessary to provide urban services and infrastructure that attract economic investment, Mahtta et al. propose that absent other factors, the importance of GDP per capita growth to ULE would likely increase relative to the importance of population growth as governments become more efficient. If true, this suggests the possibility that _____

Which choice most effectively uses data from the graph to complete the statement?

- A. national governments of countries in Region 1 experienced declines in efficiency in the period from 2000 to 2014, relative to the period from 1970 to 2000.

- B. countries in Region 1 experienced a slower rate of economic growth in the period from 2000 to 2014 than countries in Region 2 did, despite increasing national government efficiency in Region 1.
- C. national governments of most countries in Region 2 became more efficient in the period from 2000 to 2014 than they had been in the period from 1970 to 2000, but those of several countries in this region did not.
- D. national governments of countries in Region 1 and in Region 2 generally became more efficient in the period from 2000 to 2014 than they had been in the period from 1970 to 2000, but at different rates.

ID: f77024db Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most effectively uses data from the graph to complete the statement about Mahtta et al.'s proposal regarding factors that affect urban land expansion (ULE). According to the text, ULE is influenced by urban population growth and by gross domestic product (GDP) growth per capita. Reasoning that efficient national governments provide urban services and infrastructure needed to attract economic investment, Mahtta et al. suggest that, as governments become more efficient at providing urban services and infrastructure, GDP growth per capita will account for more ULE and urban population growth will account for less. But according to the graph, Region 1 saw an increase in the percentage attributed to urban population growth from 1970–2000 (between 60 and 65%) to 2000–2014 (between 70 and 75%) and a decrease in the percentage attributed to GDP growth per capita from 1970–2000 (between 35 and 40%) to 2000–2014 (about 25%). Because the percentage attributed to GDP growth per capita decreased (the opposite of what Mahtta et al. claimed would happen if the governments had become more efficient), the data suggest that the governments of Region 1 became less efficient at providing urban services and infrastructure over that period.

Choice B is incorrect. Neither the graph nor the text gives the regions' relative levels of economic growth or what effect Mahtta et al. would expect such growth to have. Furthermore, Mahtta et al.'s proposal suggests that Region 1's decline in the percentage of ULE attributed to GDP growth per capita from 1970–2000 (between 35 and 40%) to 2000–2014 (about 25%) would suggest decreasing, not increasing, government efficiency over this time. Choice C is incorrect. Neither the text nor the graph provides information about the relative efficiencies of different governments in Region 2. Choice D is incorrect. Mahtta et al.'s proposal suggests that more efficient governments will have a higher percentage of their ULE driven by GDP growth per capita and a lower percentage driven by urban population growth. For Region 2, the percentage of ULE attributed to GDP growth per capita increased from 1970–2000 (between 10 and 15%) to 2000–2014 (between 45 and 50%), but the opposite is true for Region 1, which saw the percentage of ULE attributed to GDP growth per capita decline over the same period. Thus, whereas the data suggest governments in Region 2 became more efficient, the data for Region 1 suggest that those governments became less efficient, not more.

Question Difficulty: Hard

Question ID eef2497c

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: eef2497c

Delta 15-N Values in Seagrass Samples from Four Sites on the Yucatan, 2016–2017

Site	February 2016	October 2016	February 2017	October 2017
Akumal Bay	no data available	3.3	2.0	6.3
Mahahual	0.7	no data available	2.5	3.4
Tulum	6.1	5.9	2.3	5.5
Xahuayxol	0.9	0.3	−0.9	1.4

Because water from natural, uncontaminated sources is less enriched with the stable nitrogen isotope ¹⁵N than wastewater from human activities is, the presence of such wastewater in nature can be detected by examining delta 15-N values (a measure of the ratio of ¹⁵N to ¹⁴N) in plants. Karla A. Camacho-Cruz and colleagues assessed delta 15-N values in the seagrass *Thalassia testudinum* from sites on Mexico’s Yucatan peninsula with intermediate tourism development, including Akumal Bay and Tulum, and low tourism development, including Mahahual and Xahuayxol, throughout 2016 and 2017. The data suggest that the intermediate-tourism sites experienced influxes of human wastewater. However, the researchers concluded that this happened intermittently.

Which choice best describes data from the table that support the underlined conclusion?

- A. Although delta 15-N values were generally higher in Akumal Bay and Tulum than in Mahahual and Xahuayxol, the values were lower in Akumal Bay than in Mahahual and Xahuayxol in February 2017.
- B. Delta 15-N values reached their lowest level in February 2017 in both Akumal Bay and Tulum, but no data were available for Akumal Bay in February 2016, when the values reached their highest level in Tulum.
- C. Although all sites showed considerable variation in delta 15-N values, the values remained relatively constant in Akumal Bay from October 2016 to February 2017 and in Tulum from February 2016 to October 2016.
- D. In Akumal Bay and Tulum, delta 15-N values fluctuated considerably across the three measurements made from October 2016 to October 2017.

ID: eef2497c Answer

Correct Answer: D

Rationale

Choice D is the best answer because it describes data from the table that support the underlined conclusion. The text accompanying the table states that delta 15-N values (a measure of the ratio of two nitrogen isotopes) can be used as an indirect means of measuring the ratio of human wastewater to water from uncontaminated sources—the higher the delta 15-N values, the

greater the presence of human wastewater. The text goes on to mention an experiment conducted by Camacho-Cruz and colleagues measuring delta 15-N values in seagrass on the Yucatan peninsula at several sites, four of which are presented in the table accompanying the text. Two of the sites noted in the table, Akumal Bay and Tulum, had intermediate tourism development, and two others, Mahahual and Xahuayxol, had low tourism development. It is reasonable to infer that sites with intermediate tourism have a greater human presence than those with low tourism and therefore are subject to greater amounts of wastewater and exhibit higher delta 15-N values in seagrass. However, Camacho-Cruz and colleagues found that the increase in delta 15-N values was not constant. The table supports this conclusion because the two intermediate-tourism sites (Akumal Bay and Tulum) had delta 15-N values that fluctuated considerably—both had higher delta 15-N values than the two low-tourism sites (Mahahual and Xahuayxol) in October 2016 and October 2017, but in February 2017 the delta 15-N values for the intermediate-tourism sites dropped significantly (in fact, Mahahual, a low-tourism site, had a higher delta 15-N value for that period). The fluctuations in values in Akumal Bay and Tulum support the conclusion that these sites experienced influxes of human wastewater intermittently.

Choice A is incorrect because it inaccurately describes data from the table: in February 2017 the delta 15-N value in Akumal Bay was higher than the delta 15-N value in Xahuayxol, not lower. Choice B is incorrect because the absence of data for delta 15-N levels in Akumal Bay in February 2016 would neither prove nor disprove that the presence of human wastewater at Akumal Bay and Tulum was not constant. Despite the unavailable data, there is still enough information to conclude that delta 15-N levels at both sites fluctuated significantly and that influxes of human wastewater therefore happened intermittently. Choice C is incorrect because a constancy in delta 15-N values would not indicate that the influx of human wastewater was intermittent, but rather the opposite. Moreover, the two periods selected are not indicative of general trends in the whole table (for example, the values fluctuated significantly in Akumal Bay between February 2017 and October 2017, and in Tulum between October 2016 and February 2017).

Question Difficulty: Hard

Question ID 5a998dbe

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 5a998dbe

Matthew D. Rocklage and team examined whether consumer ratings of movies can predict box office success. The team considered both numeric star ratings and written reviews in their research. To analyze the written reviews, the team measured the emotionality—the degree to which a written review expresses an emotional reaction—of user reviews on a movie rating website, assigning each review an emotionality score. After reviewing this research, a student argues that the emotionality of movie reviews is unrelated to a movie’s success at the box office.

Which finding, if true, would most directly weaken the student’s conclusion?

- A. Movies that had the highest average emotionality scores received the lowest average star ratings on the movie rating website.
- B. The average emotionality score of a movie’s reviews was a positive predictor of that movie’s box office earnings.
- C. More than half of the movies that the team examined received an average star rating of 3 out of 5 stars.
- D. The movies that were most successful at the box office tended to have high average star ratings.

ID: 5a998dbe Answer

Correct Answer: B

Rationale

Choice B is the best answer. This choice weakens the student’s conclusion by suggesting that the emotionality of movie reviews is related to box office success: the higher the emotionality score, the better the movie performs at the box office.

Choice A is incorrect. While this choice does mention emotionality scores, it only connects them to star ratings, not to box office success. Choice C is incorrect. The fact that many movies received an average star rating doesn’t tell us anything about the relationship between emotionality and box office success. Choice D is incorrect. While this choice suggests that star ratings can predict box office success, it doesn’t address the issue of emotionality in written reviews, which is the focus of the student’s conclusion.

Question Difficulty: Hard

Question ID 2251bf77

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 2251bf77

The linguistic niche hypothesis (LNH) posits that the exotericity of languages (how prevalent non-native speakers are) and grammatical complexity are inversely related, which the LNH ascribes to attrition of complex grammatical rules as more non-native speakers adopt the language but fail to acquire those rules. Focusing on two characteristics that are positive indices of grammatical complexity, fusion (when new phonemes arise from the merger of previously distinct ones) and informativity (languages’ capacity for meaningful variation), Olena Shcherbakova and colleagues conducted a quantitative analysis for more than 1,300 languages and claim the outcome is inconsistent with the LNH.

Which finding, if true, would most directly support Shcherbakova and colleagues’ claim?

- A. Shcherbakova and colleagues’ analysis showed a slightly negative correlation between grammatical complexity and fusion and between grammatical complexity and informativity.
- B. Shcherbakova and colleagues’ analysis showed a slightly negative correlation between grammatical complexity and exotericity.
- C. Shcherbakova and colleagues’ analysis showed a slightly positive correlation between grammatical complexity and fusion.
- D. Shcherbakova and colleagues’ analysis showed a slightly positive correlation between fusion and exotericity and between informativity and exotericity.

ID: 2251bf77 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents a finding that, if true, would support Shcherbakova and colleagues’ claim that the outcome of their study is inconsistent with the linguistic niche hypothesis (LNH). The text explains that the LNH holds that there is an inverse relationship between the prevalence of non-native speakers of a language (exotericity) and the grammatical complexity of that language—that is, that as the number of non-native speakers increases, grammatical complexity decreases, and vice versa. According to the text, Shcherbakova and colleagues focused on two positive indications of grammatical complexity—fusion and informativity—and analyzed their occurrence in over 1,300 languages. If the researchers found a slightly positive correlation between fusion and exotericity and between informativity and exotericity—meaning that to some extent, grammatical complexity increases as the number of non-native speakers of a language increases—their outcome would not be consistent with the assumption that exotericity and grammatical complexity are inversely related (the LNH).

Choice A is incorrect because it wouldn’t be possible to say that a finding of a slightly negative correlation between grammatical complexity and both fusion and informativity is inconsistent or consistent with the LNH, since the finding would address only grammatical complexity (given that fusion and informativity are aspects of grammatical complexity) and wouldn’t move beyond that factor to address its relationship to the prevalence of non-native speakers of a language (exotericity), which is the relationship the LNH focuses on. Choice B is incorrect because a finding of a slightly negative correlation between grammatical complexity and the prevalence of non-native speakers of a language (exotericity)—meaning that as the number of non-native

speakers increases, grammatical complexity somewhat decreases, and vice versa—would be consistent, not inconsistent, with the LNH, since the text indicates that according to the LNH, there is an inverse relationship between grammatical complexity and exotericity; a negative correlation reflects an inverse relationship. Choice C is incorrect because it wouldn't be possible to say that a finding of a slightly positive correlation between grammatical complexity and fusion is inconsistent or consistent with the LNH, since the finding would address only grammatical complexity (given that fusion is a positive indication of grammatical complexity) and wouldn't move beyond that factor to address its relationship to the prevalence of non-native speakers of a language (exotericity), which is the relationship the LNH focuses on.

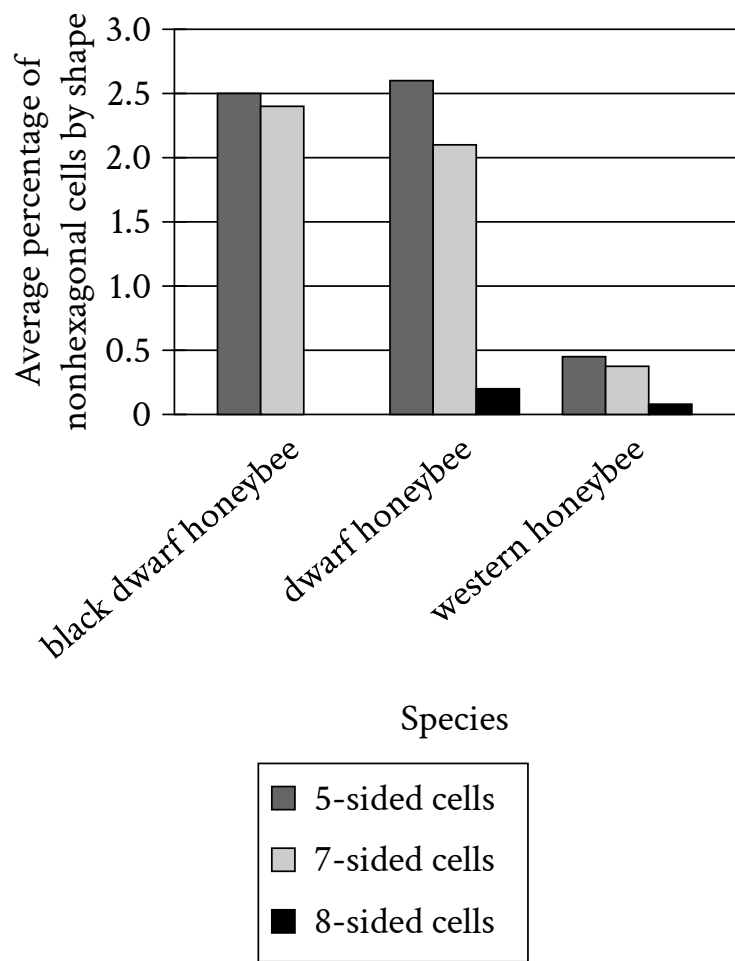
Question Difficulty: Hard

Question ID 09e6e4f4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 09e6e4f4

Percentage of Nonhexagonal Cells in Hives of Three Honeybee Species



Honeybee hives consist mainly of hexagonal (six-sided) units called cells, in which queens lay eggs. Hexagonal cells for eggs that develop into nonreproductive workers are smaller than those for eggs that develop into reproductive drones, though the size difference varies by species. Difference in cell size results in a construction problem—it’s hard to neatly connect sections of small cells to sections of large cells—that worsens as the difference increases. To fill in gaps between the sections when building a hive, bees rely on cells that have more or fewer than six sides. A student studying beehive structure consults data on three species, concluding that _____

Which choice most effectively uses data from the graph to complete the student’s conclusion?

- A. cells for worker eggs are probably closer in size to cells for drone eggs in the hives of the western honeybee than in the hives of the dwarf honeybee and the black dwarf honeybee.

- B. both the western honeybee and the black dwarf honeybee probably reserve eight-sided cells for drone eggs, while the dwarf honeybee likely deposits drone eggs in seven-sided cells.
- C. the western honeybee probably relies on many more geometrical shapes when constructing cells than either the dwarf honeybee or the black dwarf honeybee does.
- D. the percentage of hexagonal cells is probably slightly lower in the hives of the western honeybee than in the hives of the dwarf honeybee and the black dwarf honeybee.

ID: 09e6e4f4 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most effectively uses data from the graph to complete the student's conclusion about beehive structure. The text explains that in the hives of honeybees, the hexagonal cells housing drone eggs are larger than the hexagonal cells housing worker eggs, and that this size difference results in a construction problem that the bees address by using nonhexagonal cells to fill gaps between sections of drone-egg cells and worker-egg cells. The text also states that the size difference between drone-egg cells and worker-egg cells varies by species of honeybee. The graph displays data on the percentage of nonhexagonal cells in the hives of three species. In the hives of the western honeybee, the percentages of five-sided, seven-sided, and eight-sided cells are all less than 0.5%. But in the hives of the black dwarf honeybee, the percentages of five-sided and seven-sided cells are higher than those for the western honeybee: about 2.5% for both. And for the dwarf honeybee, the percentages of five-sided and seven-sided cells are also higher than those for the western honeybee: slightly over 2.5% and slightly over 2.0%, respectively; additionally, the dwarf honeybee possesses a higher percentage of eight-sided cells than the western honeybee does. Taken altogether, the graph shows that the hives of the western honeybee consist of a smaller percentage of nonhexagonal cells than the hives of the two other species do. Since the nonhexagonal cells exist only to solve the construction problem arising from the difference in size between drone-egg cells and worker-egg cells, a smaller percentage of nonhexagonal cells would be associated with a smaller size difference between the two types of cells. Therefore, it can be concluded from the data that worker-egg cells are probably closer in size to drone-egg cells in the hives of the western honeybee than in the hives of the other two species.

Choice B is incorrect because, as the text states, honeybee species deposit their eggs in hexagonal cells, not in nonhexagonal ones. Thus, the western honeybee and black dwarf honeybee wouldn't deposit drone eggs in eight-sided cells, and the dwarf honeybee wouldn't deposit drone eggs in seven-sided cells. Choice C is incorrect. The text explains that honeybees rely mainly on one geometric shape, the hexagon, when constructing their hives, and the graph shows that the western honeybee relies on the same nonhexagonal shapes as the dwarf honeybee does: five-sided, seven-sided, and eight-sided cells. In other words, the western honeybee and dwarf honeybee rely on the same number of geometric shapes. For the black dwarf honeybee, the graph displays data only for five-sided and seven-sided cells, which suggests a total absence of eight-sided cells. Yet this would be only one less nonhexagonal shape than is seen in the western honeybee. Thus, based on the graph, it would be inaccurate to say that the western honeybee relies on "many more" geometrical shapes than the other two species do. Choice D is incorrect. As the text explains, honeybee hives consist mainly of hexagonal cells, and sections of nonhexagonal cells are used to connect sections of hexagonal cells of different sizes. Since the graph indicates that the percentage of nonhexagonal cells is lower for the western honeybee than it is for the dwarf honeybee or black dwarf honeybee, the western honeybee would conversely have a *higher* percentage of hexagonal cells than the either the dwarf honeybee or black dwarf honeybee does, not a lower percentage.

Question Difficulty: Hard

Question ID 3241cbb1

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 3241cbb1

Born in Chile in 1917, artist and ethnomusicologist Violeta Parra was a pioneer in the *nueva canción chilena* (Chilean New Song) movement that emerged in the late 1950s and then spread throughout Latin America, Portugal, and Spain as *nueva canción*. Parra traveled all over Chile compiling extensive records of authentic folk music as well as recipes, proverbs, and other facets of cultural history. These records formed the foundation for the early movement’s revival of traditional Chilean folk forms in new songs that represented modern realities of the working class and strongly advocated for social change. As the movement spread beyond Chile, the breadth of musical traditions incorporated into its foundation also expanded.

Which detail about songs associated with *nueva canción*, if true, would best illustrate the underlined claim?

- A. Many feature political commentary addressing contemporary issues that stemmed from shared experiences of European colonization in Latin American countries.
- B. Many demonstrate the stylistic influence of *corrido*, a genre of narrative songs from Mexico that had come to be characterized by political themes in the early 1800s.
- C. Many were written with parts meant to be played on the *quena*, a traditional flute used across Andean countries, including Chile.
- D. Many were produced by Argentinian artists in the late 1950s, with others by artists in additional Latin American countries first emerging soon after.

ID: 3241cbb1 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents a detail that, if true, would most effectively illustrate the underlined claim that as *nueva canción* spread beyond Chile, the breadth of musical traditions incorporated into its foundation also expanded. The text explains that the movement was initially founded on traditional Chilean folk forms compiled by Parra, so if many *nueva canción* songs demonstrate the stylistic influence of *corrido*—a Mexican narrative song genre—that would show that a musical tradition originating outside Chile became part of the movement’s foundation, directly illustrating the text’s claim about how the breadth of *nueva canción* expanded.

Choice A is incorrect because the finding addresses lyrical content—political commentary on issues stemming from European colonization—rather than musical traditions. Even if *nueva canción* songs across different countries share political themes, that doesn’t indicate that new musical forms or styles were incorporated into the movement’s foundation. Thematic content is distinct from the musical traditions that songs draw on stylistically. Choice C is incorrect because the *quena* is described as a “traditional flute used across Andean countries, including Chile,” meaning it’s part of the Chilean folk tradition that underpinned *nueva canción* at its origin. Use of the *quena* therefore wouldn’t illustrate the incorporation of musical traditions beyond those that founded the early movement in Chile. Choice D is incorrect because the finding establishes only that artists in additional Latin American countries produced *nueva canción* songs, not that those artists incorporated musical traditions from their own countries into the

movement. Artists in other countries could still have been drawing on the same Chilean folk forms that originally founded the movement, so geographic spread alone doesn't illustrate an expansion of musical traditions.

Question Difficulty: Hard

Question ID f2af6ee6

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: f2af6ee6

North American Thrasher Mean Bill Size and Habitat Temperature Range

Species	Mean bill surface area (cm ²)	Mean maximum temperature of warmest month (°C)	Mean minimum temperature of coldest month (°C)
Brown thrasher	1.86	30.40	-4.29
Bendire's thrasher	1.98	36.57	0.24
Long-billed thrasher	2.24	35.27	8.82
Cozumel thrasher	2.28	33.27	18.21
Ocellated thrasher	3.26	27.56	5.45

It has been hypothesized that since birds can dissipate excess heat through their bills, bill size should increase with habitat temperature. To evaluate this hypothesis for a 2021 study, Charlotte Probst and colleagues gathered data on mean bill surface area of species of North American thrashers (genus: *Toxostoma*) as well as on climate conditions of the birds' native habitats. Based on their data, Probst and colleagues concluded that the hypothesis was not fully supported.

Which choice most effectively uses data from the table to support Probst and colleagues' conclusion?

- A. Although the Bendire's thrasher has one of the smallest mean bill surface areas of the birds included in the table, its habitat has one of the lowest mean maximum temperatures in the warmest month and one of the lowest mean minimum temperatures in the coldest month.
- B. Although the Cozumel thrasher has the second greatest mean bill surface area of the birds included in the table, its habitat's mean temperature in the warmest month is significantly higher than that of the other birds' habitats.
- C. Of the birds included in the table, the brown thrasher has the smallest mean bill surface area and the habitat with the lowest mean minimum temperature in the coldest month, while the long-billed thrasher has the second-largest mean bill surface area and the habitat with the second-highest mean minimum temperature in the coldest month.
- D. Of the birds included in the table, the ocellated thrasher has the largest mean bill surface area and the habitat with the lowest mean maximum temperature in the warmest month, while the Bendire's thrasher has the second smallest mean bill surface area and the habitat with the highest mean maximum temperature in the warmest month.

ID: f2af6ee6 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most effectively uses data from the table to support Probst and colleagues' conclusion about the hypothesis regarding the relationship between birds' bill size and habitat temperature. The text states that although it has been hypothesized that birds' bill size should increase with habitat temperature (an adaptation that reflects the fact that birds can release excess heat through their bills), Probst and colleagues concluded after studying mean bill surface area in North American thrashers that this hypothesis was not fully supported. In other words, Probst and colleagues did not observe the predicted positive relationship between mean bill surface area and habitat temperature in the thrashers they studied. The data in the table about the ocellated thrasher support Probst and colleagues' conclusion because this species has the greatest mean bill surface area (3.26 cm^2), but its habitat has the lowest mean maximum temperature in the warmest month (27.56°C). If the hypothesis were fully supported, species such as the ocellated thrasher that have colder habitats would likely also have smaller bills. Similarly, the data about the Bendire's thrasher support Probst and colleagues' conclusion because this species has the second-smallest mean bill surface area (1.98 cm^2), yet its habitat has the highest mean maximum temperature in the warmest month (36.57°C). If the hypothesis were fully supported, the Bendire's thrasher and other species with warmer habitats would also have larger bills. Because data in the table show that the ocellated thrasher and the Bendire's thrasher have the opposite or near opposite of the hypothesized relationship between bill size and habitat temperature, these examples support Probst and colleagues' conclusion that this hypothesis isn't fully supported.

Choice A is incorrect because it misrepresents the data in the table. Although the Bendire's thrasher has the second-smallest mean bill surface area of the species that are included in the table and although its habitat has the second-lowest mean minimum temperature in the coldest month, this habitat has the highest (rather than the lowest) mean maximum temperature in the warmest month. Moreover, the data about this species' bill surface area and mean minimum temperature suggest that smaller bills are associated with colder habitats, supporting rather than challenging the hypothesis that bill size increases with habitat temperature. Choice B is incorrect because it misrepresents the data in the table. Although the Cozumel thrasher has the second-greatest mean bill surface area of the species that are included in the table, its habitat's mean maximum temperature in the warmest month is not "significantly higher" than the mean maximum temperatures of the other habitats. On the contrary, the mean maximum temperature of the Cozumel thrasher's habitat is lower than that observed for the habitats of both the Bendire's thrasher and the long-billed thrasher. Choice C is incorrect because it misrepresents the data in the table. Although this choice accurately describes the brown thrasher's mean bill surface area and habitat temperature, it incorrectly states that the long-billed thrasher has the second-largest (rather than the third-largest) mean bill surface area of the species included. In addition, instead of revealing a lack of support for the hypothesis that bill size increases with habitat temperature, the data in this choice broadly reflect the hypothesized relationship.

Question Difficulty: Hard

Question ID 55ec9d0d

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 55ec9d0d

Many insects are iridescent, or have colors that appear to shimmer and change when seen from different angles. Scientists have assumed that this feature helps to attract mates but could also attract predators. But biologist Karin Kjernsmo and a team had the idea that the shifting appearance of colors might actually make it harder for other animals to see iridescent insects. To test this idea, the team put beetle forewings on leaves along a forest path and then asked human participants to look for them. Some of the wings were naturally iridescent. Others were painted with a nonchanging color from the iridescent spectrum, such as purple or blue.

Which finding, if true, would most directly support the team’s idea?

- A. On average, participants found most of the purple wings and blue wings and far fewer of the iridescent wings.
- B. On average, participants found the iridescent wings faster than they found the purple wings or blue wings.
- C. Some participants reported that the purple wings were easier to see than the blue wings.
- D. Some participants successfully found all of the wings on the leaves.

ID: 55ec9d0d Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents the finding that, if true, would most strongly support the research team’s idea about the effect of iridescence, or colors that appear to shimmer and change. The text indicates that although some scientists have assumed that iridescence could attract predators, Kjernsmo’s team wondered if iridescent insects might be harder for other animals to see. The team tested this idea by asking human participants to look for both iridescent beetle wings and beetle wings that weren’t iridescent but that had been painted colors such as purple or blue. If participants located most of the purple or blue wings but far fewer of the iridescent wings, that finding would support the team’s idea since it would suggest that noniridescent wings are easier to see than iridescent wings.

Choice B is incorrect because if participants located the iridescent wings more quickly than the purple or blue wings, that finding would weaken the team’s idea, not support the team’s idea, since it would suggest that the iridescent wings were easier to see than the noniridescent wings. Choice C is incorrect because finding that some participants believed that the purple wings were easier to see than the blue wings would be irrelevant to the team’s idea. The purple and blue wings were both noniridescent, so any difference in how easy those two colors were to see would have nothing to do with the idea that iridescent insects are harder to see than noniridescent insects. Choice D is incorrect because if some participants found all the wings, that wouldn’t support the team’s idea that iridescent insects may be harder to see than noniridescent insects. If anything, this finding might weaken the team’s idea since it could suggest that iridescence had no effect on how difficult the wings were to see.

Question Difficulty: Hard

Question ID e7390407

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: e7390407

Many music streaming services also function as social media platforms: by giving users the option to follow friends and share curated playlists or information about their listening history, these platforms allow people to convey their music preferences and listening activities directly to their social networks. In a 2023 study, researcher Michael James Walsh interviewed frequent users of a popular music streaming platform to investigate how its social media dimensions shape their listening habits. Walsh found that these dimensions tended to make study participants feel more mindful of how their listening activities may be perceived, which in turn influenced how they managed those activities.

Which quotation from a music streaming platform user would best illustrate Walsh’s finding?

- A. “When I create playlists or choose songs to listen to, I often pick songs that I think the friends who are following me might be interested in listening to, rather than what I might actually prefer listening to in that moment.”
- B. “Because the predictions the platform makes about what new songs I might like depend on my past listening habits, at times its recommendations can feel overly repetitive and unvarying.”
- C. “The social aspects of music streaming make it really easy to create a sense of a shared listening experience with my friends, even if we aren’t in the same room.”
- D. “Listening to music through a streaming platform feels a lot more passive, since I don’t need to make any deliberate choices about what music I’m going to consume, like I do when buying digital downloads or records and CDs.”

ID: e7390407 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it directly reflects both aspects of Walsh’s finding about the social media dimensions of music streaming platforms: that they make their users more mindful of how their listening activities may be perceived and that self-awareness then influences how users manage those activities. The quotation illustrates this by showing that the user considers the music preferences of their followers when selecting music (“songs that I think the friends who are following me might be interested in”), even if those choices differ from their own preferences (“rather than what I might actually prefer listening to in that moment”). This supports both aspects of Walsh’s finding: users have increased social awareness and deliberately change their listening habits based on that awareness.

Choice B is incorrect because it focuses on how the platform’s algorithmic recommendation system influences user choice, not on how the imagined opinions of other users might influence that choice. The quotation highlights a user’s concern about repetitive music recommendations based on their past listening behavior. It does not suggest that the user is adjusting their listening habits based on how they think others may perceive what they listen to. Choice C is incorrect because it focuses on the social connection that can be created by music streaming rather than illustrating how social awareness affects users’ management of their listening activities. While this quotation addresses the social dimensions of streaming platforms, it describes how these features create shared experiences rather than demonstrating how concern about others’ perceptions

influences users' listening choices. Choice D is incorrect because it compares streaming platforms to traditional music purchasing methods. This comparison doesn't address the social media dimensions of streaming platforms or how awareness of others' perceptions of music selections influences what users choose to listen to.

Question Difficulty: Hard

Question ID 72e668fa

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 72e668fa

Neurobiologists Laura Cuaya, Raúl Hernández-Pérez, and colleagues investigated the language detection abilities of eighteen dogs. The researchers monitored the brain activity of Joey (an Australian shepherd), Mini (a mixed breed), and other dogs while the animals listened to three recordings: one of *The Little Prince* being read in Spanish, the second in Hungarian, and a third made up of short, randomly selected fragments of the first two, scrambled so that they didn't resemble human speech. Each dog was familiar with either Spanish or Hungarian, but not both. The team concluded that differences in dogs' anatomical features may affect their ability to distinguish speech from nonspeech.

Which finding from the study, if true, would most directly support the team's conclusion?

- A. Long-headed dogs accustomed to hearing Spanish tended to show more brain activity when hearing Spanish than long-headed dogs accustomed to hearing Hungarian showed when hearing Hungarian.
- B. Compared with shorter-headed dogs, longer-headed dogs showed a greater difference in brain activity when hearing either Spanish or Hungarian than when hearing the scrambled recording.
- C. The pattern of brain activity that long-headed dogs showed when hearing the scrambled recording was different from the pattern of brain activity that short-headed dogs showed when hearing the language they were accustomed to.
- D. Compared with shorter-headed dogs, longer-headed dogs showed a greater difference in brain activity when hearing the language they were accustomed to than when hearing the other language.

ID: 72e668fa Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents a finding that, if true, would most directly support the research team's conclusion about anatomical features and speech detection in dogs. The text explains that a team of researchers monitored the brain activity of dogs while the dogs listened to three recordings: one of spoken Spanish, one of spoken Hungarian, and one of scrambled fragments that weren't recognizable as human speech. The text then states that the team concluded that differences in dogs' anatomical features may affect their ability to distinguish speech from nonspeech. The finding that longer-headed dogs exhibited a greater difference in brain activity when listening to the speech recordings (in Spanish or Hungarian) versus the nonspeech (scrambled) recording compared with shorter-headed dogs would establish an association between an anatomical feature (head length) and responses (as measured by brain activity) to speech versus nonspeech. This observed relationship between head length and brain activity patterns during exposure to speech and nonspeech would support the team's conclusion.

Choice A is incorrect because it describes a finding about dogs' responses (as indicated by brain activity) to hearing their respective familiar languages rather than dogs' ability to distinguish speech from nonspeech, which is what the team's conclusion specifically addresses. Moreover, this finding pertains to only one anatomical type (long-headed dogs), so it wouldn't support the conclusion that anatomical differences may affect dogs' ability to distinguish speech from nonspeech. Choice C is incorrect because it describes a finding involving a comparison between long-headed dogs listening to nonspeech and short-headed dogs

listening to speech, which wouldn't provide enough information to support the researchers' conclusion that anatomical differences may affect dogs' ability to distinguish speech from nonspeech. To support that conclusion, the finding would need to show how dogs with different anatomical features (for example, long-headed and short-headed dogs) respond to recordings of speech as well as recordings of nonspeech. Choice D is incorrect because it describes a finding about dogs' ability to distinguish between a familiar language and an unfamiliar one, not between speech and nonspeech. While this finding does compare dogs with different anatomical features (longer-headed vs. shorter-headed ones), it focuses on language recognition (Spanish vs. Hungarian) rather than the ability to distinguish speech from nonspeech, which is what the team's conclusion specifically addresses.

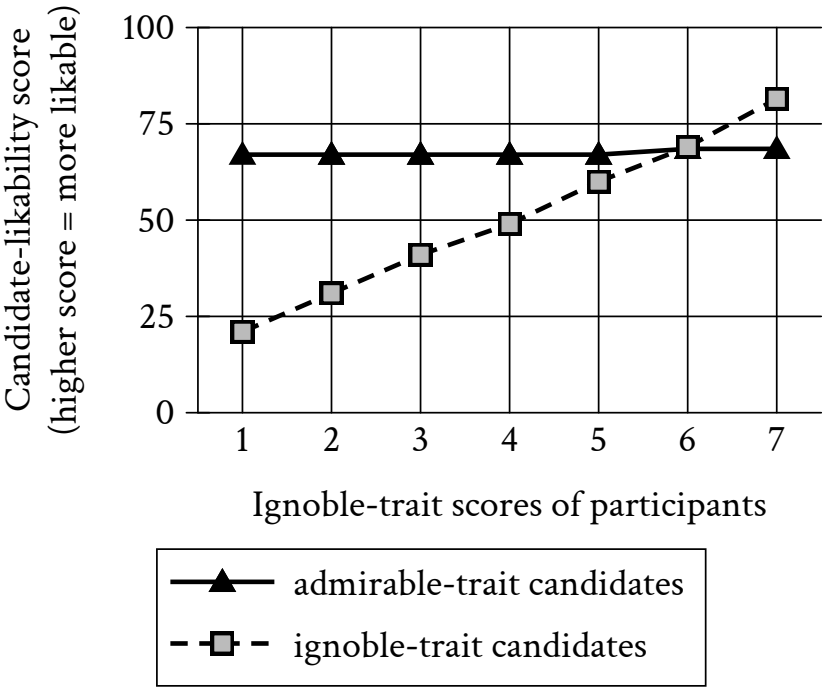
Question Difficulty: Hard

Question ID cd72ffd4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div></div> <div></div> <div></div>

ID: cd72ffd4

Participants' Likability Ratings for
Candidates by Candidates' Traits
and Participants' Ignoble-Trait Scores



Alessandro Nai et al. presented study participants with vignettes about fictive political candidates, portraying them as embodying a personality trait widely considered admirable (e.g., agreeableness) or one considered ignoble (e.g., cynicism). A survey recorded participants' ratings of the candidates' likability and showed that across participants, ignoble-trait candidates were less likable than admirable-trait candidates. However, when the researchers factored in the participants' own personality-trait scores, on a scale of 1 (least ignoble) to 7 (most ignoble), they concluded that this relative ranking of candidates persisted except among the participants with high ignobility scores.

Which choice best describes data from the graph that support the researchers' conclusion?

- A. There was a strong positive correlation between participants' ignobility scores and admirable-trait candidates' likability ratings, but there was no correlation between ignobility scores and ignoble-trait candidates' likability ratings.
- B. Participants with an ignobility score of 5 or less rated admirable-trait candidates as more likable than ignoble-trait candidates, whereas participants with an ignobility score of 6 or more rated ignoble-trait candidates as equally likable as or even more likable than admirable-trait candidates.
- C. Overall, participants rated admirable-trait candidates as quite likable, and that rating was not significantly affected by the participants' ignobility scores.

D. Unlike participants with an ignobility score of 6, participants with an ignobility score either greater or less than 6 gave admirable-trait candidates and ignoble-trait candidates different likability ratings.

ID: cd72ffd4 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it describes data from the graph that support the researchers' conclusion that the trend of admirable-trait candidates being rated as more likable than ignoble-trait candidates held true when participants' own personality-trait scores were factored in, except among participants with high ignobility scores. The values on the x-axis represent survey participants grouped by their own ignobility scores, from low ignobility (1) to high ignobility (7), while the values on the y-axis represent the likability scores given to the political candidates. The graph shows that the full range of participants (from least to most ignoble) gave the admirable-trait candidates (represented by the line with triangles) a likability rating of approximately 70 out of 100; that is, regardless of their own level of ignobility, participants generally found admirable-trait candidates quite likable. However, the graph shows that participants varied in their views of ignoble-trait candidates (represented by the line with squares); likability ratings increased as the participants' own ignobility scores increased. Participants with low to medium-high ignobility scores (1 to 5) still rated the ignoble-trait candidates as less likable than the admirable-trait candidates, with all ratings falling below approximately 70, but participants with high ignobility scores (6 and 7) gave ratings equal to or higher than approximately 70. In other words, the previously observed trend of ranking admirable-trait candidates as more likable than ignoble-trait candidates persisted for participants with low to medium-high ignobility but not for participants with high ignobility.

Choice A is incorrect because it describes the opposite of what the graph shows. The graph shows a positive correlation between participants' ignobility scores and ignoble-trait candidates' likability ratings (as participants' ignobility scores increased, so did their ratings for ignoble-trait candidates' likability) and no correlation between ignobility scores and admirable-trait candidates' likability ratings (all participants gave admirable-trait candidates a rating of approximately 70 out of 100). Choice C is incorrect. The graph does show that regardless of their own ignobility scores, participants rated admirable-trait candidates as quite likable (a rating of approximately 70 out of 100). However, this doesn't support the researchers' conclusion because the conclusion has to do with how participants rated both types of candidates, not just the admirable-trait ones; moreover, the conclusion is that relative ratings were actually affected by the participants' ignobility scores. Choice D is incorrect. The graph does show that only participants with an ignobility score of 6 gave the same likability score to both admirable- and ignoble-trait candidates while participants with other ignobility scores gave a different rating for each candidate, but this doesn't support the researchers' conclusion. The conclusion isn't just that participants gave different ratings to the two types of candidates—it's that participants with low to medium-high ignobility scores specifically gave higher likability ratings to admirable-trait candidates than to ignoble-trait candidates and that participants with high ignobility scores didn't.

Question Difficulty: Hard

Question ID c5257fc8

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: c5257fc8

Fiber Characteristics of Mouflon, Navajo-Churro, and Spanish Merino Sheep

Type of sheep	Diameter of outer coat fibers (in microns)	Diameter of inner coat fibers (in microns)
Spanish Merino	19–24	17–21
Navajo-Churro	35 or higher	10–35
Mouflon	150	15

Domestic sheep’s wild ancestor, the mouflon, has a coarse outer coat and an inner coat of wool fiber that is finer in diameter and therefore much softer. In some domestic breeds, such as the Spanish Merino, the outer fiber is only marginally coarser than the inner, and the wool is soft overall. Thus, Merino wool is ideal for delicate garments worn against the skin. Meanwhile, the Navajo-Churro has been selected to retain the marked distinction between outer and inner fiber that the Merino has lost. Being coarser than Merino wool overall, Navajo-Churro wool yields a more durable yarn, which Diné (Navajo) weavers use in their celebrated rugs. Yet a comparison of the fiber characteristics of all three sheep reveals that _____

- Which choice most effectively uses data from the table to complete the text?
- A. the selection process that enabled the Navajo-Churro to retain its somewhat coarse outer fiber also resulted in inner fiber that, at its softest, is softer than either the mouflon’s or the Merino’s inner fiber.
 - B. the Navajo-Churro more closely resembles its ancestor, the mouflon, in the uniform softness of its inner fiber, while the Merino more closely resembles the mouflon in the variable diameter of its outer fiber.
 - C. domestication resulted in a counterintuitive increase in the inner fiber’s minimum diameter, making the inner fiber of the Merino and the Navajo-Churro less suitable for delicate garments than the mouflon’s inner fiber is.
 - D. the domestication of the mouflon and the subsequent selection process that produced the Merino and the Navajo-Churro resulted in greater softness of outer and inner fiber alike.

ID: c5257fc8 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it accurately uses data from the table to complete the statement about the fibers of three types of sheep. The text discusses some qualities of outer and inner fibers of mouflons, Spanish Merino sheep, and Navajo-Churro sheep and indicates that sheep fibers with finer, or smaller, diameters are softer than fibers with larger diameters. The text then sets up a conclusion that can be made by comparing the fibers of all three sheep types. The table shows that the minimum diameter of the Navajo-Churro’s inner fibers is 10 microns, which is smaller than the minimum diameters of the inner fibers of both the mouflon (15 microns) and the Spanish Merino (17 microns). Thus, comparing the fiber characteristics of all three sheep reveals that at its softest, the inner fiber of the Navajo-Churro is softer than either the mouflon’s or the Merino’s inner fiber.

Choice B is incorrect because it doesn't accurately describe the data in the table. The table shows that the softness of Navajo-Churro inner fiber isn't uniform (since the diameter of Navajo-Churro inner fiber ranges from 10 microns to 35 microns) and that the diameter of the outer fiber of the mouflon isn't variable (rather, it is a uniform 150 microns). Choice C is incorrect because it doesn't accurately describe the data in the table. The text indicates that both Spanish Merino sheep and Navajo-Churro sheep were domesticated from mouflon sheep. The table doesn't show that domestication increased the minimum diameter of inner fibers for both Spanish Merino sheep and Navajo-Churro sheep from the 15-micron diameter of mouflon inner fibers: the minimum diameter of Spanish Merino increased to 17 microns, but the minimum diameter of Navajo-Churro inner fibers *decreased* to 10 microns. Choice D is incorrect because it doesn't accurately describe the data in the table. The text explains that sheep fibers with finer, or smaller, diameters are softer than fibers with larger diameters. The table does show that Spanish Merino outer fibers are finer, and thus softer, than mouflon outer fibers and that at their finest, Navajo-Churro outer fibers are softer than mouflon outer fibers, but it also shows that Spanish Merino inner fibers are less soft than mouflon inner fibers, since their minimum diameter is greater than 15 microns, and that Navajo-Churro inner fibers can be less soft than mouflon inner fibers, since the diameter ranges up to 35 microns.

Question Difficulty: Hard

Question ID 7b580e38

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 7b580e38

In 1967 the US Congress created the Corporation for Public Broadcasting, which in turn created National Public Radio (NPR). NPR began producing and distributing high-quality news and cultural programming to affiliate stations across the United States in 1971. In a research paper, a student claims that the Corporation for Public Broadcasting and NPR were inspired by the British Broadcasting System (BBC), which had been established in the 1920s.

Which quotation from a work by a historian would be the most effective evidence for the student to include in support of this claim?

- A. "Although the BBC had begun as a private corporation, politicians successfully argued to make it a public company because they believed a public broadcaster could help build national unity in the aftermath of World War I."
- B. "For many decades, the BBC had no competition since it held Britain's only broadcasting license, whereas in the United States, the Corporation for Public Broadcasting launched NPR in a broadcasting market already filled with competitors."
- C. "Congress's embrace of publicly funded broadcasting reflected a common belief among US politicians that the role of government was not only to ensure people's safety and liberty but also to enrich people's lives in other ways."
- D. "The goal of the BBC was to support British democracy by promoting an informed citizenry, and US legislators believed that ensuring access to high-quality programming could do the same for democracy in the United States."

ID: 7b580e38 Answer

Correct Answer: D

Rationale

Choice D is the best answer because this quotation would be the most effective evidence to include in support of the claim that the Corporation for Public Broadcasting and NPR were inspired by the British Broadcasting System (BBC). The quotation states that the goal of the BBC was to support British democracy and that US legislators believed high-quality programming could accomplish the same goal for democracy in the United States. In other words, US legislators looked to the BBC as a model, taking direct inspiration from it when they created the Corporation for Public Broadcasting, which in turn created NPR.

Choice A is incorrect because this quotation provides historical information about the BBC, not information about the inspiration for the creation of the Corporation for Public Broadcasting and NPR. This quotation, therefore, is irrelevant to the student's claim that the BBC inspired the creation of the Corporation for Public Broadcasting, which in turn created NPR. Choice B is incorrect because this quotation contrasts the lack of competition faced by the BBC with the substantial competition faced by NPR, which has no bearing on the student's claim that the Corporation for Public Broadcasting and NPR were inspired by the BBC. Choice C is incorrect because this quotation focuses on a common belief among US politicians that inspired Congress's embrace of publicly funded broadcasting. The quotation doesn't say anything about the BBC and therefore doesn't support the claim that the BBC inspired Congress to create the Corporation for Public Broadcasting, which in turn created NPR.

Question Difficulty: Hard

Question ID 3dc4c39c

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 3dc4c39c

Percentage of Available Eggs Eaten by Cane Toad Tadpoles

Amphibian species (common name)	Percentage of eggs eaten	Native to Australia	Produces bufadienolide
Little red tree frog	1%	yes	no
Cane toad	90%	no	yes
Short-footed frog	7%	yes	no
Striped burrowing frog	10%	yes	no
Dainty green tree frog	1%	yes	no

Native to Latin America, the cane toad was introduced to Australia in the 1930s. In recent decades, tadpoles in the Australian population have been shown to consume eggs of their own species. A 2022 study showed that when presented with cane toad eggs as well as eggs of native Australian amphibians, cane toad tadpoles disproportionately consumed eggs of their own species. This behavior results from their attraction to bufadienolide, a chemical produced by the eggs of cane toads but not by the eggs of native amphibians. However, using data from this study, a student wishes to argue that the presence of bufadienolide doesn't entirely explain the cane toad tadpoles' preference for certain eggs over others.

Which choice best describes data from the table that support the student's argument?

- A. The tadpoles consumed a higher percentage of the striped burrowing frog eggs than they did of the eggs of the dainty green tree frog.
- B. The tadpoles left a certain percentage of the eggs of each of the five species unharmed, thus ultimately allowing them to hatch.
- C. The tadpoles consumed a lower percentage of the short-footed frog eggs than they did of the eggs of their own species.
- D. The tadpoles consumed the same percentage of the dainty green tree frog eggs as they did of the little red tree frog eggs.

ID: 3dc4c39c Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most effectively uses data from the table to support the student's argument about the role of bufadienolide in the egg preferences of cane toad tadpoles. For each of five amphibian species included in the 2022 study, the table gives the percentage of available eggs that the cane toad tadpoles ate. According to the table, the tadpoles ate 10% of striped burrowing frog eggs and 1% of dainty green tree frog eggs, which suggests a preference for striped burrowing frog eggs over dainty green tree frog eggs. The table also indicates that neither of these species' eggs produces bufadienolide. Thus, these

data suggest that something other than the presence or absence of bufadienolide is needed to adequately explain the tadpoles' egg preferences.

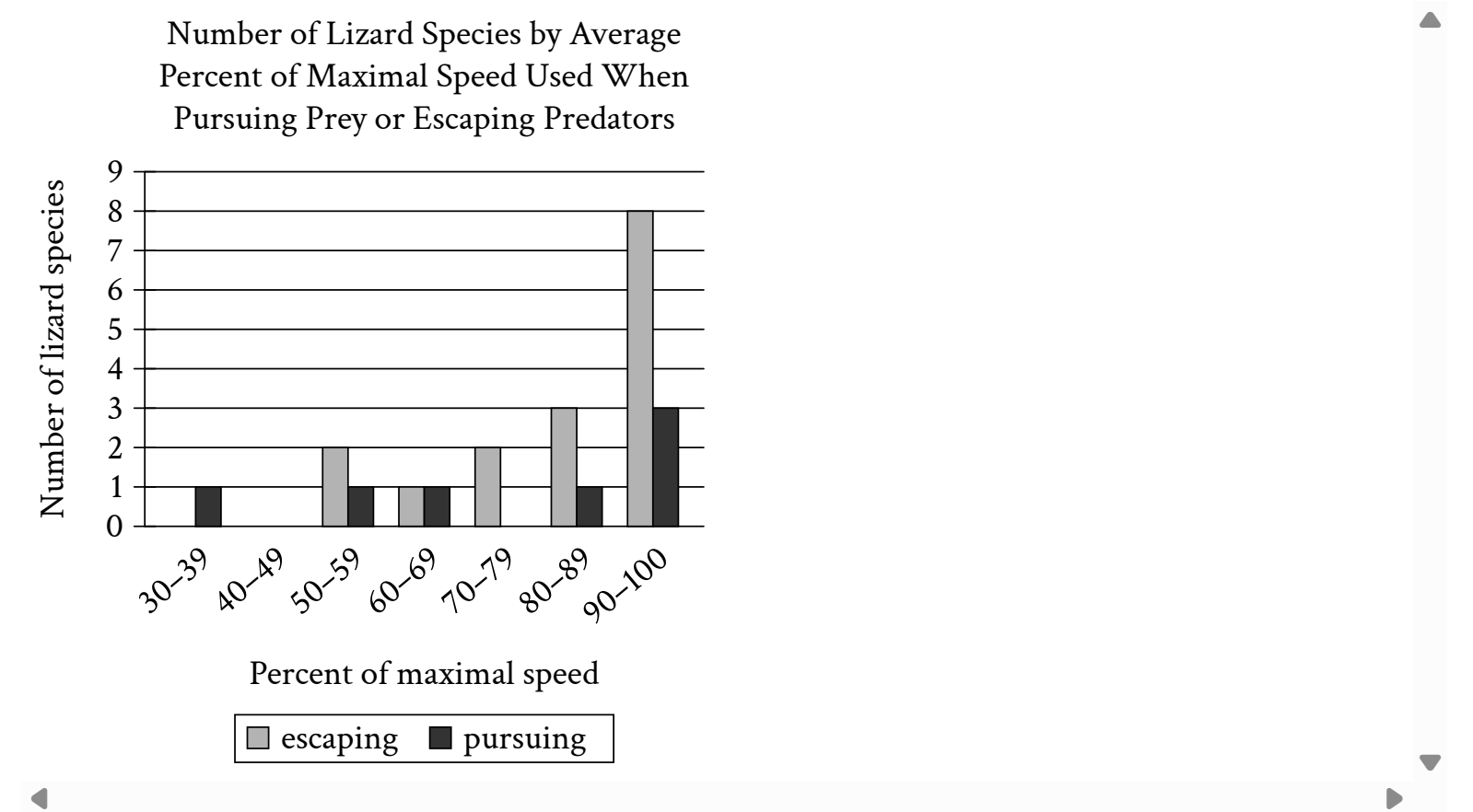
Choice B is incorrect. Although the table shows that for each of the five amphibian species, the cane toad tadpoles ate less than 100% of that species' eggs, which demonstrates that the tadpoles did indeed leave some eggs for each species unharmed, this fact alone is irrelevant to the tadpoles' preferences for some species' eggs over other species' eggs. Choice C is incorrect. Although the table indicates that the cane toad tadpoles ate 90% of the cane toad eggs and 7% of the short-footed frog eggs, which suggests that they prefer cane toad eggs over short-footed frog eggs, the table also indicates that cane toad eggs produce bufadienolide, whereas short-footed frog eggs do not. Therefore, these data are not sufficient to exclude that bufadienolide alone could explain the tadpoles' preference for some species' eggs over other species' eggs. Choice D is incorrect. Although the table shows that for both dainty green tree frog eggs and little red tree frog eggs, the cane toad tadpoles ate 1% of those species' eggs, it also indicates that neither produces bufadienolide. Thus, these data alone don't indicate bufadienolide's role in the tadpoles' egg preferences.

Question Difficulty: Hard

Question ID 08926a7f

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 08926a7f



It may seem that the optimal strategy for an animal pursuing prey or escaping predators is to move at maximal speed, but the energy expense of exploiting full speed capacity can disfavor such a strategy even in escape contexts, as evidenced by the fact that _____

- Which choice most effectively uses data from the graph to complete the text?
- A. most lizard species use about the same percentage of their maximal speed when escaping predation as they do when pursuing prey.
 - B. multiple lizard species move at an average of less than 90% of their maximal speed while escaping predation.
 - C. more lizard species use, on average, 90%–100% of their maximal speed while escaping predation than use any other percentage of their maximal speed.
 - D. at least 4 lizard species use, on average, less than 100% of their maximal speed while pursuing prey.

ID: 08926a7f Answer

Correct Answer: B

Rationale

Choice B is the best answer because it describes data from the graph that complete the text's discussion of lizard species' use of maximal speed when escaping predators. According to the text, moving at maximal speed (the highest speed possible) requires so much energy that it is not always an effective strategy for animals, even when they are escaping predators. The graph displays data on the average percent of maximal speed used by lizard species while either escaping predators or pursuing prey. The graph categorizes the data for both pursuing and escaping by the number of species using 30%–39% of maximal speed, 40%–49% of maximal speed, 50%–59% of maximal speed, 60%–69% of maximal speed, 70%–79% of maximal speed, 80%–89% of maximal speed, and 90%–100% of maximal speed, respectively. In the graph, there is at least one species in each of the following percent categories for maximal speed while escaping predators: 50%–59%, 60%–69%, 70%–79%, and 80%–89%. Thus, the data in the graph show that multiple lizard species move at an average of less than 90% of their maximal speed while escaping predation.

Choice A is incorrect because the data in the graph isn't organized in such a way that a comparison of the percentage of maximal speed used when escaping predation with the percentage used when pursuing prey is possible at the level of individual species. Choice C is incorrect. It is true that in the graph, the percent category with the largest number of species using maximal speed while escaping predators is 90%–100% (8 species total). However, these data don't complete the text, which is concerned instead with how animals are discouraged from using maximal speed even when escaping predators because of the amount of energy required to use it. Choice D is incorrect because these data from the graph pertain to maximal speed while pursuing prey and therefore don't complete the text's discussion of lizard species' use of maximal speed when escaping predators.

Question Difficulty: Hard

Question ID 3f902c47

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 3f902c47

Although most songbirds build open, cupped nests, some species build domed nests with roofs that provide much more protection. Many ecologists have assumed that domed nests would provide protection from weather conditions and thus would allow species that build them to have larger geographic ranges than species that build open nests do. To evaluate this assumption, a research team led by evolutionary biologist Iliana Medina analyzed data for over 3,000 species of songbirds.

Which finding from Medina and her colleagues’ study, if true, would most directly challenge the assumption in the underlined sentence?

- A. Species that build open nests tend to have higher extinction rates than species that build domed nests.
- B. Species that build open nests tend to be smaller in size than species that build domed nests.
- C. Species that build open nests tend to use fewer materials to build their nests than species that build domed nests do.
- D. Species that build open nests tend to have larger ranges than species that build domed nests.

ID: 3f902c47 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents a finding that, if true, would challenge the assumption that many ecologists have made about the connection between the building of domed nests and geographic range in songbirds. The text says that many ecologists have assumed that since domed nests provide protection from weather conditions, songbird species that build such nests should be able to have larger geographic ranges than songbird species that build open nests do. If Medina and her colleagues found that species that build open nests tend to have larger geographic ranges than species that build domed nests do, their finding would show the opposite of what the ecologists have assumed. It would therefore challenge the ecologists’ assumption.

Choice A is incorrect because nothing in the text suggests that there’s a relationship between songbird species’ extinction rates and their geographic ranges. The finding that species that build open nests tend to have higher extinction rates than species that build domed nests do would therefore have no clear bearing on the ecologists’ assumption that domed nests allow species that build them to have larger geographic ranges than those of species that build open nests. Choice B is incorrect because nothing in the text suggests that there’s a relationship between songbird species’ sizes and their geographic ranges. The finding that species that build open nests tend to be smaller in size than species that build domed nests are would therefore have no clear bearing on the ecologists’ assumption that domed nests allow species that build them to have larger geographic ranges than those of species that build open nests. Choice C is incorrect because although the text indicates that many ecologists have assumed that there’s a connection between how songbird species build their nests and the species’ geographic ranges, the text says that this assumption is based on the shape of the nests—that is, whether the nests are domed or open—not the number of materials used. The finding that species that build open nests tend to use fewer materials to build their nests than species that build domed nests

do would therefore have no clear bearing on the ecologists' assumption that domed nests allow species that build them to have larger geographic ranges than those of species that build open nests.

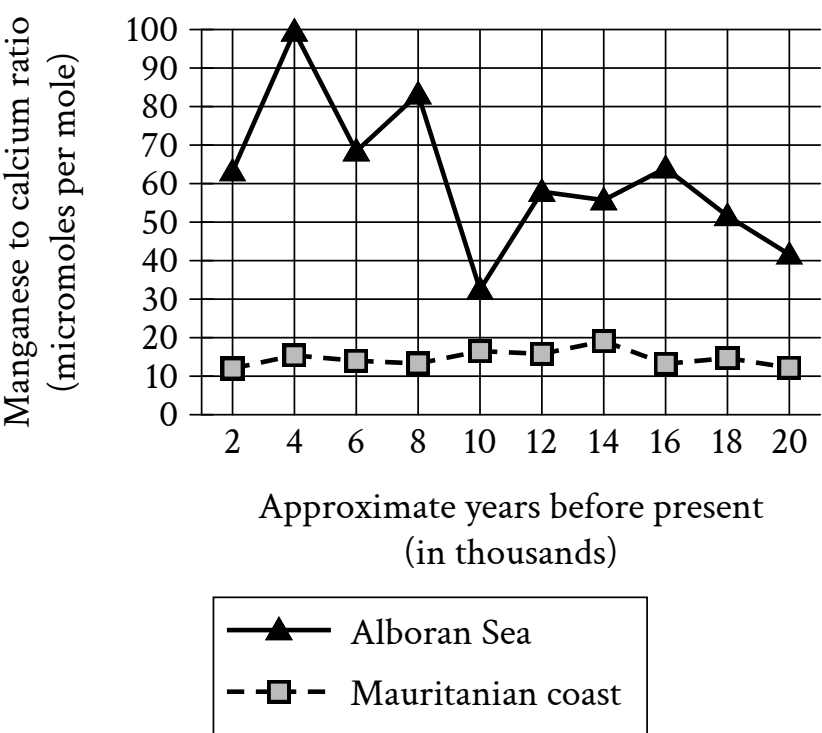
Question Difficulty: Hard

Question ID 93d7a644

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div></div> <div></div> <div></div>

ID: 93d7a644

Ratio of Manganese to Calcium in Samples from Alboran Sea and Mauritanian Coast



The population of the coral *Lophelia pertusa* declined significantly around 9,000 years ago in the Alboran Sea and around 11,000 years ago near the Mauritanian coast. Using the ratio of manganese to calcium, which inversely correlates with ocean oxygenation levels, marine scientist Rodrigo da Costa Portilho-Ramos and colleagues evaluated whether oxygenation played a role in the declines of *L. pertusa*. The researchers concluded that oxygenation may have been important in the Alboran Sea but not near the Mauritanian coast, since _____

- Which choice most effectively uses data from the graph to complete the statement?
- A. a substantial increase in oxygenation in the Alboran Sea corresponded with the local decline in *L. pertusa*, but the opposite relationship between oxygenation and *L. pertusa* was found near the Mauritanian coast.
 - B. *L. pertusa* declined in the Alboran Sea during a period of substantial local decline in oxygenation, but *L. pertusa* declined near the Mauritanian coast during a period of little local change in oxygenation.
 - C. oxygenation in the Alboran Sea was higher before the decline in *L. pertusa* than after the decline, whereas oxygenation near the Mauritanian coast was relatively low both before and after the decline in *L. pertusa*.

D. oxygenation in the Alboran Sea tended to be substantially higher than oxygenation near the Mauritanian coast during the period studied.

ID: 93d7a644 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it effectively uses data from the graph to complete the statement about Rodrigo da Costa Portilho-Ramos and colleagues' conclusion. The graph shows the ratio of manganese to calcium in *L. pertusa* coral samples from the Alboran Sea and the Mauritanian coast. The graph reflects time in approximate years before present: in other words, the greater the number in years noted on the graph's horizontal axis, the farther that moment is in the past. The text indicates that the researchers tested the samples to determine whether oxygenation played a role in the decline of *L. pertusa*. The text goes on to note that a change in the ratio of manganese to calcium would signal an inverse, or opposite, change in oxygenation. According to the graph, the ratio of manganese to calcium in samples from the Alboran Sea increased from about 30 micromoles per mole 10,000 years ago to about 80 micromoles per mole 8,000 years ago, which means that oxygenation decreased between 10,000 and 8,000 years ago. Meanwhile, there was almost no discernible change in the ratio of manganese to calcium in samples from the Mauritanian coast between 12,000 and 10,000 years ago. According to the text, the population of *L. pertusa* declined significantly around 9,000 years ago in the Alboran Sea and around 11,000 years ago near the Mauritanian coast. Thus, the increase in the ratio of manganese to calcium around 9,000 years ago in the Alboran Sea coincides with the decline in the *L. pertusa* population, suggesting an association between the decrease in oxygenation and the decline in population of the coral. No such relationship is suggested around 11,000 years ago near the Mauritanian coast. So, oxygenation likely played a role in the *L. pertusa* decline in the Alboran Sea but not in the coral's decline near the Mauritanian coast.

Choice A is incorrect because it asserts the opposite of what the graph indicates regarding oxygenation in the Alboran Sea, and it misrepresents what the graph indicates about oxygenation near the Mauritanian coast. The graph indicates that at the time of the decline in *L. pertusa* (approximately 9,000 years ago), the samples from the Alboran Sea contained a ratio of manganese to calcium that was increasing. According to the text, this ratio inversely correlates with ocean oxygenation levels, so if the ratio was increasing, oxygenation was decreasing, not substantially increasing. Furthermore, the graph shows that the ratio of manganese to calcium remained relatively stable in coral samples from the Mauritanian coast during the period studied, which suggests that there was no discernible relationship between oxygenation and the coral's population decline in that location, not that there was a substantial decrease in oxygenation corresponding to the coral's decline. Choice C is incorrect. Although the graph suggests that the level of oxygenation in the Alboran Sea was higher before the decline in *L. pertusa* than after—because the ratio of manganese to calcium inversely correlates with ocean oxygenation levels and this ratio was lower before the decline than after—the graph doesn't support the claim that oxygenation near the Mauritanian coast was consistently low before and after the coral's decline there. Rather, the graph indicates that relative to coral samples from the Alboran Sea, the ratio of manganese to calcium in samples from near the Mauritanian coast was consistently low, which suggests that oxygenation levels were relatively high both before and after the decline of *L. pertusa*. Choice D is incorrect because it states the opposite of what the graph indicates: the graph shows that throughout the period studied, the ratio of manganese to calcium was higher in coral samples from the Alboran Sea than it was in samples from near the Mauritanian coast. Since the text indicates that the ratio of manganese to calcium inversely correlates with ocean oxygenation levels, oxygenation in the Alboran Sea was therefore lower than, not higher than, oxygenation near the Mauritanian coast during the period studied. Moreover, even if choice D did accurately represent the graph, it wouldn't effectively complete the statement since a comparison of the ocean oxygenation levels at the two locations is not relevant to the claim that a decline in oxygenation levels was associated with the decline of *L. pertusa* in the Alboran Sea but not near the Mauritanian coast.

Question Difficulty: Hard

Question ID 856b0a5a

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 856b0a5a

Mosasaurs were large marine reptiles that lived in the Late Cretaceous period, approximately 100 million to 66 million years ago. Celina Suarez, Alberto Pérez-Huerta, and T. Lynn Harrell Jr. examined oxygen-18 isotopes in mosasaur tooth enamel in order to calculate likely mosasaur body temperatures and determined that mosasaurs were endothermic—that is, they used internal metabolic processes to maintain a stable body temperature in a variety of ambient temperatures. Suarez, Pérez-Huerta, and Harrell claim that endothermy would have enabled mosasaurs to include relatively cold polar waters in their range.

Which finding, if true, would most directly support Suarez, Pérez-Huerta, and Harrell’s claim?

- A. Mosasaurs’ likely body temperatures are easier to determine from tooth enamel oxygen-18 isotope data than the body temperatures of nonendothermic Late Cretaceous marine reptiles are.
- B. Fossils of both mosasaurs and nonendothermic marine reptiles have been found in roughly equal numbers in regions known to be near the poles during the Late Cretaceous, though in lower concentrations than elsewhere.
- C. Several mosasaur fossils have been found in regions known to be near the poles during the Late Cretaceous, while relatively few fossils of nonendothermic marine reptiles have been found in those locations.
- D. During the Late Cretaceous, seawater temperatures were likely higher throughout mosasaurs’ range, including near the poles, than seawater temperatures at those same latitudes are today.

ID: 856b0a5a Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents the finding that, if true, would best support Suarez, Pérez-Huerta, and Harrell’s claim about mosasaurs. The text states that Suarez, Pérez-Huerta, and Harrell’s research on mosasaur tooth enamel led them to conclude that mosasaurs were endothermic, which means that they could live in waters at many different temperatures and still maintain a stable body temperature. The researchers claim that endothermy enabled mosasaurs to live in relatively cold waters near the poles. If several mosasaur fossils have been found in areas that were near the poles during the period when mosasaurs were alive and fossils of nonendothermic marine reptiles are rare in such locations, that would support the researchers’ claim: it would show that mosasaurs inhabited polar waters but nonendothermic marine mammals tended not to, suggesting that endothermy may have been the characteristic that enabled mosasaurs to include polar waters in their range.

Choice A is incorrect because finding that it’s easier to determine mosasaur body temperatures from tooth enamel data than it is to determine nonendothermic reptile body temperatures wouldn’t support the researchers’ claim. Whether one research process is more difficult than another indicates nothing about the results of those processes and therefore is irrelevant to the issue of where mosasaurs lived and what enabled them to live in those locations. Choice B is incorrect because finding roughly equal numbers of mosasaur and nonendothermic marine reptile fossils in areas that were near the poles in the Late Cretaceous would suggest that endothermy didn’t give mosasaurs any particular advantage when it came to expanding their range to include relatively cold polar waters, thereby weakening the researchers’ claim rather than supporting it. Choice D is incorrect because

finding that the temperature of seawater in the Late Cretaceous was warmer than seawater today wouldn't weaken the researchers' claim. Seawater in the Late Cretaceous could have been warmer than seawater today but still cold enough for endothermy to be advantageous to mosasaurs, so this finding wouldn't provide enough information to either support or weaken the researchers' claim.

Question Difficulty: Hard

Question ID 7aabd8b8

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 7aabd8b8

Given that stars and planets initially form from the same gas and dust in space, some astronomers have posited that host stars (such as the Sun) and their planets (such as those in our solar system) are composed of the same materials, with the planets containing equal or smaller quantities of the materials that make up the host star. This idea is also supported by evidence that rocky planets in our solar system are composed of some of the same materials as the Sun.

Which finding, if true, would most directly weaken the astronomers’ claim?

- A. Most stars are made of hydrogen and helium, but when cooled they are revealed to contain small amounts of iron and silicate.
- B. A nearby host star is observed to contain the same proportion of hydrogen and helium as that of the Sun.
- C. Evidence emerges that the amount of iron in some rocky planets is considerably higher than the amount in their host star.
- D. The method for determining the composition of rocky planets is discovered to be less effective when used to analyze other kinds of planets.

ID: 7aabd8b8 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents a finding that, if true, would weaken the astronomers’ claim about the makeup of host stars and their planets. The text explains that because stars and planets begin forming from the same gas and dust, astronomers believe planets should be composed of the same materials as their host stars, but in equal or smaller quantities. The finding that the amount of iron in some rocky planets is much higher than the amount in their host star would weaken the astronomers’ claim because it would show that some planets contain the same material as their host star, but in higher quantities.

Choice A is incorrect because a finding only about the makeup of stars, whether they’ve cooled or not, would provide no information about the makeup of planets. Thus, it wouldn’t have any bearing on the claim that planets and their host stars are composed of the same materials in differing quantities. Choice B is incorrect because a finding about two host stars having similar proportions of certain materials wouldn’t provide any information about the makeup of planets. Thus, it wouldn’t be relevant to the claim that planets and their host stars are composed of the same materials in differing quantities. Choice D is incorrect because the text indicates that the astronomers’ claim is based on a fact—that stars and planets begin forming from the same gas and dust in space—which would remain true regardless of the effectiveness of a method for analysis of compositions. The text does cite analysis of rocky planets in our solar system and the Sun, but only as a single piece of evidence that is consistent with the claim and not as the source of the claim; the finding that the method used for that analysis is less effective in other scenarios wouldn’t weaken a claim that’s based on knowledge of how stars and planets initially form.

Question Difficulty: Hard

Question ID 0104f233

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 0104f233

The ancient Greek concept of “mimesis,” a term used in the works of Plato, Aristotle, and other Greek philosophers in discussions of representational art—visual, performance, or literary art that aims to depict the real world—is a foundational concept of the Western philosophy of aesthetics. Mimesis is typically translated as “imitation” in modern editions of ancient Greek texts, but scholar Stephen Halliwell warns that this is overly reductive: “imitation” implies that art merely copies—and is thus by definition entirely derivative of—a reality that exists outside and prior to the work of art, and translating “mimesis” thusly obscures the multifaceted ways in which the ancient Greeks understood the relationship between art and reality.

Which statement, if true, would most directly support the claim by Halliwell presented in the text?

- A. One of the earliest appearances of mimesis’s root word, *mimos*, can be found in an ancient Greek tragedy in reference to dramatic impersonation, and the *mim-* root came to be generally associated with the musical and poetic arts by the fifth century BCE.
- B. Both Plato’s and Aristotle’s theorizations of mimesis examine the psychological effects that works of art induce in the viewer or listener.
- C. Although several of Plato’s earliest philosophical works discuss aesthetic ideas, the term “mimesis” doesn’t appear in Plato’s discussions of art until *Cratylus*, a relatively late work.
- D. Although Plato’s writings typically characterize representational art as an inferior reflection of the physical world, Aristotle suggests that mimesis can refer to art’s capacity to envision hypothetical conditions that could, but don’t yet, exist.

ID: 0104f233 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents a statement that would support Halliwell’s claim that “imitation” is an overly simplified translation of the word “mimesis” in the context of ancient Greek philosophical discussions of representational art and that, because it suggests a view of art as merely copying things that exist in reality, the translation obscures the fact that Plato, Aristotle, and other ancient Greeks understood the relationship between art and reality in varied ways. If Plato’s works tend to treat representational art as an inferior or inadequate reflection of the physical world (consistent with the idea of mere imitation), while Aristotle’s works suggest that the term “mimesis” can refer to art’s ability to show conditions that don’t currently exist but could exist (going beyond imitation into novel creation), that evidence would support the claim that the term “mimesis” means more than just “imitation” and that ancient Greek philosophers held different views of the relationship between art and reality.

Choice A is incorrect because information about the root word *mimos* first being used in drama and the root *mim-* coming to be associated with music and poetry wouldn’t indicate anything about the meaning of the specific term “mimesis” as it was used by ancient Greek philosophers in discussions of representational art; thus, the information would have no bearing on Halliwell’s claim that a common translation of the specific term is an oversimplification. Choice B is incorrect because the issue of art’s psychological effects on audiences gets at how people respond to works of art instead of how art itself is related to reality, so the

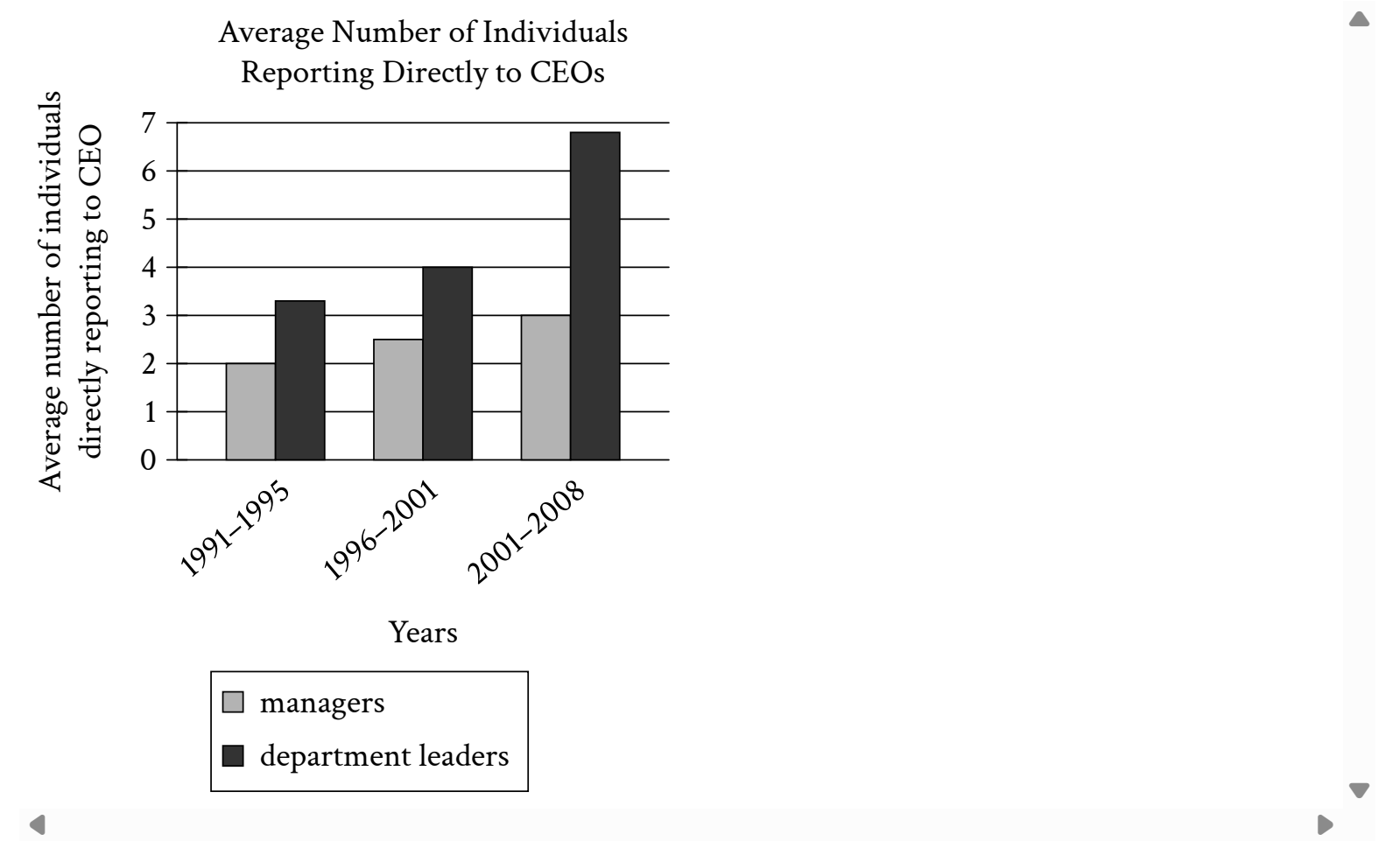
idea that Plato and Aristotle both addressed such effects in their considerations of mimesis wouldn't have any bearing on Halliwell's claim that a common translation of that term oversimplifies the relationship between art and reality. Further, this idea would touch on one general similarity in approaches to mimesis instead of illustrating the multifaceted, or varied, ways Halliwell claims ancient Greek philosophers understood art's relation to reality. Choice C is incorrect because the idea that Plato discussed aesthetics in his early works but didn't use the term "mimesis" until later doesn't give any indication of how Plato or any other ancient Greek philosophers understood the relation between art and reality, so it would have no bearing on Halliwell's claim that a common translation of the term "mimesis" is oversimplified and fails to reflect the varied ways the philosophers understood that relationship.

Question Difficulty: Hard

Question ID 90ded699

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 90ded699



Considering a large sample of companies, economics experts Maria Guadalupe, Julie Wulf, and Raghuram Rajan assessed the number of managers and leaders from different departments who reported directly to a chief executive officer (CEO). According to the researchers, the findings suggest that across the years analyzed, there was a growing interest among CEOs in connecting with more departments in their companies.

Which choice best describes data from the graph that support the researchers' conclusion?

- A. The average numbers of managers and department leaders reporting directly to their CEO didn't fluctuate from the 1991–1995 period to the 2001–2008 period.
- B. The average number of managers reporting directly to their CEO was highest in the 1996–2001 period.
- C. The average number of department leaders reporting directly to their CEO was greater than the average number of managers reporting directly to their CEO in each of the three periods studied.
- D. The average number of department leaders reporting directly to their CEO rose over the three periods studied.

Correct Answer: D

Rationale

Choice D is the best answer because it describes data from the graph that support the researchers' conclusion that there is a growing interest among CEOs in connecting with more departments in their companies. The graph shows the average number of individuals reporting directly to CEOs during three different time periods: the individuals are divided into managers and department leaders. The average number of department leaders directly reporting to their CEO during the 1991–1995 period was slightly more than three, during the 1996–2001 period it was four, and during the 2001–2008 period it was almost seven. Thus, the average number of department leaders reporting directly to their CEO rose over the three periods studied, which suggests that CEOs were connecting with more departments.

Choice A is incorrect because the average number of managers and department leaders reporting directly to their CEO rose for both categories between the 1991–1995 and 2001–2008 periods; thus, it isn't true that the average numbers didn't fluctuate. Choice B is incorrect because the average number of managers reporting directly to their CEO was highest in the 2001–2008 period, not in the 1996–2001 period. Choice C is incorrect. Although it correctly describes a feature of the graph, the observation that more department leaders than managers are reporting to CEOs does not by itself address the question of whether CEOs are connecting with more departments over time—to address that question, one needs to know whether the number of department leaders reporting to CEOs is increasing over time.

Question Difficulty: Hard

Question ID 73a7aadb

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 73a7aadb

Dated Ages of Lunar Samples from Select Missions			
Mission name	Year	Landing site	Approximate age of lunar samples (billions of years)
Apollo 11	1969	Mare Tranquillitatis	3.6
Apollo 15	1971	Mare Imbrium	3.3
Apollo 17	1972	Mare Serenitatis	3.8
Chang’e 5	2020	Oceanus Procellarum	2.0

The Apollo program missions were spaceflights to the moon led by the United States during the 1960s and 1970s during which astronauts collected some samples of the moon’s surface. More recently, China launched the Chang’e 5 mission, which returned additional lunar surface samples. Researchers have analyzed and dated each of the samples, concluding that the lunar samples collected during the Chang’e 5 mission are significant because _____

- Which choice most effectively uses data from the table to complete the claim?
- A. they are much younger than the samples brought back from any of the Apollo missions.
 - B. they were collected from the same landing site as the Apollo 11 mission.
 - C. they are closest in age to the samples brought back by the Apollo 17 mission.
 - D. they helped confirm the predicted ages of the lunar samples from the Apollo missions.

ID: 73a7aadb Answer

Correct Answer: A

Rationale

Choice A is the best answer because it effectively uses data from the table to complete the claim about the significance of the Chang’e 5 lunar samples. The table shows the approximate ages of lunar samples from four different missions: three Apollo missions and the Chang’e 5 mission. The Chang’e 5 samples are said to be approximately 2 billion years old, while the Apollo samples are each said to be more than 3 billion years old. In other words, based on the data in the table, the Chang’e 5 samples are much younger than those from the Apollo missions.

Choice B is incorrect because the table shows that the Chang’e 5 samples were taken from a landing site at Oceanus Procellarum, which none of the Apollo missions are shown to have visited. Choice C is incorrect because the table shows the Apollo 17 samples as approximately 3.8 billion years old, the Apollo 15 samples as approximately 3.3 billion years old, and the Chang’e 5 samples as approximately 2 billion years old, and therefore, the Chang’e samples are closer in age to the Apollo 15 samples than

they are to the Apollo 17 samples. Choice D is incorrect because nothing in the text or table suggests that the Chang'e 5 samples were used to confirm the ages of the Apollo samples.

Question Difficulty: Hard

Question ID 5ec5005e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 5ec5005e

“Mr. Cornelius Johnson, Office-Seeker” is a 1900 short story by Paul Laurence Dunbar. In the story, the narrator describes Mr. Cornelius Johnson’s appearance as conveying his exaggerated sense of his importance: _____

Which quotation from “Mr. Cornelius Johnson, Office-Seeker” most effectively illustrates the claim?

- A. “He carried himself always as if he were passing under his own triumphal arch.”
- B. “The grey Prince Albert was scrupulously buttoned about his form, and a shiny top hat replaced the felt of the afternoon.”
- C. “It was a beautiful day in balmy May and the sun shone pleasantly on Mr. Cornelius Johnson’s very spruce Prince Albert suit of grey as he alighted from the train in Washington.”
- D. “Mr. Cornelius Johnson always spoke in a large and important tone.”

ID: 5ec5005e Answer

Correct Answer: A

Rationale

Choice A is the best answer. This quote most effectively illustrates the claim. The claim is that the narrator describes Mr. Johnson as arrogant and self-important. This basically says that Mr. Johnson always looks like he’s congratulating himself for something, which definitely supports the idea that Mr. Johnson is arrogant! .

Choice B is incorrect. This quote doesn’t illustrate the claim. The claim is that the narrator describes Mr. Johnson’s appearance as conveying his arrogance. This describes his appearance, but the description doesn’t suggest a sense of arrogance. Choice C is incorrect. This quote doesn’t illustrate the claim. The claim is that the narrator describes Mr. Johnson’s appearance as conveying his arrogance. This doesn’t describe Mr. Johnson’s appearance very much, and it doesn’t suggest a sense of arrogance. Choice D is incorrect. This quote doesn’t effectively illustrate the claim. It describes Mr. Johnson’s tone of voice as “large and important,” but it doesn’t describe his appearance as conveying a sense of self-importance.

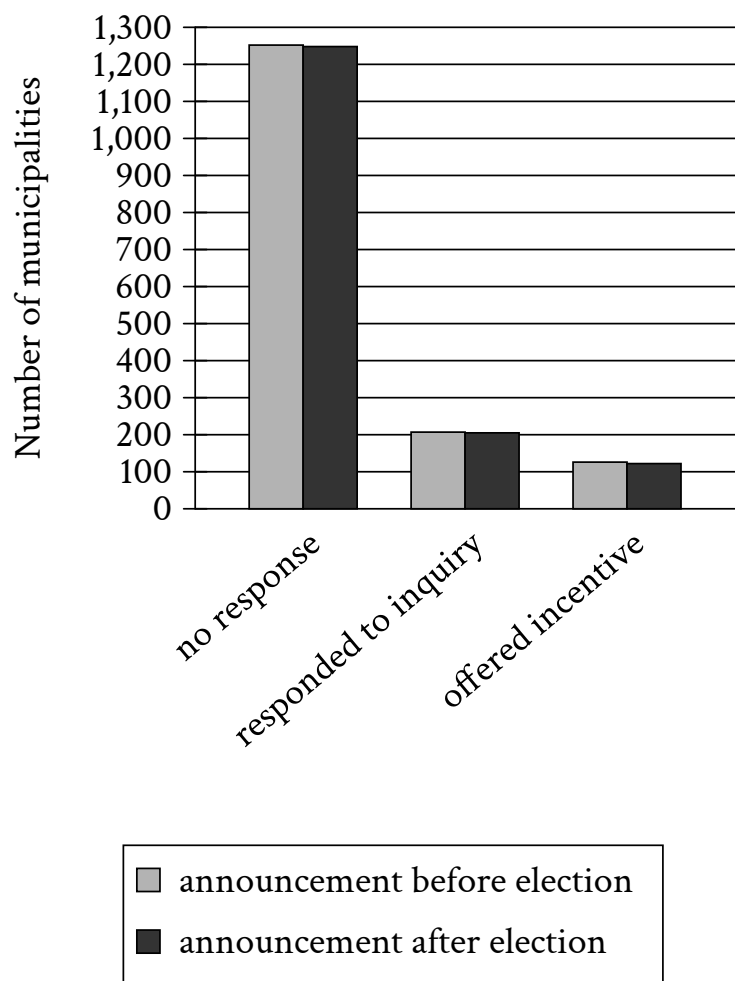
Question Difficulty: Hard

Question ID 57bb328f

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 57bb328f

Municipalities’ Responses to Inquiries about Potential Incentives for Firm



In the United States, firms often seek incentives from municipal governments to expand to those municipalities. A team of political scientists hypothesized that municipalities are much more likely to respond to firms and offer incentives if expansions can be announced in time to benefit local elected officials than if they can’t. The team contacted officials in thousands of municipalities, inquiring about incentives for a firm looking to expand and indicating that the firm would announce its expansion on a date either just before or just after the next election.

Which choice best describes data from the graph that weaken the team’s hypothesis?

- A. A large majority of the municipalities that received an inquiry mentioning plans for an announcement before the next election didn’t respond to the inquiry.

- B. The proportion of municipalities that responded to the inquiry or offered incentives didn't substantially differ across the announcement timing conditions.
- C. Only around half the municipalities that responded to inquiries mentioning plans for an announcement before the next election offered incentives.
- D. Of the municipalities that received an inquiry mentioning plans for an announcement date after the next election, more than 1,200 didn't respond and only around 100 offered incentives.

ID: 57bb328f Answer

Correct Answer: B

Rationale

Choice B is the best answer. The text explains that firms in the United States often look to municipal governments (local governing bodies) for incentives to expand the firms into those areas. The text then indicates that a team of political scientists hypothesized that those governing bodies are much more likely to respond and offer incentives when the expansion (if there's going to be one) can be announced before an election, since announcing a firm coming to their area can benefit local elected officials. However, the graph—which presents the results of the political scientists' inquiries to municipalities about incentives for a firm in two timing scenarios—shows that the proportion of municipalities that responded to the inquiry or offered incentives didn't substantially differ based on timing. According to the graph, about 200 municipalities responded to the inquiry and about 100 offered an incentive when the announcement could be made before an election (represented by the gray bars) and about 200 municipalities responded to the inquiry and about 100 offered an incentive when the announcement would be made after an election (represented by the black bars). These data weaken the team's hypothesis by demonstrating that municipalities are *not* much more likely to respond and offer incentives when the timing means they could announce an expansion before an election.

Choice A is incorrect. Although the graph does show that a large number of municipalities didn't respond to inquiries in the scenario in which an expansion announcement could be made before an election (represented by the gray bars), the text indicates that the team hypothesized that there would be a substantial difference in municipalities' actions based on timing, and information about only one timing scenario doesn't reveal anything about whether such a difference occurred. Choice C is incorrect. The graph does show that in the scenario in which an expansion announcement could be made before an election (represented by the gray bars), about 200 municipalities responded to inquiries and about 100 offered an incentive, but the text indicates that the team hypothesized that there would be a substantial difference in municipalities' actions based on timing, and information about only one timing scenario doesn't reveal anything about whether such a difference occurred. Choice D is incorrect. Although this choice accurately describes data from the graph for the scenario in which an expansion announcement would be made after an election (represented by the black bars), the text indicates that the team hypothesized that there would be a substantial difference in municipalities' actions based on timing, and information about only one timing scenario doesn't reveal anything about whether such a difference occurred.

Question Difficulty: Hard

Question ID c5e30d22

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: c5e30d22

Water flowing around an obstruction creates vortices (patterns of swirls) of varying size; by detecting the vortices, fish can determine the size and position of the obstruction. Testing by Yuzo R. Yanagisuru, Otar Akanyeti, and James C. Liao using models of three head shapes—narrow (low ratio of width to length), intermediate, and wide (high ratio of width to length)—showed that for medium-sized vortices, fish with wide heads would be least able to distinguish between vortices and general turbulence in the water. A second research team has therefore hypothesized that in low-visibility conditions, wider-headed fish will be less likely than narrower-headed fish to detect obstructions.

Which finding, if true, would most directly support the second research team’s hypothesis?

- A. A study using obstructions that created medium-sized vortices in low-visibility conditions found that the bristlemouth (*Chaetostoma yurubiense*), which has a relatively wide head, bumped into more than half of the obstructions.
- B. A study using obstructions that created medium-sized vortices in low-visibility conditions found that some specimens of dusky smooth-hound (*Mustelus canis*), which has a relatively narrow head, bumped into the obstructions more often than other specimens of the same fish did.
- C. A study using obstructions that created medium-sized vortices in low-visibility conditions found that the wider-headed bristlemouth (*Chaetostoma yurubiense*) bumped into obstructions more often than the narrower-headed dusky smooth-hound (*Mustelus canis*) did.
- D. A study using obstructions that created medium-sized vortices in low-visibility conditions found that the narrower-headed dusky smooth-hound (*Mustelus canis*) bumped into the obstructions just as often as the wider-headed bristlemouth (*Chaetostoma yurubiense*) did.

ID: c5e30d22 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents a finding that, if true, would most directly support the second research team’s hypothesis about how a fish’s head shape affects the fish’s ability to detect obstructions. The text explains that fish detect obstructions using water vortices and that testing by Yanagisuru, Akanyeti, and Liao showed that fish with wide heads struggle to distinguish medium-sized vortices from general turbulence in the water. Based on this finding, a second research team hypothesized that in low-visibility conditions, wider-headed fish would be less effective at detecting obstructions than narrower-headed fish. The finding that wider-headed bristlemouth fish bumped into obstructions more often than narrower-headed dusky smooth-hound fish did under the specified conditions (low visibility with medium-sized vortices) would directly support the second team’s hypothesis.

Choice A is incorrect because it would provide only partial support for the second research team’s hypothesis. While this finding shows that wide-headed bristlemouth fish bumped into many obstructions, it provides no comparison with narrow-headed fish. The hypothesis specifically predicts a difference in detection ability between fish with wider heads and those with narrower heads,

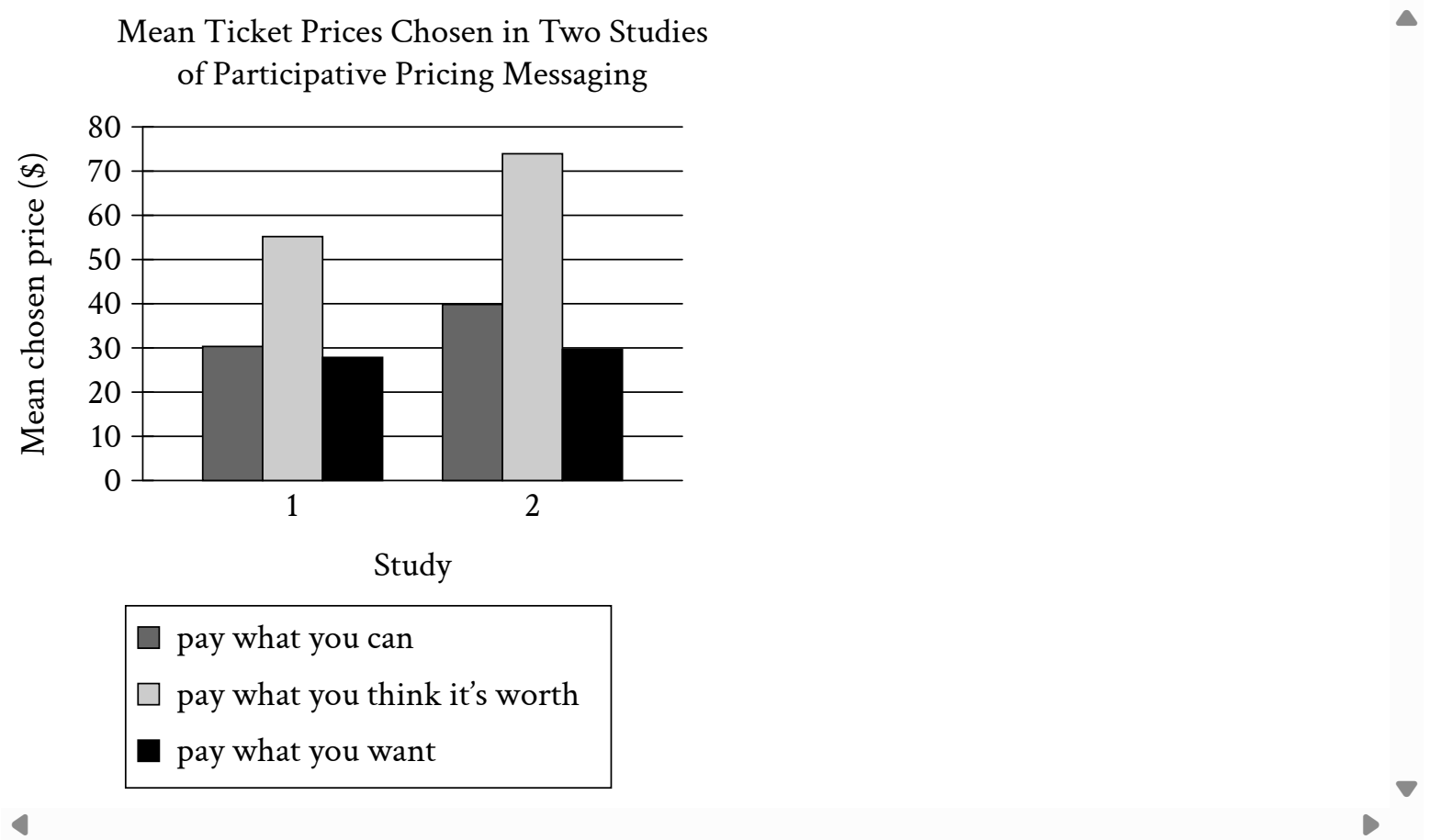
so supporting evidence would need to include data from both head types to allow for this comparison. Choice B is incorrect because it would not support the second research team’s hypothesis comparing obstruction detection between fish with wide heads and those with narrow heads. Instead, it examines variation within a single narrow-headed species, which would not address the hypothesis about differences between fish with wider and narrower head shapes. Choice D is incorrect because this finding would contradict rather than support the second research team’s hypothesis. The hypothesis predicts that wider-headed fish will be less likely to detect obstructions than narrower-headed fish in low-visibility conditions, which would result in wider-headed fish bumping into obstructions more frequently. A finding showing equal bumping rates between fish with the two head shapes would indicate no relationship between head width and detection ability, directly contradicting the hypothesis.

Question Difficulty: Hard

Question ID 7b1ecd4f

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 7b1ecd4f



Participative pricing, in which purchasers choose the prices they pay for products, can enable sellers to capitalize on the heterogeneous values consumers assign to the same goods and services, but doing so requires careful messaging. Annie Peng Cui and Jennifer Wiggins recruited 171 participants (ages 18–60) online for an initial study and 83 students (ages 18–31) at a state university for a second study to test the effect of three different messages—“pay what you can,” “pay what you think it’s worth,” and “pay what you want”—on how much participants would pay for concert tickets. Their results illustrate both the heterogeneity of consumer valuations and how sellers can benefit by prompting consumers to consider their own valuations:

- Which choice most effectively uses data from the graph to complete the text?
- A. the students tended to value the concert tickets more highly than did the more age-diverse group recruited online, but when considering what they could afford to pay, the students tended to choose a lower price than did the other group.
 - B. in all three messaging conditions, the group of participants recruited online tended to choose lower prices than did the students, but both groups tended to choose prices closest to the actual cost of the tickets when prompted to consider the tickets’ value.

- C. the students tended to value the concert tickets more highly than did the more age-diverse group recruited online, but both groups tended to choose a higher price when considering the value of the tickets than when considering what they could afford or wanted to pay.
- D. within each group of participants, there was wide variation in the value that individuals assigned to the concert tickets, but the students tended to assign a higher value to the tickets than did the more age-diverse group recruited online.

ID: 7b1ecd4f Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most effectively uses data from the graph to complete the text about the effect of messaging on participative pricing. The graph shows mean ticket prices chosen by participants in response to three messages across two studies: Study 1, which the text indicates was conducted with an age-diverse group recruited online, and Study 2, which was conducted with student participants. The graph indicates that in the "pay what you think it's worth" condition, the mean price of the concert tickets in Study 2 was about \$74, which is greater than the mean price of about \$55 in Study 1. In other words, when participants were asked to consider their valuation of the tickets, the response was heterogeneous, or mixed. Moreover, according to the graph, both Study 1 and Study 2 show higher prices for the tickets under the "pay what you think it's worth" condition than they do under both the "pay what you can" and the "pay what you want" conditions. That is, the data suggest that both groups of participants named higher prices when considering the value of the tickets than when considering either what they could afford or wanted to pay, a finding that supports the idea that sellers can benefit when prompting consumers to consider their own valuations when they choose prices.

Choice A is incorrect because it contradicts information in the graph. Although the graph shows that students in Study 2 assigned a higher value to the tickets than did the age-diverse group in Study 1, which would support the idea that consumer valuations were heterogeneous, the graph shows that in the "pay what you can" (i.e., what you can afford) condition, the students in Study 2 assigned a higher price (about \$40), not a lower price, than the age-diverse group in Study 1 did (about \$30). Moreover, even if it were true that the students had assigned a lower price in this condition, it wouldn't support the result described in the text, only that the participants across the two studies had different ideas of what they can afford to pay. Choice B is incorrect. Although a finding that participants tended to choose prices that were closest to the actual ticket costs in the "pay what you think it's worth" condition would support the idea that sellers benefit by prompting consumers to think about their own valuations (since it's implied that sellers would lose money in the other conditions, where chosen prices were lower than the participants' valuations), neither the text nor the graph addresses how any of the prices chosen by the study participants relate to the tickets' actual market price. Choice D is incorrect. Although the wide variation in participant valuations would support the idea that consumer valuations tend to be heterogeneous, neither the text nor the graph provides any information from which to discern the relative levels of variance among the responses from participants in either study.

Question Difficulty: Hard

Question ID ba5df00d

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: ba5df00d

A museum curator is writing a biographical statement about Trinidadian-born Chinese dancer, choreographer, and teacher Dai Ailian for a new exhibit on Chinese dance. The curator claims that some of the pieces Dai created shortly after arriving in mainland China in 1941, such as the solo dance *Yao Drum*, reflect a desire to represent the dances of local communities Dai visited during her travels through China.

Which quotation from a work by a dance historian would be the most effective evidence for the curator to include in support of this claim?

- A. "There is no sound or music accompanying Dai's movements in *Yao Drum*, aside from the sounds of drumsticks beating against a drum and against each other."
- B. "Unlike some of the works Dai created in the early 1940s, *Yao Drum* does not feature a narrative structure, humorous elements, or references to real-life events."
- C. "*Yao Drum* was inspired by a ceremonial dance Dai witnessed during her time performing field research among the Yao people in the province of Guizhou in 1941 or 1942."
- D. "*Yao Drum* is notable for its intense physicality, with Dai performing sharp jumps, swift turns, and dramatic sweeps of her legs through the air as she moves in circles on the stage."

ID: ba5df00d Answer

Correct Answer: C

Rationale

Choice C is the best answer. This choice clearly states that *Yao Drum* was inspired by a ceremonial dance of the Yao people. This directly supports the curator's claim that some of Dai's pieces "represent the dances of local communities" she visited.

Choice A is incorrect. This choice discusses the sound and music in *Yao Drum*, but it doesn't connect these elements to "the dances of local communities," which is the focus of the claim. Choice B is incorrect. This choice doesn't mention the dances of local communities, but instead discusses how *Yao Drum* is different from some of Dai's earlier works. Choice D is incorrect. This choice describes the choreography of *Yao Drum*, but it doesn't connect these elements to "the dances of local communities," which is the focus of the claim.

Question Difficulty: Hard

Question ID 2ec25c90

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 2ec25c90

Sense and Sensibility is an 1811 novel by Jane Austen. In the novel, Austen describes Marianne Dashwood’s ability to persuade others of the rightness of her artistic judgments, as is evident when Marianne visits with John Willoughby, a potential suitor:

Which quotation from *Sense and Sensibility* most effectively illustrates the claim?

- A. “Above all, when she heard him declare, that of music and dancing he was passionately fond, she gave him such a look of approbation as secured the largest share of his discourse to herself for the rest of his stay.”
- B. “Their taste was strikingly alike. The same books, the same passages were idolized by each—or if any difference appeared, any objection arose, it lasted no longer than till the force of her arguments and the brightness of her eyes could be displayed.”
- C. “It was only necessary to mention any favourite amusement to engage her to talk. She could not be silent when such points were introduced, and she had neither shyness nor reserve in their discussion.”
- D. “They speedily discovered that their enjoyment of dancing and music was mutual, and that it arose from a general conformity of judgment in all that related to either. Encouraged by this to a further examination of his opinions, she proceeded to question him on the subject of books.”

ID: 2ec25c90 Answer

Correct Answer: B

Rationale

Choice B is the best answer. By showing that "any difference" in taste was quickly overcome by "the force of [Marianne’s] arguments," this choice effectively demonstrates Marianne’s "ability to persuade others."

Choice A is incorrect. This choice doesn’t effectively illustrate the claim. This choice shows that Marianne and John share an interest in music and dancing, but it doesn’t provide evidence of Marianne’s "ability to persuade others." Choice C is incorrect. This choice doesn’t effectively illustrate the claim. This choice shows that Marianne enjoys talking about her interests, but it doesn’t provide evidence of Marianne’s "ability to persuade others." Choice D is incorrect. This choice doesn’t effectively illustrate the claim. This choice shows that Marianne and John share many interests and generally agree on music and dancing, but it doesn’t provide evidence of Marianne’s "ability to persuade others."

Question Difficulty: Hard

Question ID e1bb2ef2

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: e1bb2ef2

Sandra Cisneros’s 1984 novella *The House on Mango Street* made a lasting impact on US literature. Its depiction of Mexican American culture inspired later authors to examine their own heritage within their fictional works. Also influential was the book’s portrayal of the main character, Esperanza, during a pivotal year of her youth. This insightful depiction of a preteen girl encouraged authors who, like Cisneros herself, are Latina to use fictional works to examine experiences from their own youth.

Which statement, if true, would most strongly support the claim in the underlined sentence?

- A. In interviews, a number of Latina authors say that *The House on Mango Street* inspired them to write about their own adolescence in their novels.
- B. In published writings, several prominent authors who are not Latina say that reading *The House on Mango Street* influenced their approach to writing fiction.
- C. *The House on Mango Street* has sold over six million copies and is one of the most commonly read books among high school and university students in the US.
- D. Since 1984, new novels about young Latina characters by Latina authors have often been compared to *The House on Mango Street*.

ID: e1bb2ef2 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents a finding that, if true, would most strongly support the claim in the underlined sentence. The text begins by explaining that the portrayal of Mexican American culture in Sandra Cisneros’s *The House on Mango Street* inspired later authors to explore their own heritage. Noting that Cisneros’s novella was also influential for its depiction of a formative year in a female character’s youth, the text then claims that this depiction inspired other Latina authors to use fiction to explore their own experiences of youth. Since this claim addresses how Cisneros encouraged Latina authors specifically to portray their youthful experiences, it would be directly supported by such authors stating that her novella influenced them to write about their own adolescence, or the transitional period between childhood and adulthood.

Choice B is incorrect. The text states that with its portrayal of Mexican American culture, *The House on Mango Street* inspired later authors to explore their own heritage, and since this statement isn’t limited to only Latina authors, it can be inferred that authors who aren’t Latina were also likely influenced by the novella. But because the claim in the underlined sentence concerns the novella’s influence on Latina authors specifically, the finding that the book also influenced authors who weren’t Latina would fail to provide support for the claim. Choice C is incorrect because the finding that *The House on Mango Street* has sold millions of copies and is widely read among students in the US doesn’t relate directly to the text’s claim that the novella has influenced Latina authors specifically. Choice D is incorrect. While comparisons of new novels about young Latina characters by Latina authors to Cisneros’s *The House on Mango Street* would likely be founded on similarities between those novels and Cisneros’s novella, such similarities wouldn’t necessarily be evidence of the novella’s influence; such similarities might arise if Cisneros and

younger Latina authors alike depicted certain basic cultural and historical features of their communities. Testimony from younger Latina authors about how *The House on Mango Street* had inspired them would be far more persuasive evidence of the novella's influence.

Question Difficulty: Hard

Question ID 056efa7c

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 056efa7c

O Pioneers! is a 1913 novel by Willa Cather. In the novel, Cather depicts Alexandra Bergson as a person who takes comfort in understanding the world around her: _____

Which quotation from *O Pioneers!* most effectively illustrates the claim?

- A. "She looked fixedly up the bleak street as if she were gathering her strength to face something, as if she were trying with all her might to grasp a situation which, no matter how painful, must be met and dealt with somehow."
- B. "She had never known before how much the country meant to her. The chirping of the insects down in the long grass had been like the sweetest music. She had felt as if her heart were hiding down there, somewhere, with the quail and the plover and all the little wild things that crooned or buzzed in the sun. Under the long shaggy ridges, she felt the future stirring."
- C. "Alexandra drove off alone. The rattle of her wagon was lost in the howling of the wind, but her lantern, held firmly between her feet, made a moving point of light along the highway, going deeper and deeper into the dark country."
- D. "Alexandra drew her shawl closer about her and stood leaning against the frame of the mill, looking at the stars which glittered so keenly through the frosty autumn air. She always loved to watch them, to think of their vastness and distance, and of their ordered march. It fortified her to reflect upon the great operations of nature, and when she thought of the law that lay behind them, she felt a sense of personal security."

ID: 056efa7c Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most effectively uses a quotation from *O Pioneers!* to illustrate the claim that Alexandra Bergson takes comfort in understanding the world around her. In the quotation, Alexandra is described as enjoying looking at the stars and feeling a "sense of personal security" when she contemplates nature's order and its governing laws. This suggests that Alexandra takes comfort in understanding the world around her.

Choice A is incorrect because the quotation expresses how Alexandra Bergson attempts to meet difficult situations with determination, not how she takes comfort in understanding the world around her. Choice B is incorrect because the quotation expresses "how much the country meant to" Alexandra Bergson, not how she takes comfort in understanding the world around her. In detailing some of the wildlife surrounding Alexandra, the quotation conveys that nature is important to her but not necessarily that it gives her comfort. Choice C is incorrect because the quotation describes Alexandra driving her wagon down a highway at night; it doesn't describe how she takes comfort in understanding the world around her or address how she's feeling as she drives off.

Question Difficulty: Hard

Question ID a6ebdf5c

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: a6ebdf5c

East Australian humpback whales migrate up to 10,000 kilometers each year to reach their breeding grounds. Researchers long believed that migrating whales live only on the extra energy they stored up during the feeding season. But marine biologist Vanessa Pirotta and her team aren't so sure. They analyzed 20 years of observations of the migrating whales made by citizen scientists (members of the public who help collect data for scientific research). The team claims that the whales may not live only on their stored energy during migration.

Which finding, if true, would most directly support the team's claim?

- A. Citizen scientists have observed many different types of marine animals feeding alongside the whales.
- B. Citizen scientists have made many observations of the whales feeding as they migrate to their breeding grounds.
- C. Citizen scientists have made more observations of the whales migrating to their breeding grounds than of the whales returning to their feeding grounds.
- D. Citizen scientists have recently begun to observe the whales migrating to their breeding grounds earlier in the year.

ID: a6ebdf5c Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents a finding that, if true, would most directly support Pirotta and her team's claim that East Australian humpback whales may not live only on stored energy during migration. The text explains that it has long been thought that East Australian humpback whales store extra energy during the feeding season and then use that energy to survive while traveling to their breeding grounds. If it were true that citizen scientists have often seen the whales feeding as they migrate to the breeding grounds, that would indicate that the whales sometimes feed and take in additional energy during the journey, meaning that they may not rely only on energy they stored before migrating.

Choice A is incorrect because finding that citizen scientists have observed many different types of marine animals feeding alongside the whales would have no bearing on the team's claim; the behavior of other animals is irrelevant, and without indicating the timing of the observed feeding, the finding wouldn't reveal whether the whales rely only on previously stored energy or ever take in additional energy during migration. Choice C is incorrect because finding that citizen scientists have more often observed whales on the way to their breeding grounds than returning to their feeding grounds would have no bearing on the team's claim. Since it would provide information about the timing of observations but not about the whales' observed activities, the finding wouldn't reveal whether the whales rely only on previously stored energy or ever take in additional energy during migration. Choice D is incorrect because finding that citizen scientists have recently started seeing the whales migrate to their breeding grounds earlier in the year would have no bearing on the team's claim. Since it would provide information about a change in the timing of migration but not about the whales' observed activities while migrating, the finding wouldn't reveal whether the whales rely only on previously stored energy or ever take in additional energy during migration.

Question Difficulty: Hard

Question ID 7cad1b7a

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 7cad1b7a

Archaeologist Weiwei Wang and her colleagues analyzed footed grinding slabs and other food-preparation tools excavated from Óc Eo, a Southeast Asian port city that flourished between the first and sixth centuries CE. Wang and colleagues recovered microscopic remnants of turmeric and other spices from the surfaces of the tools. Turmeric is native to South Asia, more than a thousand miles west of Óc Eo, and the researchers showed that the footed grinding slabs at Óc Eo are very similar to footed grinding slabs common throughout South Asia from around 500 BCE to 300 CE. Wang and colleagues’ findings therefore indicate that there must have been a trade link, whether direct or indirect, between the two regions.

Which finding, if true, would directly weaken the conclusion about Wang and her colleagues’ findings that is presented in the text?

- A. Some of the spices recovered from Óc Eo are native to the Maluku Islands, which are located approximately 2,000 miles southeast of Óc Eo.
- B. In the first through third centuries CE, there was a significant migration of people from South Asia to Southeast Asia.
- C. Other types of artifacts originating in South Asia and dating to the first through sixth centuries CE have been found throughout Southeast Asia.
- D. The people of Óc Eo and several communities in South Asia regularly traded with people in the region that is now the Southeast Asian country of Malaysia no later than the first century CE.

ID: 7cad1b7a Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents a finding that, if true, would most directly weaken the conclusion that Wang and colleagues’ findings indicate a trade link between Óc Eo and South Asia. The text explains that turmeric (native to South Asia) and footed grinding slabs of a style common in South Asia between roughly 500 BCE and 300 CE were found at Óc Eo, a Southeast Asian port that flourished between the first and sixth centuries CE. From this evidence, the text concludes that these items must have reached Óc Eo through trade. If, however, there was a significant migration of people from South Asia to Southeast Asia during the first through third centuries CE, that would offer an alternative explanation: South Asian people could have brought turmeric and grinding slabs with them when they migrated. Thus, the finding would weaken the conclusion that trade must account for the items’ presence at Óc Eo.

Choice A is incorrect. A finding involving spices from a different region—the Maluku Islands, southeast of Óc Eo—wouldn’t undermine the conclusion because it wouldn’t reveal how the items from South Asia, a region to the west, reached Óc Eo. If anything, such a finding might be further evidence of broad trade networks involving Óc Eo. Choice C is incorrect. If it were true that other South Asian artifacts from the period when Óc Eo flourished have been found throughout Southeast Asia, that would suggest only that South Asian items other than turmeric and footed grinding slabs were present in the region at the time; it wouldn’t reveal anything about how any of those items reached Southeast Asia from South Asia. If anything, the widespread presence of South Asian artifacts in Southeast Asia during this period could be seen as further support for a trade network

connecting the regions. Choice D is incorrect because the finding that Óc Eo and some South Asian communities traded with people in another Southeast Asian location (what is now Malaysia) would suggest that this location could have been an intermediary for the movement of items from South Asia to Óc Eo. Such a finding would support, not weaken, the plausibility of an indirect trade link that's presented in the conclusion.

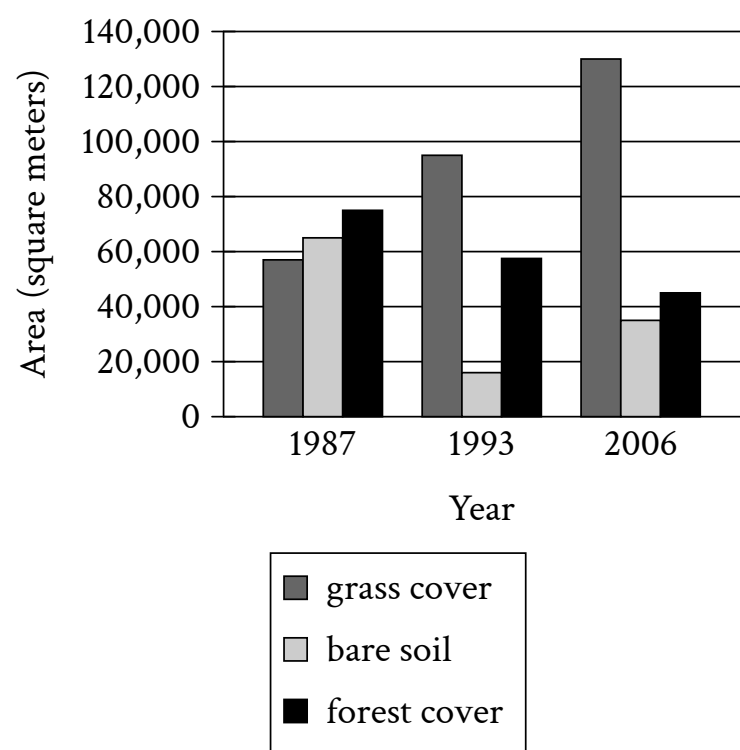
Question Difficulty: Hard

Question ID 69a2c79f

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 69a2c79f

Characteristics of the Banks of the Provo River Downstream of the Jordanelle Dam



The Jordanelle Dam was built on the Provo River in Utah in 1992. Earth scientist Adriana E. Martinez and colleagues tracked changes to the environment on the banks of the river downstream of the dam, including how much grass and forest cover were present. They concluded that the dam changed the flow of the river in ways that benefited grass plants but didn't benefit trees.

Which choice best describes data from the graph that support Martinez and colleagues' conclusion?

- A. The lowest amount of grass cover was approximately 58,000 square meters, and the highest amount of forest cover was approximately 75,000 square meters.
- B. There was more grass cover than forest cover in 1987, and this difference increased dramatically in 1993 and again in 2006.
- C. There was less grass cover than bare soil in 1987 but more grass cover than bare soil in 1993 and 2006, whereas there was more forest cover than bare soil in all three years.
- D. Grass cover increased from 1987 to 1993 and from 1993 to 2006, whereas forest cover decreased in those periods.

Correct Answer: D

Rationale

Choice D is the best answer because it describes data from the graph that support Martinez and colleagues' conclusion that the Jordanelle Dam led to changes that benefited grass plants but not trees. The graph shows characteristics of the banks of the Provo River downstream of the Jordanelle Dam in three different years—1987, 1993, and 2006. Specifically, the graph shows the amount of grass cover, bare soil, and forest cover in those years. The text indicates that the Jordanelle Dam was built in 1992, meaning that the data from the graph for 1987 reflect conditions before the dam was built, whereas the data for 1993 and 2006 reflect conditions after the dam was built. The data show that grass cover increased substantially from 1987 to 1993 and again from 1993 to 2006. The data also show that forest cover declined over those periods. Together, these data support Martinez and colleagues' conclusion that the dam was beneficial for grass plants but not for trees—grass cover increased significantly after the dam was built, while forest cover declined.

Choice A is incorrect. Although it is true that, in the graph, the lowest value for grass cover is approximately 58,000 square meters and the highest value for forest cover is approximately 75,000 square meters, both values are from 1987, before the Jordanelle Dam was built in 1992. Therefore, this information alone cannot support Martinez and colleagues' conclusion about changes in grass and tree cover following the construction of the dam. Choice B is incorrect because it presents an inaccurate description of data from the graph. The graph shows that there was more forest cover than grass cover in 1987, not that there was more grass cover than forest cover that year. Choice C is incorrect because, while it accurately reflects data from the graph when it compares grass cover and forest cover to bare soil, these data alone cannot support Martinez and colleagues' conclusion that the dam led to changes that benefited grass plants but not trees. An increase in grass cover relative to bare soil following the construction of the dam might indicate that the dam benefited grass plants, but the fact that there was more forest cover than bare soil in all three years doesn't indicate that the dam failed to benefit trees.

Question Difficulty: Hard

Question ID 080e14a2

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 080e14a2

Rivers rich in sediment appear yellow, while increases in red algae make rivers appear red. To track things like the sediment or algae content of large US rivers, John R. Gardner and colleagues used satellite data to determine the dominant visible wavelengths of light measured for various segments of these rivers. The researchers classified wavelengths of 495 nanometers (nm) and below as red, wavelengths between 495 and 560 nm as blue, and wavelengths of 560 nm and above as yellow. The researchers concluded that for the Missouri River, segments flowing into lakes tend to carry more sediment than those flowing out of lakes.

Which finding, if true, would most directly support the researchers’ conclusion?

- A. The segments of the Missouri River that had higher levels of chlorophyll-a, which contributes to the green color of photosynthetic organisms, have dominant wavelengths of light between 490 and 560 nm.
- B. In lakes through which segments of the Missouri River pass, the dominant wavelength of light tended to be above 560 nm near the lakes’ shores and below 560 nm in the lakes’ centers.
- C. The majority of the segments of the Missouri River were found to have dominant wavelengths of light significantly higher than 560 nm.
- D. Segments of the Missouri River flowing into lakes typically had dominant wavelengths of light above 560 nm, while segments flowing out of lakes typically had dominant wavelengths below 560 nm.

ID: 080e14a2 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents a finding that, if true, would support Gardner and colleagues’ conclusion that segments of the Missouri River flowing into lakes tend to carry more sediment than do segments of the river flowing out of lakes. The text says that rivers appear yellow when they contain a lot of sediment and appear red when they contain a lot of algae. It goes on to explain that Gardner and colleagues measured the wavelengths of light for different segments of rivers in the United States and classified those wavelength measurements into colors: red for wavelengths of 495 nanometers and below, blue for wavelengths between 495 and 560 nanometers, and yellow for wavelengths of 560 nanometers and above. Combined with the earlier information about river colors, this suggests that rivers rich in sediment will have wavelengths of 560 nanometers and above (since such rivers appear yellow). If researchers found that Missouri River segments flowing into lakes tend to have wavelengths above 560 nanometers and segments flowing out of lakes tend to have wavelengths below 560 nanometers, this finding would support Gardner and colleagues’ conclusion, since it would suggest that the river tends to carry more sediment when it flows into lakes than when it flows out of lakes.

Choice A is incorrect because finding that sections of the Missouri River with high chlorophyll-a levels have wavelengths between 490 and 560 nanometers would be irrelevant to the researchers’ conclusion that segments of the river flowing into lakes are richer in sediment than are segments of the river flowing out of lakes. This finding would not indicate anything about segments flowing

into or out of lakes. Choice B is incorrect because finding that lakes through which the Missouri River passes have higher wavelengths near their shores than in the center would not support the researchers' conclusion that segments of the river flowing into lakes have more sediment than segments flowing out of lakes. This finding would suggest only that there is more sediment around the edges of lakes than in their centers, which does not have any direct bearing on the researchers' conclusion about river segments flowing into and out of lakes. Choice C is incorrect because finding that most segments of the Missouri River have wavelengths significantly higher than 560 nanometers would suggest that most segments of the river are high in sediment, not that segments flowing into lakes are higher in sediment than segments flowing out of lakes. Only a comparison of river segments flowing into lakes with segments flowing out of lakes can support the researchers' conclusion.

Question Difficulty: Hard

Question ID 3bc75372

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 3bc75372

“Looking Back on Girlhood” is an 1892 short story by Sarah Orne Jewett. In the story, the narrator explains that she prefers her hometown to other places she has visited: _____

Which quotation from “Looking Back on Girlhood” most effectively illustrates this claim?

- A. “There is always something fresh, something to be traced or discovered, something particularly to be remembered.”
- B. “Two large rivers join just below the village at the head of tide-water, and these, with the great inflow from the sea, make a magnificent stream, bordered by lovely green fields that slope gently to long lines of willows at the water’s edge.”
- C. “I have had a good deal of journeying in my life, and taken great delight in it, but I have never taken greater delight than in my rides and drives and tramps and voyages within the borders of my native town.”
- D. “There is never-ending pleasure in making one’s self familiar with such a region.”

ID: 3bc75372 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most effectively illustrates the claim that the narrator prefers her hometown to other places she has visited. In the quotation, the narrator compares how she feels about places she has traveled to how she feels about the town she’s from. The narrator states that although the many journeys she has made in her lifetime have brought her much pleasure, she has gained the most enjoyment from her experiences inside the borders of her hometown.

Choice A is incorrect because it doesn’t express that the narrator likes her hometown better than other places she has visited; instead, the quotation describes something unspecified in positive terms, saying it continues to offer new things to explore and remember. Choice B is incorrect. Although the quotation praises a landscape surrounding a village, it doesn’t specify that this village is the narrator’s hometown, nor does it express a preference for this village over other places the narrator has visited. Choice D is incorrect. Although the quotation describes enjoyment from getting to know a region, it doesn’t compare the narrator’s feelings for this region with her feelings for her hometown.

Question Difficulty: Hard

Question ID 4d2e2f18

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 4d2e2f18

Partial List of Candidate Species for De-extinction

Common name	Scientific name	Became extinct
Huia	<i>Heteralocha acutirostris</i>	1907
Caribbean monk seal	<i>Monachus tropicalis</i>	1952
Passenger pigeon	<i>Ectopistes migratorius</i>	1914
Saber-toothed cat	<i>Smilodon</i>	11,000 years before present
Woolly mammoth	<i>Mammuthus primigenius</i>	6,400 years before present

The passage of time is among the many obstacles faced by scientists who are pursuing de-extinction efforts—that is, efforts to use breeding or a mixture of cloning and genetic engineering to bring back extinct species. Specifically, researchers are concerned that the longer a species has been extinct, the less likely it is that a suitable habitat still exists for that species. Among candidate species for de-extinction, this problem would be especially concerning for the _____

Which choice most effectively uses data from the table to complete the statement?

- A. passenger pigeon (*Ectopistes migratorius*), which became extinct only a few years after the huia (*Heteralocha acutirostris*).
- B. saber-toothed cat (*Smilodon*), which became extinct 11,000 years ago.
- C. woolly mammoth (*Mammuthus primigenius*), which became extinct several thousand years before the saber-toothed cat (*Smilodon*).
- D. Caribbean monk seal (*Monachus tropicalis*), which became extinct in 1952.

ID: 4d2e2f18 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it uses data from the table to complete the statement regarding a species for which the problem of finding a suitable habitat would be especially concerning. For each candidate species, the table lists its common name, scientific name, and when the species became extinct. The text explains that scientists pursuing de-extinction for the candidate species also consider the length of time that has passed since the species’ extinction, noting that the longer the animal has been extinct, the less likely it is that a suitable habitat would exist for the species today. The possibility of not having a suitable habitat would be especially concerning for the candidate species for which the most time has passed since its extinction. According to the table this species would be the saber-toothed cat, which became extinct 11,000 years before present.

Choice A is incorrect because it compares the time since the extinction of the passenger pigeon to the time since the extinction of the huia instead of citing the species listed in the table that has been extinct the longest (the saber-toothed cat). The text indicates that the longer a species has been extinct, the lower the chances are that a suitable habitat exists for it today. Neither the table nor the text supports the claim that the passenger pigeon is especially vulnerable to this problem. Choice C is incorrect because the text states that the longer a species has been extinct, the less likely it is that there would be a suitable habitat available for the species today. So, the problem would be especially concerning for the saber-toothed cat, which became extinct several thousand years before the woolly mammoth did—not the other way around. Choice D is incorrect because the text states that the longer a species has been extinct, the lower the chances are that a suitable habitat would be available for that species today. According to the table, the Caribbean monk seal became extinct in 1952, which is the most recent extinction listed for a candidate species in the table.

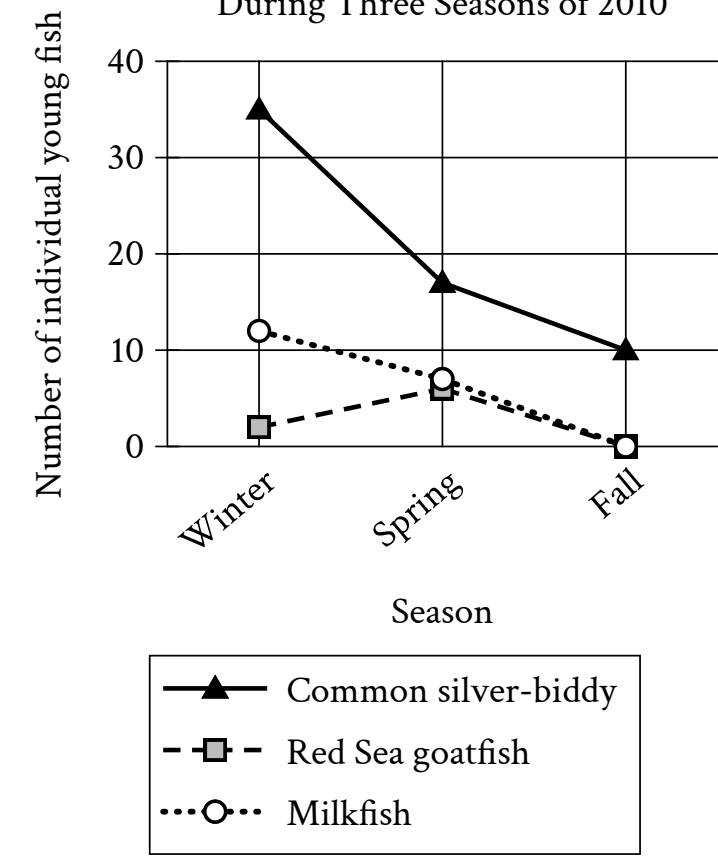
Question Difficulty: Hard

Question ID 532afcc2

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 532afcc2

Number of Young Fish Collected at Mangrove Sites in the Egyptian Red Sea During Three Seasons of 2010



Mangroves are trees or bushes that grow on the coastlines of seas and rivers. Areas with mangroves are great places for young fish since they help keep these fish fed and protected while they grow. To study the importance of mangroves to young fish, researchers Mohamed A.Abu El-Regal and Nesreen K. Ibrahim collected and identified young fish from three different mangrove sites in the Egyptian Red Sea. They collected fish in the winter, spring, and autumn of 2010, collecting a total of 269 fish from 21 different species. For some species, more fish were collected in the winter than the other two seasons, for instance: _____

Which choice most effectively uses the data in the graph to complete the example?

- A. more common silver-biddy and milkfish were collected in the winter than in either of the other two seasons.
- B. the common silver-biddy was collected more frequently than the other two species in all three seasons.
- C. in the spring, researchers collected more Red Sea goldfish than they collected from the other two species.
- D. in the fall, researchers collected 10 common silver-biddy but collected no milkfish or Red Sea goatfish.

Correct Answer: A

Rationale

Choice A is the best answer. The claim is about which fish were collected more in winter than in other seasons. By comparing the number of common silver-biddy and milkfish collected in each season, we can see that more of these fish were collected in winter than in any other season.

Choice B is incorrect. The claim is about which fish were collected more in winter than in other seasons. This statement compares collections across the three species of fish, rather than comparing collections of individual types of fish across seasons. Choice C is incorrect. The claim is about which fish were collected more in winter than in other seasons. This statement is about spring, rather than winter. Choice D is incorrect. The claim is about which fish were collected more in winter than in other seasons. This statement is about fall, rather than winter, fish collections.

Question Difficulty: Hard

Question ID 134f63f5

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 134f63f5

An archaeological team led by Piotr Bieliński and Sultan al-Bakri found remnants of a 4,000-year-old Bronze Age board game at a site in Oman. Little is left of the game except a stone board, which is carved with a grid and has places to hold game pieces. Some scholars claim that the game was largely played by traders.

Which finding, if true, would most directly support the scholars’ claim?

- A. Other examples of the game dating to the same period have been found in the remains of several homes in the region, including in one home that may have belonged to a trader.
- B. Similar games have been found in other sites dating to the same period that were connected to the site in Oman via trade routes.
- C. The other known examples of the game dating to the same period have been found along routes that seem to have been used primarily by traders at the time.
- D. Remnants of other goods have been found at the site in Oman that probably also reached the location through trade.

ID: 134f63f5 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents a finding that, if true, would most directly support the scholars’ claim about the board game. The text explains that the remains of a 4,000-year-old board game were found in Oman. The text then states that scholars claim this board game was played mostly by traders. If the other known examples of this board game from the same time period were discovered along routes that seem to have been used primarily by traders, this finding would directly support the scholars’ claim because it suggests that the game was largely played by traders who brought it with them for entertainment as they traveled.

Choice A is incorrect because this finding would suggest only that a single trader may have possessed examples of the board game, perhaps for the purpose of trading or selling the game to residents of Oman. For this reason, the finding wouldn’t directly support the scholars’ claim that the majority of the game’s players were traders. Choice B is incorrect because this finding doesn’t mention the board game at all, referring only to similar games found at other sites, and would therefore provide no direct support for the scholars’ claim about the board game. Choice D is incorrect because this finding doesn’t mention the board game at all, referring only to the remains of other goods found at the site in Oman, and would therefore provide no direct support for the scholars’ claim about the board game.

Question Difficulty: Hard

Question ID aad72f33

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: aad72f33

There Is Confusion is a 1924 novel by Jessie Redmon Fauset. In the novel, the narrator portrays the character Joanna as someone who admires ambition in other people to the exclusion of all other qualities: _____

Which quotation from *There Is Confusion* most effectively illustrates the claim?

- A. “Joanna was mightily interested in people who had a ‘purpose’ in life. Otherwise not at all.”
- B. “Indeed from the very beginning Joanna showed her preference for her father.”
- C. “Joanna was like her father not only so far as ambition was concerned but also in her willingness to work.”
- D. “She had a good sense of logic, a strong power of concentration, and a remarkably retentive and visualizing memory.”

ID: aad72f33 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most effectively presents a quotation from *There Is Confusion* that illustrates the claim that the narrator portrays Joanna as admiring the quality of ambition, or the determination to achieve something, and no other qualities in other people. By describing Joanna as not being interested in people unless they have "a ‘purpose’ in life"—that is, a goal they are determined to achieve—in which case she is very interested in them, the quotation reveals that Joanna cares only about others’ ambition.

Choice B is incorrect because this quotation indicates only that Joanna has a preference for her father, without giving a reason for that preference; therefore, it doesn’t illustrate the claim that Joanna cares only about others’ ambition. Choice C is incorrect because this quotation doesn’t illustrate that Joanna greatly admires the quality of ambition in others; it refers to Joanna’s similarity to her father "so far as ambition was concerned" but doesn’t reveal how she (or her father) views that quality. Choice D is incorrect because this quotation describes qualities Joanna possesses—praising her logic, concentration, and memory—instead of Joanna’s interest in other people’s qualities.

Question Difficulty: Hard

Question ID 6ab18e1e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 6ab18e1e

Participants’ Evaluation of the Likelihood That Robots Can Work Effectively in Different Occupations

Occupation	Somewhat or very unlikely (%)	Neutral (%)	Somewhat or very likely (%)
television news anchor	24	9	67
teacher	37	16	47
firefighter	62	9	30
surgeon	74	9	16
tour guide	10	8	82
Rows in table may not add up to 100 due to rounding.			

Georgia Tech roboticists De’Aira Bryant and Ayanna Howard, along with ethicist Jason Borenstein, were interested in people’s perceptions of robots’ competence. They recruited participants and asked them how likely they think it is that a robot could do the work required in various occupations. Participants’ evaluations varied widely depending on which occupation was being considered; for example, _____

Which choice most effectively uses data from the table to complete the example?

- A. 47% of participants believe that it is somewhat or very likely that a robot could work effectively as a teacher, but 37% of respondents believe that it is somewhat or very unlikely that a robot could do so.
- B. 9% of participants were neutral about whether a robot could work effectively as a television news anchor, which is the same percent of participants who were neutral when asked about a robot working as a surgeon.
- C. 82% of participants believe that it is somewhat or very likely that a robot could work effectively as a tour guide, but only 16% believe that it is somewhat or very likely that a robot could work as a surgeon.
- D. 62% of participants believe that it is somewhat or very unlikely that a robot could work effectively as a firefighter.

ID: 6ab18e1e Answer

Correct Answer: C

Rationale

Choice C is the best answer because it effectively uses data from the table to complete the example of variations in participants’ evaluations. The table shows participants’ evaluations of the likelihood that robots could work effectively in different occupations. The text asserts that participants’ evaluations varied widely depending on the occupation being considered and introduces an example supporting that assertion. The data from the table showing that 82% of participants believe that it is somewhat or very

likely that a robot could work effectively as a tour guide but only 16% of participants believe that it is somewhat or very likely that a robot could work effectively as a surgeon illustrate this assertion: those data show participants' views changing substantially with the occupation being considered.

Choice A is incorrect because it does not describe data that illustrate the assertion that participants' evaluations varied widely depending on which occupation was being considered. Although this choice accurately describes data in the table, data about participants' responses when considering a single occupation—teaching—could not be an example of people's views changing substantially depending on the occupation being considered. Choice B is incorrect because it identifies a similarity in participants' responses when considering two different occupations, but the assertion that the example is intended to illustrate is that participants' evaluations varied widely depending on the occupation being considered. Although this choice accurately describes data in the table, those data do not illustrate the assertion in the text. Choice D is incorrect because it does not describe data that illustrate the assertion that participants' evaluations varied widely depending on which occupation was being considered. Although this choice accurately describes data in the table, data showing participants' evaluation of just one occupation could not be an example of participants' evaluations changing depending on the occupation under evaluation.

Question Difficulty: Hard

Question ID eb14b292

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: eb14b292

In the 1970s, a roughly 60,000-year-old piece of hyena bone marked with nine notches was discovered at a site in western France once inhabited by Neanderthals. Although many believe that only modern humans developed systems for notating numbers, one archaeologist asserts that this artifact may be a sign that Neanderthals also recorded numerical information. The notches on the bone are unevenly spaced but approximately parallel, and microscopic analysis reveals that they were made with a single stone tool; according to the archaeologist, this suggests that the notches were all made at one time by one individual as a means of counting something.

Which finding, if true, would most directly weaken the underlined claim?

- A. Parallel lines are a common feature in modern humans’ early systems for recording numerical information.
- B. More than nine approximately parallel notches made with a different stone tool are present on another artifact found at a site in western France.
- C. It would have taken careful effort to make evenly spaced lines on bone with the stone tools typically used by Neanderthals.
- D. Decorative art discovered at another Neanderthal site in western France primarily features patterns of unevenly spaced parallel lines.

ID: eb14b292 Answer

Correct Answer: D

Rationale

Choice D is the best answer. The archeologist bases their claim on the fact that the hyena bone features unevenly spaced parallel notches. But if unevenly spaced parallel lines were found on "decorative art" at another Neanderthal site, it would suggest that the hyena bone is probably decorative art as well—not a counting tool.

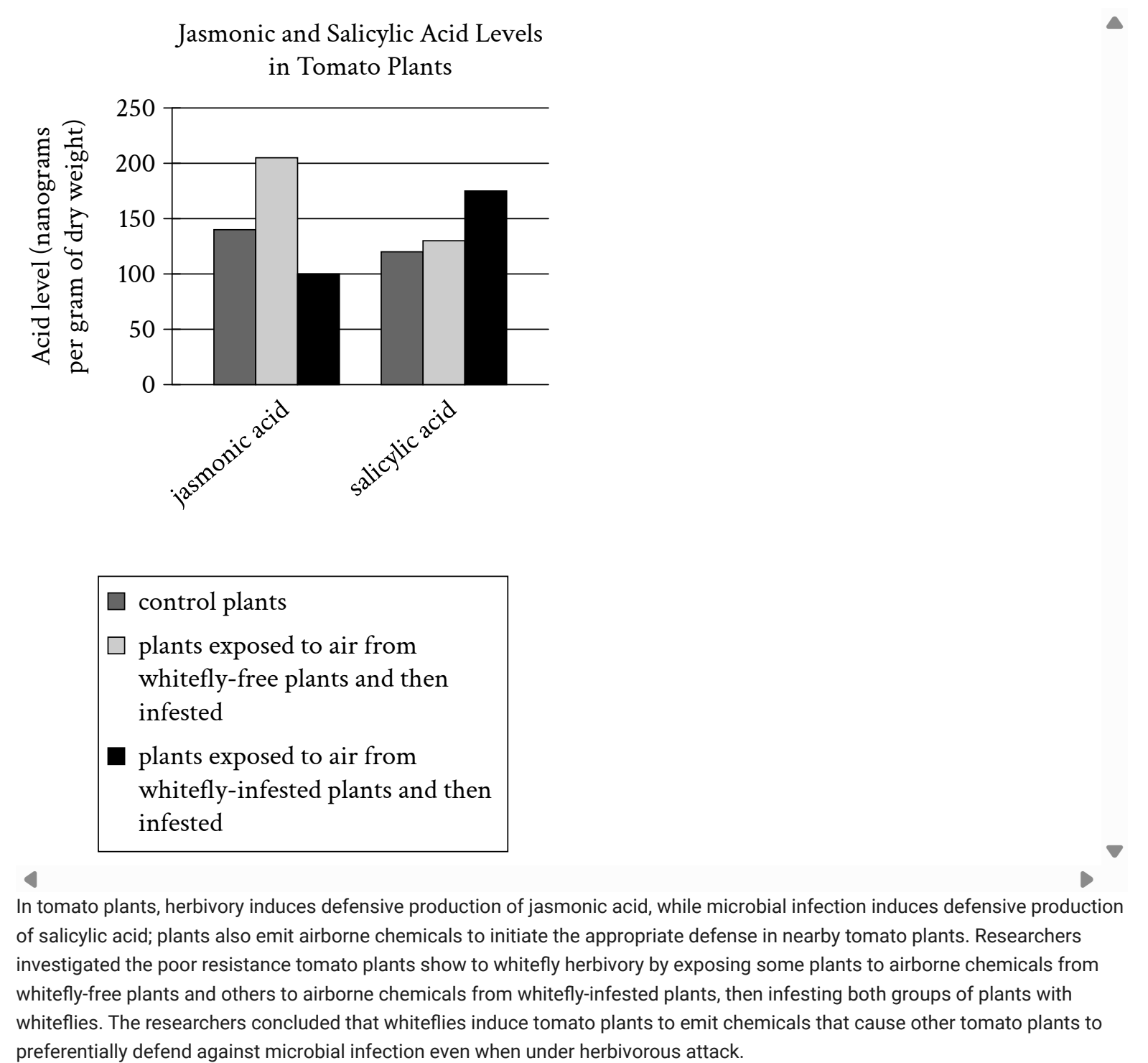
Choice A is incorrect. This choice doesn’t weaken the underlined claim. If anything, it might actually strengthen the claim: assuming we can make an inference about Neanderthals using a fact about early humans, it provides more support for the idea that the person who made the notches was counting something. Choice B is incorrect. This choice doesn’t weaken the underlined claim. The fact that another artifact had parallel notches made with a different stone tool doesn’t tell us anything about the use of either artifact. For all we know, they could both have been used for counting. Choice C is incorrect. This choice doesn’t weaken the underlined claim. The fact that it took effort to make the lines doesn’t tell us anything about what the lines were for.

Question Difficulty: Hard

Question ID 77001549

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 77001549



Which choice best describes data from the graph that support the researchers' conclusion?

- A. When plants exposed to air from whitefly-free plants were infested, they produced more jasmonic acid than did control plants, whereas when plants exposed to air from whitefly-infested plants were infested, they produced less jasmonic acid and more salicylic acid than did control plants.
- B. When plants exposed to air from whitefly-infested plants were infested, they produced less jasmonic acid than salicylic acid, whereas when plants exposed to air from whitefly-free plants were infested, they produced about the same amount of jasmonic acid and salicylic acid.
- C. When plants exposed to air from whitefly-free plants were infested, they produced both jasmonic acid and salicylic acid, whereas when plants exposed to air from whitefly-infested plants were infested, they exclusively produced salicylic acid.
- D. When plants exposed to air from whitefly-infested plants were infested, they produced less jasmonic acid than did control plants, whereas when plants exposed to air from whitefly-free plants were infested, they produced more jasmonic acid and salicylic acid than did control plants.

ID: 77001549 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it best describes data from the graph that support the researchers' conclusion about whitefly-induced defenses in tomato plants. According to the text, tomato plants produce airborne chemicals that prompt nearby tomato plants to increase their production of appropriate defensive chemicals, such as jasmonic acid in response to herbivory and salicylic acid in response to microbial infection. The text goes on to indicate that researchers concluded that whiteflies induce tomato plants to emit chemicals that cause nearby plants to defend against microbial infection instead of herbivory from whiteflies. The graph shows that control tomato plants (plants that weren't exposed to any chemicals from nearby tomato plants and weren't subsequently infested with whiteflies) produced about 140 nanograms of jasmonic acid per gram of dry weight and about 120 nanograms of salicylic acid per gram of dry weight, which indicates the baseline levels of these defensive chemicals in tomato plants. The graph also shows that plants exposed to air from whitefly-free plants produced about 205 nanograms of jasmonic acid per gram of dry weight when subsequently infested by whiteflies, which is more than the amount produced by the control plants. This suggests that when infested with whiteflies, tomato plants that weren't previously exposed to air from nearby whitefly-infested plants begin producing higher levels of jasmonic acid to defend against the infestation. Finally, the graph also shows that plants exposed to air from whitefly-infested plants and then subsequently infested by whiteflies produced approximately 100 nanograms of jasmonic acid per gram of dry weight (which is less than control plants did) and approximately 175 nanograms of salicylic acid per gram of dry weight (which is more than control plants did). This suggests that whiteflies cause tomato plants to emit chemical signals that decrease nearby plants' defenses against whitefly herbivory relative to baseline levels and redirect their defenses toward microbial infection, thereby supporting the researchers' conclusion that whiteflies cause tomato plants to emit airborne chemical signals that induce nearby plants to preferentially defend against microbes even when experiencing herbivory from whiteflies.

Choice B is incorrect. Although the graph shows that tomato plants exposed to whitefly-infested plants produced less jasmonic acid than salicylic acid (about 100 nanograms of jasmonic acid per gram of dry weight vs. about 175 nanograms of salicylic acid per gram of dry weight), and although this might suggest that those plants are therefore better defended against microbial attack than against herbivory, this wouldn't be sufficient to conclude that this is the case: without reference to the relative levels of defensive chemicals produced by the plants in the other experimental conditions, it would be impossible to conclude that exposure to air from whitefly-infested plants either induces or diminishes these plants' defenses to different kinds of threats. Furthermore, the graph shows that plants exposed to air from whitefly-free plants produced about 205 nanograms of jasmonic acid per gram of dry weight and about 130 nanograms of salicylic acid per gram of dry weight, not that they produced the same amount of the two acids. Choice C is incorrect because it inaccurately describes the data in the graph. The graph shows that plants in all three conditions produced both jasmonic and salicylic acid, not that plants exposed to air from whitefly-infested plants produce no jasmonic acid at all. Choice D is incorrect. Although the graph shows that plants exposed to air from whitefly-infested plants produced about 100 nanograms of jasmonic acid per gram of dry weight when infested, which is less than the amount produced by control plants (about 140 nanograms per gram of dry weight), and although the graph shows that plants

exposed to air from whitefly-free plants produced about 205 nanograms of jasmonic acid per gram of dry weight when infested (which is more than the amount produced by control plants) and about 130 nanograms of salicylic acid per gram of dry weight (which is more than the approximately 120 nanograms per gram of dry weight produced by control plants), this wouldn't support the researchers' conclusion that plants exposed to air from whitefly-infested plants preferentially defend against microbial infection—that is, that they increase their levels of salicylic acid and decrease their levels of jasmonic acid relative to control plants. Rather, the data would suggest that exposure to air from whitefly-infested plants reduces plants' defenses against herbivory, but these data wouldn't indicate that whiteflies induce plants to redirect their defenses to guard against microbial infection. Furthermore, the data concerning plants exposed to air from whitefly-free plants merely indicate that these plants increase their defenses against both herbivory and microbial infection when infested by whiteflies.

Question Difficulty: Hard

Question ID de4dc44a

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: de4dc44a

Mean Time (in Seconds) Spent per Flower for Four Pollinator Genera				
Pollinator genus	Seconds per intact pin flower	Seconds per damaged pin flower	Seconds per intact thrum flower	Seconds per damaged thrum flower
<i>Habropoda</i>	2.7	5.4	4.1	9.5
<i>Osmia</i>	5.2	8.2	7.1	8.3
<i>Pierid</i>	2.6	4.0	2.4	1.9
<i>Xylocopa</i>	2.3	2.8	2.5	2.2

To study how floral damage affects the behavior of pollinators, such as bees, a team of researchers punched holes in the floral tissue of flowers from the vine yellow jessamine (*Gelsemium sempervirens*), a plant that produces flowers that have either a long pistil and a short stamen (pin morphs) or a short pistil and a long stamen (thrum morphs). The researchers then compared the time different insect pollinators spent visiting intact pin and thrum flowers to the time such pollinators spent visiting the artificially damaged pin and thrum flowers. The researchers concluded that the effect of floral damage on time spent per flower varied by both floral morph and the genus of the pollinator.

- Which choice best describes data from the table that support the researchers’ conclusion?
- A. For pin flowers, damage led to longer times per flower in all pollinator genera, whereas for thrum flowers, damage led to longer times per flower only in *Habropoda* and *Osmia*.
 - B. Compared with pollinators belonging to the genus *Osmia*, pollinators belonging to the genus *Xylocopa* spent less time on damaged pin flowers but more time on damaged thrum flowers.
 - C. Damage led to shorter times per thrum flower in three pollinator genera (*Osmia*, *Pierid*, and *Xylocopa*), whereas it led to longer times per thrum flower in one pollinator genus (*Habropoda*).
 - D. Pollinators belonging to the genus *Habropoda* spent 2.7 seconds on intact pin flowers and 4.1 seconds on intact thrum flowers.

ID: de4dc44a Answer

Correct Answer: A

Rationale

Choice A is the best answer because it describes data from the table that support the researchers’ conclusion that the effect of floral damage on time spent per flower varied by both floral morph and the genus of the pollinator. The table presents the average time pollinators spent per floral morph. The data in the table shows that for pin flowers, the average time spent per flower by all pollinator genera was higher for flowers that had been artificially damaged than for intact flowers. By contrast, for thrum flowers,

the difference in time spent on intact and damaged flowers is seen for only some pollinator genera. This supports the researchers' conclusion that both floral morph and the genus of the pollinator are factors involved in the effect that floral damage has on time pollinators spend per flower.

Choice B is incorrect. The table shows that pollinators belonging to the genus *Xylocopa* spent less time on both damaged pin flowers and damaged thrum flowers than pollinators belonging to the genus *Osmia* did. Choice C is incorrect. The table shows that the artificial damage to the thrum flowers led to shorter average times spent by pollinators on those flowers for only two of the four pollinator genera represented in the table, not three. Furthermore, this choice doesn't address the effect the artificial damage had on pin flowers; thus, even if accurate, this evidence doesn't support the researchers' conclusion that both floral morph and pollinator genus affect time spent per flower when a flower has been damaged. Choice D is incorrect. While this statement is true based on the information in the table, it doesn't provide evidence that supports the researchers' conclusion that the effect of floral damage on time spent per flower varied by both floral morph and the genus of the pollinator because this choice provides information only about how much time one pollinator genus spent on intact flowers.

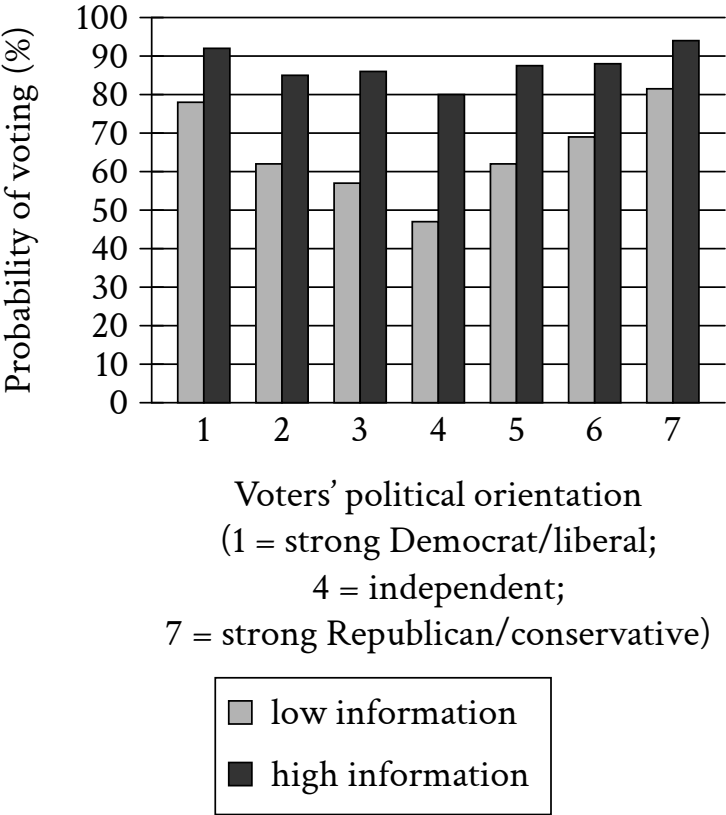
Question Difficulty: Hard

Question ID 13afbff4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 13afbff4

Voters’ Political Orientation, Level of Political Information, and Probability of Voting



Economists Kerwin Kofi Charles and Melvin Stephens Jr. investigated a variety of factors that influence voter turnout in the United States. Using survey data that revealed whether respondents voted in national elections and how knowledgeable respondents are about politics, Charles and Stephens claim that the likelihood of voting is driven in part by potential voters’ confidence in their assessments of candidates—essentially, the more informed voters are about politics, the more confident they are at evaluating whether candidates share their views, and thus the more likely they are to vote.

Which choice best describes data in the graph that support Charles and Stephens’s claim?

- A. At each point on the political orientation scale, high-information voters were more likely than low-information voters to vote.
- B. Only low-information voters who identify as independents had a voting probability below 50%.
- C. The closer that low-information voters are to the ends of the political orientation scale, the more likely they were to vote.
- D. High-information voters were more likely to identify as strong Democrats or strong Republicans than low-information voters were.

Correct Answer: A

Rationale

Choice A is the best answer because it uses data from the graph to effectively support Charles and Stephens's claim about how level of information affects voters. The graph shows the probability of voting for both high- and low-information voters in seven categories of political orientation. Charles and Stephens claim that "the more informed voters are about politics...the more likely they are to vote." This statement correctly asserts that the graph shows a higher probability of voting for high-information voters than for low-information voters at each of the seven political orientations. Thus, this statement accurately cites data from the graph that support Charles and Stephens's claim about how level of information affects voters.

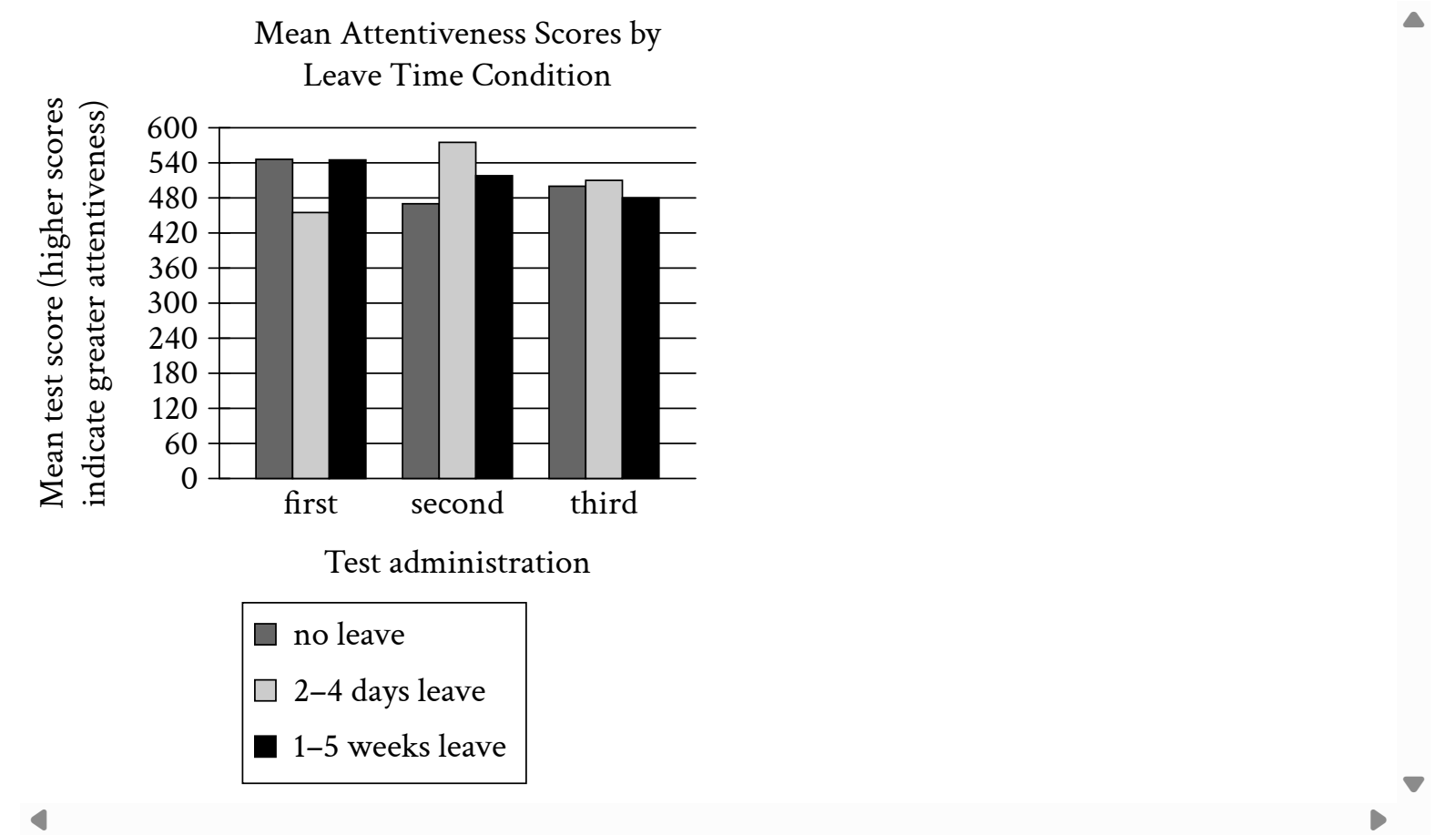
Choice B is incorrect. Although this statement is correct that the only probability in the graph below 50% is for low-information voters categorized as independent (orientation 4), the claim in question is about the relative likelihood that low- and high-information voters will vote, and without some reference to high-information voters, this statement cannot help support such a comparison. Choice C is incorrect. Although this statement is correct that the highest probabilities of voting for low-information voters are at the ends of the orientation scale (1 and 7), the claim in question is about the relative likelihood that low- and high-information voters will vote, and without some reference to high-information voters, this statement cannot help support such a comparison. Choice D is incorrect because the graph does not give any information about how many people are represented in any of the categories, so this statement is not based on data from the graph. Furthermore, even if we did have this information, the claim is about how level of information affects voters' probability of voting, not whether they're likely to strongly identify with a particular political party.

Question Difficulty: Hard

Question ID 7d9898dd

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 7d9898dd



To investigate potential cognitive benefits of taking leave from work, psychologist Jan Packer and colleagues conducted a six-month study of Australian university staff members who took no leave from work during the study, took 2–4 days of leave, or took 1–5 weeks of leave. Tests of attentiveness were administered to participants three times during the study: at random for the no-leave staff, and for the rest, one week before their leave, one week following their return to work, and one week after the second test administration. After analyzing the results, the researchers concluded that longer leave times might not confer a greater cognitive benefit than shorter leave times do.

Which choice best describes data from the graph that support the researchers’ conclusion?

- A. In the second test administration, participants who took 2–4 days of leave had higher average attentiveness scores than did those who took no leave, but in the third test administration, those who took no leave had higher average scores than those who took 1–5 weeks of leave.
- B. In the first test administration, participants who took 2–4 days of leave had lower average attentiveness scores than did those who took 1–5 weeks of leave and those who took no leave.
- C. In both the second and third test administrations, participants who took 2–4 days of leave had higher average attentiveness scores than did participants who took 1–5 weeks of leave.

D. In the second and third test administrations, participants who took 2–4 days of leave had higher average attentiveness scores than did those who took no leave.

ID: 7d9898dd Answer

Correct Answer: C

Rationale

Choice C is the best answer because it describes data from the graph that support Jan Packer and colleagues' conclusion about the effect of leave time on the attentiveness of university employees. According to the text, the researchers' study design included a group of employees who took no leave, a group who took 2–4 days of leave, and a group who took 1–5 weeks of leave. The participants who took leave were tested for attentiveness one week before their leave (the first test administration), one week after their return to work (the second test administration), and two weeks after their return (the third test administration). The participants who took no leave were tested three times at random. The graph shows that at one week after their return to work, participants who took only 2–4 days of leave had an average attentiveness score of between 540 and 600, while participants who took 1–5 weeks of leave had an average score of between 480 and 540. At two weeks after their return to work, those who took only 2–4 days of leave had an average score of between 480 and 540, while those who took 1–5 weeks of leave had an average score of approximately 480. In other words, the graph shows that on both post-leave testing dates, participants with longer leave times had lower average attentiveness scores than those with shorter leave times. Since attentiveness is an indicator of cognitive functioning, these data confirm Packer and colleagues' conclusion that longer leave times might not confer a greater cognitive benefit than shorter leave times do.

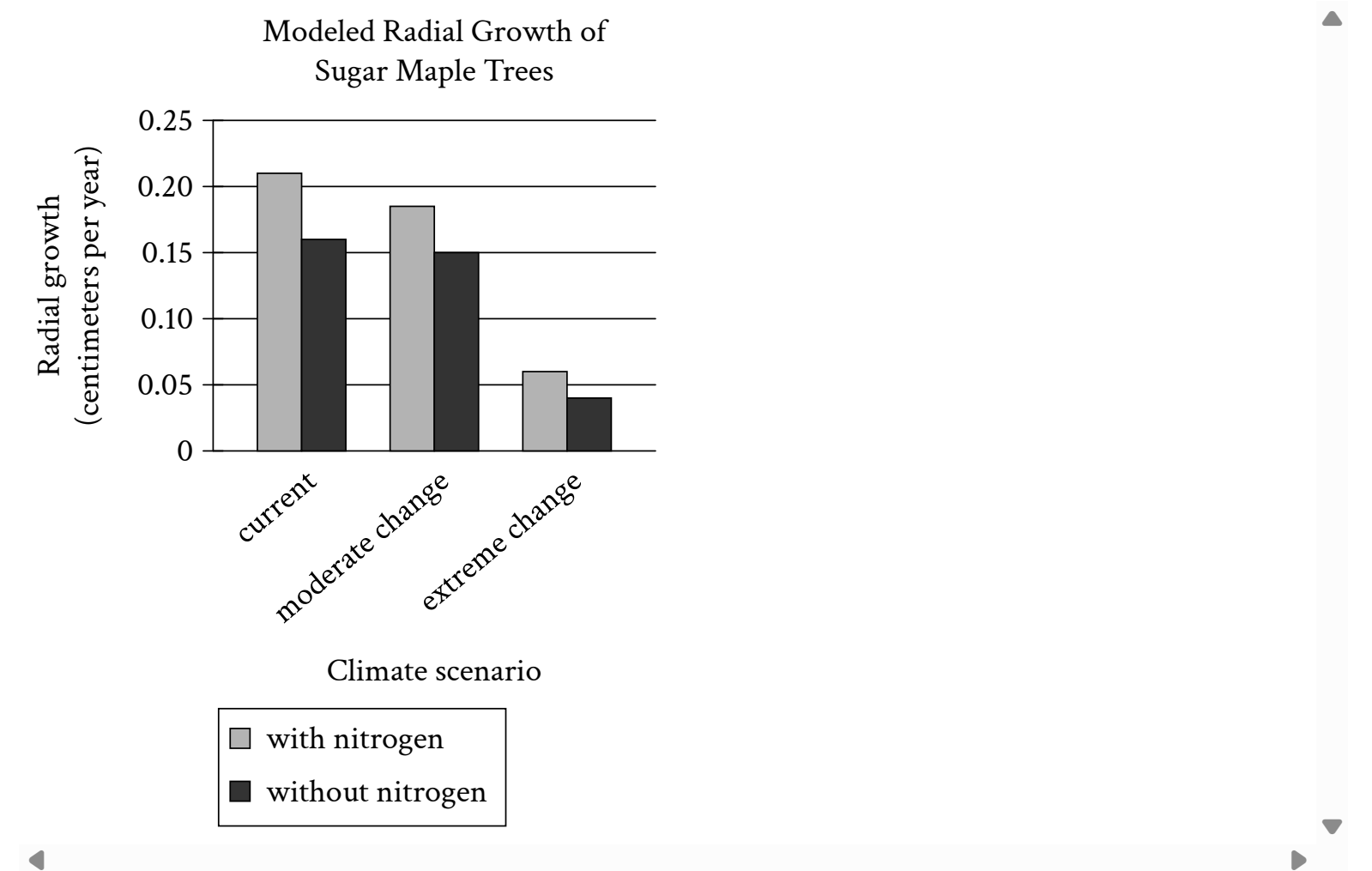
Choice A is incorrect. The graph does show that in the second test administration, participants who took 2–4 days of leave had higher average attentiveness scores than did those who took no leave and also shows that in the third test administration, those who took no leave had higher average scores than those who took 1–5 weeks of leave. But neither of these findings has a direct bearing on the researchers' conclusion, which concerns a comparison of participants who took 2–4 days of leave with those who took 1–5 weeks, rather than a comparison of either group with participants who took no leave. Choice B is incorrect. Although the graph does show that in the first test administration, participants who took 2–4 days of leave had lower average attentiveness scores than did those who took 1–5 weeks of leave and those who took no leave, this test administration occurred before any participants went on leave; therefore, these results have no bearing on the researchers' conclusion about how the amount of leave taken by participants affected their cognitive functioning. Choice D is incorrect. Although the graph does show that in the second and third test administrations, participants who took 2–4 days of leave had higher average attentiveness scores than did those who took no leave, the researchers' conclusion is about the effects of short leave compared with the effects of long leave, not the effects of short leave compared with the effects of no leave. These results are therefore irrelevant to the conclusion.

Question Difficulty: Hard

Question ID 6c717268

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 6c717268



Inés Ibáñez and colleagues studied a forest site in which some sugar maple trees receive periodic fertilization with nitrogen to mimic the broader trend of increasing anthropogenic nitrogen deposition in soil. Ibáñez and colleagues modeled the radial growth of the trees with and without nitrogen fertilization under three different climate scenarios (the current climate, moderate change, and extreme change). Although they found that climate change would negatively affect growth, they concluded that anthropogenic nitrogen deposition could more than offset that effect provided that change is moderate rather than extreme.

- Which choice best describes data from the graph that support Ibáñez and colleagues' conclusion?
- A. Growth with nitrogen under the current climate exceeded growth with nitrogen under moderate change, but the latter exceeded growth without nitrogen under extreme change.
 - B. Growth without nitrogen under the current climate exceeded growth without nitrogen under moderate change, but the latter exceeded growth with nitrogen under extreme change.
 - C. Growth with nitrogen under moderate change exceeded growth without nitrogen under moderate change, but the latter exceeded growth without nitrogen under extreme change.

D. Growth with nitrogen under moderate change exceeded growth without nitrogen under the current climate, but the latter exceeded growth with nitrogen under extreme change.

ID: 6c717268 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it describes data from the graph that support Ibáñez and colleagues' conclusion that increasing anthropogenic nitrogen deposition can compensate for the negative effect of climate change on tree growth if that change is moderate but not if it's extreme. The bar graph shows the growth of sugar maple trees with and without nitrogen fertilization under three different climate-change scenarios: current conditions, a moderate change, and an extreme change. According to the graph, radial growth without nitrogen fertilization is projected to be about 0.16 centimeters (cm) under current conditions, 0.15 cm under a moderate change, and 0.04 cm under an extreme change. The graph also shows that with nitrogen fertilization, growth is projected to be about 0.18 centimeters under a moderate change but only about 0.06 centimeters under an extreme change. Thus, the data in the graph support the researchers' conclusion by showing greater growth for a moderate change using nitrogen fertilization than they do either under current conditions without nitrogen fertilization or under an extreme change with nitrogen fertilization.

Choice A is incorrect. Although it accurately represents the data in the graph, this fact pattern doesn't support Ibáñez and colleagues' conclusion that the decline in radial growth due to climate change will be partly offset by higher levels of anthropogenic nitrogen, but only if change to the climate is moderate and not if it's extreme. To support this would require comparing radial growth without nitrogen fertilization under current climate conditions to the growth with nitrogen fertilization under both moderate and extreme changes. This choice mentions only growth with nitrogen fertilization under current climate conditions and moderate change and growth without nitrogen fertilization under an extreme change, which don't provide a basis to determine whether higher nitrogen in the future will be able to offset reduced growth due to climate change. Choice B is incorrect. Although it accurately represents the data in the graph, this fact pattern doesn't support Ibáñez and colleagues' conclusion that the decline in radial growth due to climate change will be partly offset by higher levels of atmospheric nitrogen, but only if change to the climate is moderate and not if it's extreme. The support needed would compare radial growth under current climate conditions without nitrogen fertilization to the growth with nitrogen fertilization under moderate and extreme changes. This choice mentions only growth without nitrogen fertilization under current conditions and moderate change and growth with nitrogen fertilization under extreme change, which don't provide a basis to determine whether higher nitrogen in the future will be able to offset reduced growth due to climate change. Choice C is incorrect. Although it accurately represents the data in the graph, this fact pattern doesn't support Ibáñez and colleagues' conclusion that the decline in radial growth due to climate change will be partly offset by higher levels of atmospheric nitrogen, but only if change to the climate is moderate and not if it's extreme. The support needed would compare radial growth without adding nitrogen under current climate conditions to the growth with nitrogen fertilization under moderate and extreme changes. This choice mentions only the growth with and without nitrogen fertilization under moderate climate change and growth without nitrogen fertilization under extreme change, which don't provide a basis to determine whether higher nitrogen in the future will be able to offset reduced growth due to climate change.

Question Difficulty: Hard

Question ID 68c23005

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 68c23005

Roasted green chiles are a popular ingredient in Southwestern cuisine, but the traditional roasting method of burning propane is not environmentally friendly. To see if solar power could provide a better alternative, engineer Kenneth Armijo and his team roasted batches of green chiles using between 38 and 42 heliostats, which are devices that concentrate sunlight. The team was successful in reaching the same roasting temperature used in traditional propane roasting, but they found that propane yielded faster results. While the fastest solar-roasted green chiles took six minutes, batches using propane took only four. Armijo hypothesizes that they can reduce the roasting time for solar-roasted green chiles by using more heliostats.

Which finding, if true, would most directly support Armijo’s hypothesis?

- A. The temperature inside the roasting drum is distributed more evenly when roasting green chiles with solar power than with propane.
- B. Attempts to roast green chiles using 50 heliostats yields results in fewer than six minutes.
- C. Green chile connoisseurs prefer the flavor of solar-roasted green chiles over the flavor of propane-roasted green chiles.
- D. The skins of solar-roasted green chiles are easier to peel than the skins of propane-roasted green chiles.

ID: 68c23005 Answer

Correct Answer: B

Rationale

Choice B is the best answer. Armijo believes that using more heliostats will speed up the roasting process, and this finding shows that with 50 heliostats—more than the number of heliostats already used—the roasting time is indeed reduced.

Choice A is incorrect. The evenness of temperature in the roasting drum doesn’t tell us about the speed of the roasting process, which is what Armijo’s hypothesis is concerned with. Choice C is incorrect. Armijo’s hypothesis is focused on the speed of the roasting process, not the flavor of the resulting roasted chiles. Choice D is incorrect. Though Armijo’s hypothesis mentions a benefit of solar-roasting green chiles (easier peeling), it doesn’t address the speed of the roasting process.

Question Difficulty: Hard

Question ID 188877fa

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 188877fa

A student in a political science course is writing a paper on Aristotle's *The Politics*, in which Aristotle offers his opinion on political instability and gives advice on how constitutions can be preserved. Aristotle observes that different forms of government can fall in different ways—for example, oligarchies might grant power to military leaders during wartime who refuse to relinquish that power during peacetime—but some methods of preserving order apply across all forms of government. The student claims that in particular Aristotle asserts that in a healthy state obedience to law must be as close to absolute as possible and that even minor infractions should not be ignored.

Which quotation from a philosopher’s analysis of *The Politics* would best support the student’s claim?

- A. “When constructing his argument regarding the characteristics of a well-functioning government, Aristotle asserts that ‘Transgression creeps in unperceived and at last ruins the state,’ illustrating this idea with a comparison to frequent small expenditures slowly and almost imperceptibly chipping away at a fortune until it is ultimately depleted.”
- B. “When Aristotle writes on the necessity of avoiding corruption in government, he proposes that ‘every state should be so administered and so regulated by law that its magistrates cannot possibly make money.’ In particular, he thinks oligarchies are particularly susceptible to corruption through bribery.”
- C. “When Aristotle considers the health of constitutions, he states that ‘Constitutions are preserved when their destroyers are at a distance, and sometimes also because they are near, for the fear of them makes the government keep in hand the constitution.’ He holds that rulers who wish to see constitutions preserved must continually remind the populace of the dangers that would result from a constitutional collapse.”
- D. “When contrasting different forms of government, Aristotle holds that ‘oligarchies may last, not from any inherent stability in such forms of government, but because the rulers are on good terms both with the unenfranchised and with the governing classes.’ That is, oligarchic leaders who wish to hold on to power will introduce members of disenfranchised classes into government in a participatory role.”

ID: 188877fa Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents the quotation that best supports the student’s claim that in *The Politics*, Aristotle gives advice on preserving constitutions—preventing governments from falling and maintaining order—and specifically asserts that in a healthy state, laws must be followed as strictly as possible and infractions should not be overlooked even if they are minor. The philosopher states that when Aristotle builds his argument about the characteristics of a well-functioning government, Aristotle asserts that transgression, or violation of law, will ruin the state if it "creeps in unperceived," or goes unnoticed. The philosopher then adds that Aristotle illustrates this point by comparing the situation to one in which small but frequent expenses diminish a fortune almost unnoticeably until, eventually, the fortune is entirely gone. In other words, the philosopher indicates that Aristotle makes the point that total obedience to law preserves a healthy state while even small violations, if ignored, will undermine the health of the state.

Choice B is incorrect because the philosopher addresses Aristotle's observation about corruption within the government (in particular, preventing the possibility that members of the government can take bribes), and although corruption can involve infractions, the observation is about a subset of people within the state and isn't directly connected to the importance of upholding total obedience to the law throughout the state. Choice C is incorrect because the philosopher discusses Aristotle's point about those who would intentionally destroy a constitution altogether and the need for rulers to remind the populace that it would be dangerous for a constitution to collapse, but neither idea is directly connected to the importance of upholding total obedience to the law. Choice D is incorrect because the philosopher explains that Aristotle makes the point that oligarchic leaders may retain power by having members of disenfranchised classes participate in government alongside governing classes, and this point doesn't address the importance of ensuring obedience to the law and addressing even minor violations.

Question Difficulty: Hard

Question ID 31789d69

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 31789d69

Under normal atmospheric pressure at Earth’s surface, water molecules form a tetrahedral network stabilized by hydrogen bonds between adjacent molecules. Extreme high pressure, such as can be found in deep ocean waters, destabilizes these bonds and compresses water’s structure, allowing water molecules within organisms to permeate proteins and impede crucial biological functions; yet deep-sea organisms known as piezophiles have adapted to extreme pressure. Studies have found a positive correlation between the depths that various piezophiles inhabit and concentrations of a compound called trimethylamine N-oxide (TMAO) in their muscle tissues, which has led a team of researchers to hypothesize that TMAO reduces water’s compressibility.

- Which finding, if true, would most directly support the researchers’ hypothesis?
- A. Water molecules are found to be impervious to TMAO even when the water molecules’ tetrahedral configuration has been distorted by high pressure.
 - B. Examination of TMAO’s molecular structure shows that TMAO molecules retain their shape even as pressure increases.
 - C. A positive correlation is found between concentrations of TMAO and the rate at which water’s molecular structure compresses as pressure increases.
 - D. Analysis of water’s molecular structure under high pressure reveals that hydrogen bonds are more stable when TMAO is present than when it is not.

ID: 31789d69 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents a finding that, if true, would support the researchers’ hypothesis that TMAO reduces water’s compressibility. The text explains that at great depths in the ocean, extreme pressure compresses the molecular structure of water by destabilizing the hydrogen bonds between adjacent molecules, thereby allowing water to penetrate proteins and harm the associated organisms. However, deep-sea organisms called piezophiles have adapted to live at these depths and previous studies show a positive correlation between the depth at which a piezophile species lives and the species’ level of the compound TMAO. Because this hypothesis links TMAO levels with reduced compressibility of water’s tetrahedral molecular structure, a finding that TMAO helps maintain the hydrogen bonds between water molecules under high pressure would strongly support that hypothesis.

Choice A is incorrect. Although the researchers’ hypothesis suggests a relationship between TMAO and water molecules’ tetrahedral molecular structure, that relationship involves TMAO helping maintain water’s tetrahedral molecular structure under high pressure; as presented in the text, the hypothesis doesn’t contend that water molecules are impervious to, or incapable of being penetrated by, TMAO. Choice B is incorrect because the text discusses how the molecular structure of water, not TMAO, is compressed under extreme pressure and never addresses how TMAO might be affected by such pressure. Choice C is incorrect because the researchers’ hypothesis holds that water under extreme pressure is more resistant, not less, to being compressed when TMAO concentrations are higher. Moreover, the positive correlation mentioned in the text is between TMAO concentrations

and the depths at which piezophiles live, not between concentrations of TMAO and the rate at which water's molecular structure compresses as pressure increases.

Question Difficulty: Hard

Question ID 73d9532c

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 73d9532c

Land Area Covered by Native Flowering Plants at a Site in Antarctica			
Species	Area covered in 2009 (in square meters)	Area covered in 2018 (in square meters)	Percent increase in area covered from 2009 to 2018
<i>Deschampsia antarctica</i>	1,230	1,576	28%
<i>Colobanthus quitensis</i>	6.9	10.7	55%

The only flowering plant species native to Antarctica, *Colobanthus quitensis* and *Deschampsia antarctica* grow in places where the earth remains free of ice for much of the year. Botanist Niccoletta Cannone wondered how the warming of Antarctica’s climate in recent years had affected these species, so she visited a site in Antarctica, first in 2009 and later in 2018, to count the number of plants growing there. Cannone found that the area of land covered by the two species had significantly expanded during the nine-year period. While both species likely benefited from warming temperatures, *Colobanthus quitensis* _____

Which choice most effectively uses data from the table to complete the comparison?

- A. suppressed the growth of *Deschampsia antarctica*, which covered a smaller area of land in 2018 than it had in 2009.
- B. saw a greater expansion than *Deschampsia antarctica* did, increasing the area of land it covered by more than half.
- C. showed a greater increase in the average size of individual plants than *Deschampsia antarctica* did.
- D. covered land newly freed from ice at a rate 55% faster than that of *Deschampsia antarctica*.

ID: 73d9532c Answer

Correct Answer: B

Rationale

Choice B is the best answer because it most effectively uses data from the table to complete the comparison of how *Colobanthus quitensis* benefited from warming temperatures with how *Deschampsia antarctica* benefited from them. The table shows the land area covered by these two plant species at a site in Antarctica. According to the table, *Colobanthus quitensis* increased the area it covered by 55% from 2009 to 2018, whereas *Deschampsia antarctica* increased the area it covered by 28% during the same period. It therefore follows that *Colobanthus quitensis* saw a greater expansion than *Deschampsia antarctica* did and that *Colobanthus quitensis* increased the area of land it covered by more than half.

Choice A is incorrect because according to the table, *Deschampsia antarctica* covered 1,230 square meters of land in 2009 and 1,576 square meters of land in 2018. *Deschampsia antarctica* therefore covered a larger, not a smaller, area of land in 2018 than in 2009. Moreover, there’s no information in the text or the table that suggests that one species of the plant suppressed the other.

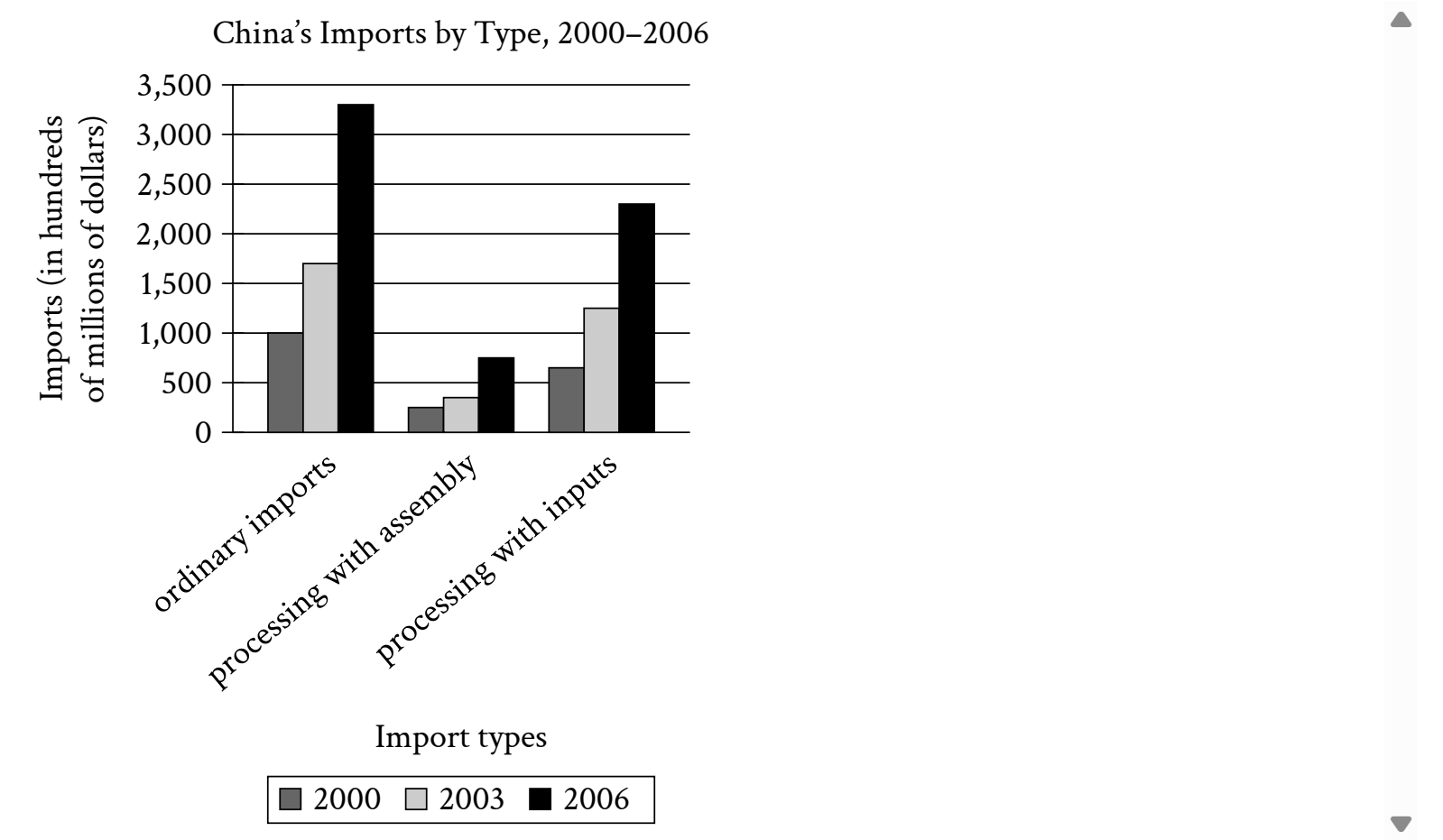
Choice C is incorrect because it inaccurately describes the data in the table. The table shows the land area covered by *Colobanthus quitensis* and *Deschampsia antarctica* and the percent increase in area covered by the two species from 2009 to 2018, not the average size of individual plants belonging to the two species. The data in the table therefore can't be used to make a comparison of the increase in individual plants' average size. Choice D is incorrect because the table shows the land area covered by *Colobanthus quitensis* and *Deschampsia antarctica* and the percent increase in area covered by the two species from 2009 to 2018, not the rate at which the species increased the area they covered. Moreover, there's nothing in the table or the text that suggests that the areas covered by the two species were newly freed from ice.

Question Difficulty: Hard

Question ID 03a802ae

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 03a802ae



A student is researching the Chinese government’s 1992 shift to a market economy that emphasizes trade liberalization. One means of trade liberalization involves expanding from ordinary imports into an emphasis on processing imports, which have two types: processing with assembly (in which a firm obtains raw materials from a foreign trading partner without payment and sells the final goods to that partner, charging for assembly) and processing with inputs (in which a firm expends capital to buy raw materials from a trading partner, processes them into final goods, and sells those goods to whichever trading partner it chooses). The student asserts that while initial efforts at trade liberalization were shaped by Chinese firms’ limited capital, this situation resolved during the 2000s.

- Which choice best describes data from the graph that support the student’s assertion?
- A. Processing imports with inputs were greater than both ordinary imports and processing imports with assembly in 2006.
 - B. From 2000 to 2006, processing imports with inputs rose much more sharply than processing imports with assembly did.
 - C. From 2000 to 2006, neither processing imports with inputs nor processing imports with assembly were greater than ordinary imports.

D. Processing imports with assembly were greater in 2006 than processing imports with inputs in 2000.

ID: 03a802ae Answer

Correct Answer: B

Rationale

Choice B is the best answer because it describes data from the graph that best support the student's assertion that initial efforts at trade liberalization in China were shaped by firms having limited capital (assets available for use) and that this situation resolved during the 2000s. The text explains that an approach to trade liberalization involves engaging in processing imports, one type of which doesn't require payment to a trade partner (processing with assembly) and one type of which requires upfront payment to a trade partner for raw materials (processing with inputs). The graph, which presents China's imports for ordinary imports and both types of processing imports in the years 2000, 2003, and 2006, shows that while processing imports with assembly rose from about 250 hundred million dollars in 2000 to about 750 hundred million dollars in 2006, processing imports with inputs rose much more sharply, increasing from approximately 650 hundred million dollars in 2000 to about 2,300 hundred million dollars in 2006. Because processing with inputs requires firms to pay for materials (expending capital) and processing with assembly doesn't, the sharper rise in processing imports with inputs suggests that Chinese firms' assets—and thus their ability to engage in that type of processing imports—were relatively limited in (and before) 2000 and then substantially increased from 2000 to 2006. In other words, the data suggest that the situation of having limited capital resolved during the 2000s.

Choice A is incorrect because the graph indicates that ordinary imports were greater than both types of processing imports in 2006, not that processing imports with inputs were greater than ordinary imports and processing imports with assembly that year. Choice C is incorrect because the observation that ordinary imports were greater than both types of processing imports in 2000, 2003, and 2006 doesn't address a change within any type of imports from 2000 to 2006, and an indication of a change in that period that might be related to the availability of assets is needed to support the assertion that the situation of having limited capital resolved during the 2000s. Choice D is incorrect because the fact that processing imports with assembly were greater at the end of the period from 2000 to 2006 than processing imports with inputs were at the start of the same period doesn't address a change within either type of imports during the period, and an indication of such a change that might be related to the availability of assets is needed to support the assertion that the situation of having limited capital resolved during the 2000s.

Question Difficulty: Hard

Question ID 413240ee

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 413240ee

Guilds in French Cities in the Late Eighteenth Century

City	Date	Inhabitants	Number of guilds	Inhabitants per guild
Paris	1766	600,000	133	4,511
Bordeaux	1762	80,000	49	1,633
Rouen	1775	74,000	112	661
Lyon	1789	143,000	72	1,986

Guilds—local associations of artisans and merchants in the same industry—were widespread in France from the medieval period until the late eighteenth century. But guilds were much more numerous relative to the population in some cities than in others: for example, _____

Which choice most effectively uses data from the table to complete the statement?

- A. there were 49 guilds in Bordeaux but 72 guilds in Lyon despite the two cities having nearly equal numbers of inhabitants.
- B. Lyon had far fewer inhabitants than Paris did but had many more guilds.
- C. there was one guild for every 661 inhabitants in Rouen but one guild for every 4,511 inhabitants in Paris.
- D. Paris had 133 guilds and 600,000 inhabitants, or one guild for every 4,511 inhabitants.

ID: 413240ee Answer

Correct Answer: C

Rationale

Choice C is the best answer. The claim we’re trying to prove is that guilds were much more numerous relative to population in some cities than others. This choice describes the guilds per number of inhabitants in two cities (Rouen and Paris), showing significant differences between guilds relative to population in these cities.

Choice A is incorrect. This choice misreads the table. Bordeaux had 80,000 inhabitants, according to the table, while Lyon had 143,000, so it isn’t correct to say that they had "nearly equal numbers of inhabitants." Lyon had almost twice as many inhabitants.

Choice B is incorrect. This choice misreads the table. Although Lyon did have fewer inhabitants than Paris, it didn’t have more guilds—Paris had 133 guilds versus Lyon’s 72. Choice D is incorrect. This choice doesn’t support the claim. To show that guilds were more numerous relative to population in some cities than others, we would need to compare at least two cities, and this choice only mentions one.

Question Difficulty: Hard

Question ID ed02db2b

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: ed02db2b

Swahili Speakers in Three African Countries

Country	Approximate number of speakers (in millions)	Estimated % of population
Democratic Republic of the Congo	22	25
Kenya	55	100
Tanzania	61	100

Swahili is estimated to be the first language of up to 15 million people worldwide. It’s also an officially recognized language in Tanzania, Kenya, and the Democratic Republic of the Congo, which means these countries use Swahili in government documents and proceedings. But even in countries where almost everyone speaks Swahili, for many it isn’t their first language but is instead their second, third, or even fourth language.

Which choice most effectively uses data from the table to support the underlined claim?

- A. Tanzania has approximately 61 million Swahili speakers, which is much more than the estimated total number of people worldwide for whom Swahili is their first language.
- B. Tanzania is estimated to have at most 15 million Swahili speakers, while the country’s total population is approximately 61 million people.
- C. Approximately 100 percent of the people who speak Swahili as their first language live in Kenya, which has a total population of approximately 55 million people.
- D. Approximately 100 percent of Kenya’s population speaks Swahili, while only about 25 percent of the Democratic Republic of the Congo’s population speaks Swahili.

ID: ed02db2b Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most effectively uses data from the table to support the underlined claim. The text indicates that Swahili is the first language of up to 15 million people worldwide. The text goes on to claim, in the underlined portion, that even in countries where nearly everyone speaks Swahili, many of the language’s speakers don’t have Swahili as their first language. The table indicates that 61 million people in Tanzania, which amounts to 100 percent of the population, speak Swahili. If 61 million people in Tanzania speak Swahili, but only 15 million people worldwide have Swahili as their first language, that means there are many people in Tanzania who speak Swahili as a language other than their first language. This information about Swahili speakers in Tanzania therefore supports the claim that many Swahili speakers in countries where nearly everyone speaks Swahili speak it as a language other than their first language (such as their second, third, or fourth language).

Choice B is incorrect because it doesn't accurately describe information in the table. According to the table, Tanzania has 61 million Swahili speakers, not at most 15 million Swahili speakers. Additionally, the table indicates that 100 percent of Tanzania's population speak Swahili, which means that the number of Swahili speakers in the country and the country's total population should be the same, not that they should differ by such a large amount. Choice C is incorrect because there's no information in the table or the text that indicates where people who speak Swahili as their first language live. Although Kenya's total population can be inferred from the table—if Kenya has 55 million Swahili speakers and 100% of Kenya's population speak Swahili, then Kenya must have a population of 55 million people—nothing suggests that all the people who speak Swahili as their first language live in a single country, let alone that they all live in Kenya. Choice D is incorrect. Although the table does indicate that 100 percent of Kenya's population and 25 percent of the Democratic Republic of the Congo's population speak Swahili, this comparison is irrelevant to the claim that Swahili isn't the first language of many of its speakers even in countries where almost everyone speaks Swahili. On its own, a difference in the proportions of the population who speak Swahili cannot reveal whether those Swahili speakers have Swahili as their first language or a subsequent language.

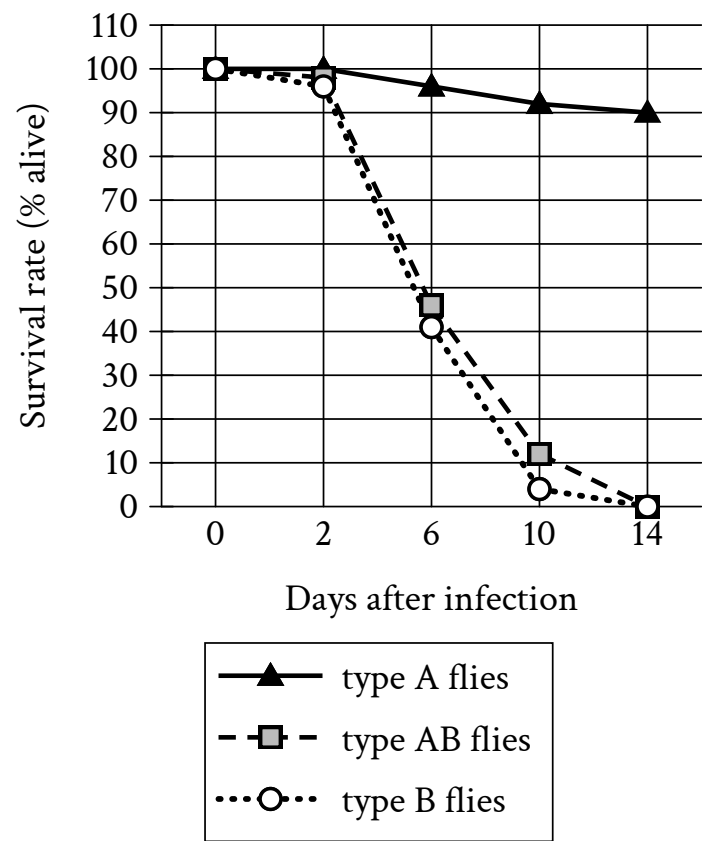
Question Difficulty: Hard

Question ID 96d09770

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 96d09770

Average Survival of Fruit Flies following Infection



In a study of the evolution of *DptA* and *DptB*—*Diptericin* genes encoding antimicrobial peptides that combat pathogens and foster beneficial microbes in fruit flies (*Drosophila*)—researchers assessed *Drosophila melanogaster* resistance to pathogenic infections by *Providencia rettgeri* and *Acetobacter sicerae*, bacteria common in the flies’ environments. Subjects included flies identified by mutations silencing *DptA*, *DptB*, or both *DptA* and *DptB* (termed types A, B, and AB, respectively). In conjunction with the observation that resistance to *P. rettgeri* correlates with *DptA* activity but is not significantly affected by *DptB* activity, data in the graph of survival rates post-*A. sicerae* infection suggest that _____

- Which completion of the text is best supported by data in the graph?
- A. *DptA* confers defense against *A. sicerae* regardless of the presence of *DptB*.
 - B. *DptB* protects against only one bacteria species, whereas *DptA* protects against multiple species.
 - C. *DptB* may have developed as a specific defense against *A. sicerae*.
 - D. defense against *A. sicerae* is strongest when both *DptA* and *DptB* are present.

Correct Answer: C

Rationale

Choice C is the best answer because it most logically completes the text based on supporting data in the graph. The text indicates that in the fly *D. melanogaster*, *DptA* and *DptB* are genes that encode peptides that both fight pathogens and promote beneficial microbes. Researchers tested *D. melanogaster*'s resistance to *P. rettgeri* and *A. sicerae* bacteria based on which variation of the peptide-encoding gene the flies exhibit: *DptA* silenced (referred to as type A), *DptB* silenced (type B), or both silenced (type AB). The text also indicates that resistance to *P. rettgeri* correlates with *DptA* activity but not with *DptB* activity (which would manifest as type B flies surviving at a higher rate than other fly types when exposed to *P. rettgeri*). The graph shows the post-*A. sicerae* infection results, which indicate that *DptB* activity was most strongly associated with survival, whereas *DptA* activity was not (manifesting in the graph as the type A flies having greater survival rates than the other fly types). In other words, when *DptA* activity was silenced, the flies showed relatively high survival rates, but when *DptB* activity was silenced, whether on its own or in conjunction with *DptA* activity being silenced, survival rates were low, suggesting that *DptB* may have developed as a specific defense against *A. sicerae*.

Choice A is incorrect. The graph suggests that *DptA* activity is associated with a low rate of survival, not a high one. Furthermore, the graph shows results for flies where *DptA* alone was silenced, *DptB* alone was silenced, and both were silenced and thus does not show any flies with activity in both *DptA* and *DptB*, which would be necessary to determine whether *DptA* conferred defense against *A. sicerae* in the presence of *DptB*. Choice B is incorrect. Only two bacteria species were considered in the text: *P. rettgeri* and *A. sicerae*. The text and graph taken together suggest that activity in *DptA* is associated with resistance to *P. rettgeri* while *DptB* activity is not, and that *DptB* activity is associated with resistance to *A. sicerae* while *DptA* is not. There is no further information to suggest one genetic type confers resistance to a greater number of pathogens than the other. Choice D is incorrect. The graph does not address flies with activity in both *DptA* and *DptB*. All flies represented in the graph had one or both of *DptA* and *DptB* silenced, or inactive.

Question Difficulty: Hard

Question ID 26ab8fef

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 26ab8fef

Initially observed in 2017, the interstellar object ‘Oumuamua is the first object of its kind to be seen in our solar system. Researchers have been puzzled because its acceleration cannot be entirely explained by the gravitational pull of nearby bodies: there must be a nongravitational influence on its velocity and trajectory. Some previously suggested explanations for this nongravitational acceleration involve mechanisms that are unlikely or unrealistic, such as geometric effects from ‘Oumuamua being potentially composed of several spatially separated bodies. Now, Jennifer Bergner and colleagues propose that the nongravitational acceleration is due to the gaseous expulsion of entrapped hydrogen from ‘Oumuamua’s water-rich icy body.

- Which statement, if true, would most strongly support the claim made by Bergner and colleagues about the cause of ‘Oumuamua’s acceleration?
- A. Existing proposed models of outgassing from ‘Oumuamua include the direct conversion of nitrogen or carbon monoxide from a solid to a gaseous state without becoming liquid, but these models have theoretical or observational inconsistencies.
 - B. ‘Oumuamua’s trajectory is inconsistent with a nongravitational acceleration that would be caused by the release of hydrogen gas resulting from the processing of water ice (H₂O), but the interstellar object’s observable properties can be explained if it has a significant component of molecular hydrogen ice (H₂).
 - C. Since nongravitational accelerations of interstellar objects are several orders of magnitude weaker than gravitational accelerations, deviation from behavior that could be fully attributed to gravitational pull has been detected on a limited number of objects similar to ‘Oumuamua.
 - D. Exposure to interstellar cosmic radiation can result in the formation of embedded pockets of hydrogen gas in water ice; moreover, when traveling through the solar system, ‘Oumuamua experienced warming sufficient to alter its icy structure and allow for outgassing.

ID: 26ab8fef Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents findings that, if true, would support the claim made by Bergner and colleagues that the nongravitational acceleration of ‘Oumuamua is due to the expulsion of entrapped hydrogen. The text first introduces the observation of a unique interstellar object named ‘Oumuamua and goes on to explain that the object exhibited nongravitational acceleration that could not be fully attributed to the expected cause: gravitational pull of nearby celestial bodies. The text concludes by stating that Bergner and colleagues claim that the nongravitational acceleration is caused by expulsion of hydrogen gas from ‘Oumuamua’s water-rich icy body. To support this claim requires evidence that hydrogen gas could be present within ‘Oumuamua at all, which this answer choice presents: cosmic radiation can result in embedded pockets of hydrogen gas in water ice. Additionally, evidence that this gas can be released from such a body is required to fully support the claim, which this answer choice goes on to provide: ‘Oumuamua experienced sufficient warming as it traveled through the solar system to alter its icy structure and release the hydrogen gas. Thus, this answer choice provides the best evidence to support Bergner and colleagues’ claim.

Choice A is incorrect because this answer choice concerns faults with previous models of outgassing from 'Oumuamua of carbon monoxide and nitrogen, which would not support a claim regarding hydrogen outgassing. Furthermore, inconsistencies in other models would not provide evidence in support of a different model or explanation. Choice B is incorrect. The evidence presented in this answer choice would weaken the claim proposed by Bergner and colleagues that the nongravitational acceleration of 'Oumuamua is caused by the expulsion of hydrogen gas because this answer choice suggests that there is evidence that refutes this claim: 'Oumuamua's trajectory is inconsistent with a nongravitational acceleration caused by the release of hydrogen gas. Furthermore, the remaining portion of this answer choice is unrelated to the claim. Choice C is incorrect because the claim being made by Bergner and colleagues concerns the expulsion of entrapped hydrogen gas, but this answer choice is concerned solely with the differences in magnitude of gravitational and nongravitational acceleration, which would not support Bergner's claim. Furthermore, this answer choice discusses interstellar objects similar to 'Oumuamua, but the text states that 'Oumuamua is the first observed object of its kind in our solar system, so evidence from other, similar bodies would not be available.

Question Difficulty: Hard

Question ID 0fab6d5c

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 0fab6d5c

“The Yellow Wallpaper” is an 1892 short story by Charlotte Perkins Gilman. In the story, the narrator expresses mixed feelings about her surroundings: _____

Which quotation from “The Yellow Wallpaper” most effectively illustrates the claim?

- A. “This wallpaper has a kind of sub-pattern in a different shade, a particularly irritating one, for you can only see it in certain lights, and not clearly then.”
- B. “By moonlight—the moon shines in all night when there is a moon—I wouldn’t know it was the same paper.”
- C. “I’m really getting quite fond of the big room, all but that horrid [wall]paper.”
- D. “The color is repellant, almost revolting; a smouldering, unclean yellow, strangely faded by the slow-turning sunlight.”

ID: 0fab6d5c Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most effectively illustrates the claim that the narrator of "The Yellow Wallpaper" has mixed feelings about her surroundings. She says she is "really getting quite fond of the big room," a positive sentiment, but also describes the room’s wallpaper as "horrid," a negative sentiment. Since some of her feelings about her surroundings are positive and others are negative, they are best described as mixed.

Choice A is incorrect because though the narrator describes the room’s wallpaper as "irritating," a negative sentiment, she does not mention a positive sentiment. Thus, the quotation does not effectively illustrate the claim that the narrator has mixed feelings about her surroundings. Choice B is incorrect because it describes how the appearance of the room’s wallpaper changes at night but does not mention the narrator’s feelings about her surroundings. Choice D is incorrect because though the narrator describes the room’s wallpaper as "repellant," a negative sentiment, she does not mention a positive sentiment. Thus, the quotation does not effectively illustrate the claim that the narrator has mixed feelings about her surroundings.

Question Difficulty: Hard

Question ID 26cc15ca

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 26cc15ca

Gorgets, or necklaces with large pendants, have been part of the ceremonial attire of tribes from the US Southeast for centuries. One of the oldest examples, the Fairfield Gorget, was found in Fairfield, Missouri, in 1958. Its overall design resembles that of other art from the region during the Mississippian period (900–1600 CE). Yet the image on the gorget is of a jaguar—a species whose range doesn’t extend to Missouri. Jaguar images are common in ancient Mexican art, and Mexico lies squarely in the species’ range. Therefore, some scholars argue that long-distance trade in Mexican art objects brought the imagery to Missouri, where a local artist could have adopted it and incorporated it into the Fairfield Gorget.

Which finding, if true, would most strongly support the underlined explanation?

- A. The Fairfield Gorget is dated not to the Mississippian period but instead to the earlier Woodland period, which ended around 900 CE.
- B. The range of the jaguar is shown to have expanded dramatically after the Mississippian period came to a close around 1600 CE.
- C. An ancient Mexican art object is found at a site that dates to the Mississippian period and is close to where the Fairfield Gorget was found.
- D. Certain works by present-day artists from Southeastern tribes reflect outside cultural influences, including contemporary Mexican art.

ID: 26cc15ca Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents a finding that, if true, would most strongly support the underlined explanation that the jaguar imagery on the Fairfield Gorget could have been inspired by art objects brought to Missouri from Mexico. The text describes the Fairfield Gorget as one of the oldest examples of these necklaces, noting that it’s similar to other art from the Mississippian period except for its image of a jaguar. The text goes on to explain that this is unusual because the jaguar’s range didn’t include Missouri. The Fairfield Gorget’s artist likely wouldn’t have encountered a live jaguar, but since such jaguar images were common in ancient Mexican art (and the jaguar’s range did include Mexico), perhaps some of that art inspired the gorget’s artist. Therefore, evidence that an ancient Mexican art object had been found at a site that was close to the Fairfield Gorget in both location and time period would strongly support the explanation that long-distance trade from Mexico took place during the Mississippian period and that jaguar imagery could have reached Missouri by those means.

Choice A is incorrect. The underlined explanation indicates that Mexican artistic influence preceded the creation of the Fairfield Gorget. An artifact from Mexico that appeared in Missouri only after the gorget was created cannot support such a claim. Choice B is incorrect. The underlined explanation pertains to whether the jaguar image on the Fairfield Gorget was suggested to the Mississippian artist who made it by encounters with depictions of jaguars in Mexican art. The appearance of jaguars in Missouri after the Mississippian period cannot provide evidence for such a claim. Choice D is incorrect. The underlined explanation

pertains to influence that Mexican art might have had on Mississippian art, restricted to the period from 900 CE to 1600 CE. The actions of contemporary artists cannot provide evidence for centuries-old networks of artistic influence and exchange.

Question Difficulty: Hard

Question ID 0ebb6a16

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 0ebb6a16

Almost all works of fiction contain references to the progression of time, including the time of day when events in a story take place. In a 2020 study, Allen Kim, Charuta Pethe, and Steven Skiena claim that an observable pattern in such references reflects a shift in human behavior prompted by the spread of electric lighting in the late nineteenth century. The researchers drew this conclusion from an analysis of more than 50,000 novels spanning many centuries and cultures, using software to recognize and tally both specific time references—that is, clock phrases, such as 7 a.m. or 2:30 p.m.—and implied ones, such as mentions of meals typically associated with a particular time of day.

Which finding from the study, if true, would most directly support the researchers’ conclusion?

- A. Novels published after the year 1800 include the clock phrase 10 a.m. less often than novels published before the year 1800 do.
- B. Novels published after 1880 contain significantly more references to activities occurring after 10 p.m. than do novels from earlier periods.
- C. Among novels published in the nineteenth century, implied time references become steadily more common than clock phrases as publication dates approach 1900.
- D. The time references of noon (12 p.m.) and midnight (12 a.m.) are used with roughly the same frequency in the novels.

ID: 0ebb6a16 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents a finding that, if true, would most directly support the researchers’ conclusion that an observable pattern in time references in novels reflects a shift in human behavior prompted by the spread of electric lighting in the late nineteenth century. If novels published after 1880 contain significantly more references to activities occurring after 10 p.m. than novels from earlier periods do, this would suggest a change in human behavior and daily routines enabled by the availability of electric lighting. Before electric lighting—which provided illumination more easily than other available forms of light—many activities ceased after nightfall, so references to late-night activities would be less common in earlier novels. An increase in such references after 1880 would align with the researchers’ conclusion, reflecting an increase in late-night activities made possible by electric lighting.

Choice A is incorrect because a decrease in references to 10 a.m. after the year 1800 would not support the researchers’ conclusion involving a shift in human behavior prompted by the spread of electric lighting toward the end of the 1800s. The time of 10 a.m. is in the morning and, in most places, characterized by daylight, so a change in references to that time would not be clearly linked to the impact of electric lighting. Choice C is incorrect because while an increase in implied time references relative to clock phrases in nineteenth-century novels could suggest a change in writing style or conventions, it does not directly support the conclusion involving a shift in human behavior prompted by the spread of electric lighting. The text indicates that the researchers’ conclusion is based on the content of the time references themselves, not the phrasing used. Choice D is incorrect. If

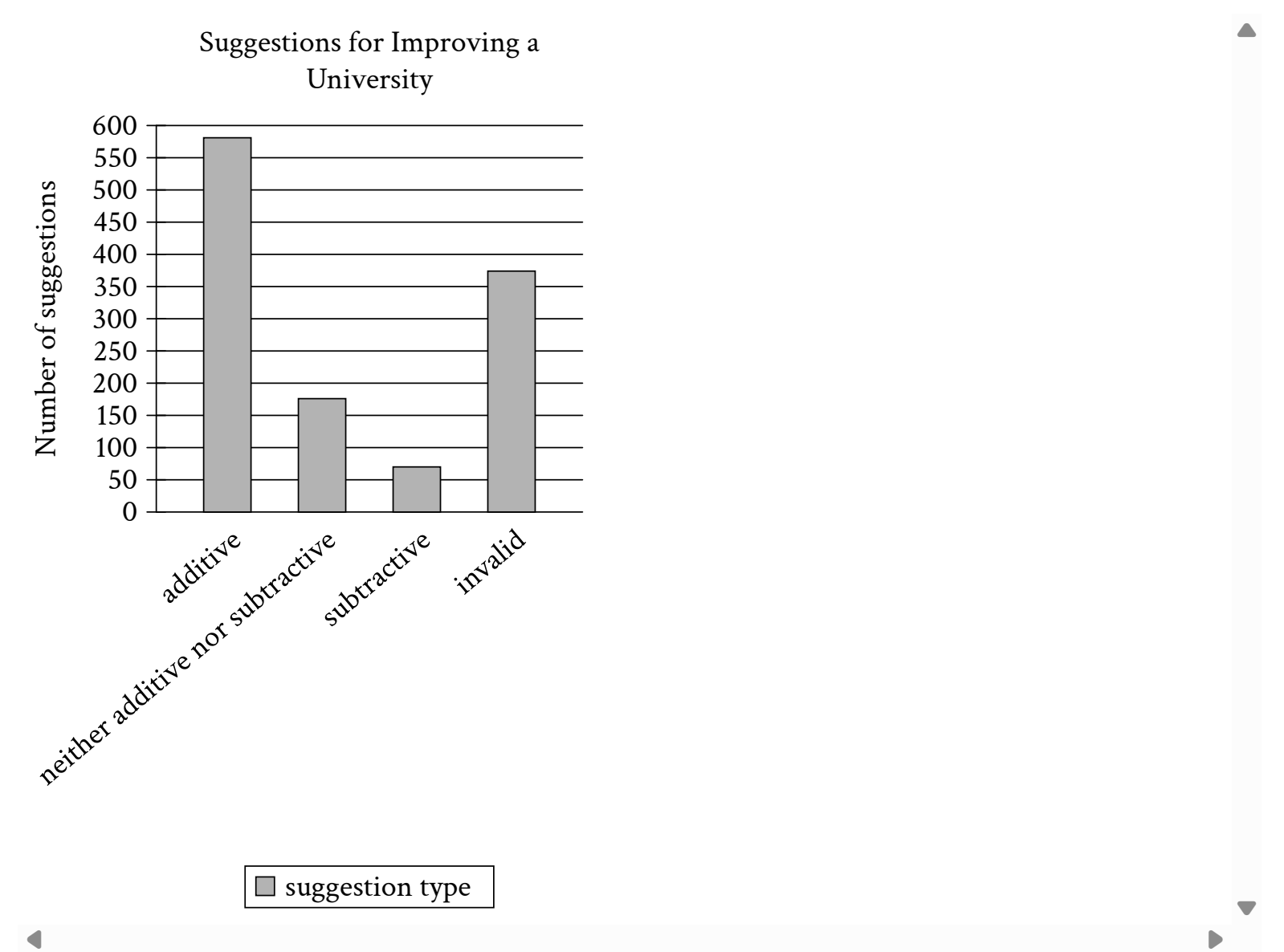
references to noon and midnight are used with roughly the same frequency in all the novels analyzed by the researchers, this would reflect a lack of change in human behavior with regard to time and therefore would not support the researchers' conclusion involving a shift in human behavior that occurred in response to the spread of electric lighting.

Question Difficulty: Hard

Question ID 463bc8a0

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 463bc8a0



Gabrielle Adams and colleagues reviewed suggestions for improving a university that had been submitted to the university’s president. They coded each suggestion as additive (the idea suggested adding something new to the university), subtractive (the idea suggested removing something from the university), neither additive nor subtractive, or invalid (the idea was not comprehensible). The data illustrated people’s tendency to overlook the possibility of removing things to achieve improvements:

Which choice most effectively uses data in the graph to complete the statement?

A. around 175 suggestions were coded as neither additive nor subtractive, whereas around 575 suggestions were coded as additive.

- B. more than 350 suggestions were coded as invalid, whereas fewer than 100 suggestions were coded as subtractive.
- C. fewer than 100 suggestions were coded as subtractive, whereas more than 550 suggestions were coded as additive.
- D. around 575 suggestions were coded as additive, whereas around 175 suggestions were coded as subtractive.

ID: 463bc8a0 Answer

Correct Answer: C

Rationale

Choice C is the best answer. This choice shows that people suggested removing things to achieve improvements a lot less often than they suggested adding things, which supports the claim that people tend not to think of removing things as a likely way to improve the university.

Choice A is incorrect. This choice doesn't support the claim. We are looking to prove that people suggested subtractive means of achieving improvements less often than other means, but this choice doesn't address how often people made subtractive suggestions. Choice B is incorrect. This choice doesn't support the claim. Invalid responses were incomprehensible, so we can't compare what they were suggesting to what was being suggested in subtractive responses. Choice D is incorrect. This choice misreads the graph. Fewer than 100 suggestions were coded as subtractive. 175 is the approximate number of suggestions coded as "neither additive or subtractive."

Question Difficulty: Hard

Question ID 7e3c3b1f

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 7e3c3b1f

In the early 1970s, art historian Michael Baxandall created an approach to viewing art called the “period eye,” which explains how to look at art through the lens of its historical period. Baxandall argued that it is critical that art historians understand and communicate the original social and cultural contexts of older works of art so that it is clear what the artists intended and how the pieces would have been understood by their original viewers. Since it was first introduced, Baxandall’s period eye has significantly influenced the practice of art history.

Which statement, if true, would most strongly support the claim in the underlined sentence?

- A. Art historians working today have largely rejected the idea, common among Baxandall’s predecessors, that artists’ intentions should influence how artworks are interpreted.
- B. For some historical periods, it is difficult for art historians to reconstruct how the original viewers of artworks understood what artists’ intentions for their works were.
- C. Numerous art historians of the late twentieth century and twenty-first century have focused their scholarship on how various artworks were interpreted at the time of their creation.
- D. Many art historians working before the 1970s produced detailed analyses of the social and cultural contexts of older artworks, though few extended that approach to artworks produced in their own lifetimes.

ID: 7e3c3b1f Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents a statement that, if true, would most strongly support the underlined claim that Baxandall’s period eye has significantly influenced the practice of art history since its introduction. The text explains that the period eye—an approach Baxandall introduced in the early 1970s—directs art historians to understand how artworks were originally understood by viewers from the same historical period in which the works were created. If numerous art historians working in the late twentieth and twenty-first centuries—that is, in the decades after Baxandall’s introduction of the approach—have focused on how artworks were interpreted at the time of their creation, their scholarship would correspond to the definition of period eye provided by the text, thereby supporting the claim that the period eye has been significantly influential.

Choice A is incorrect because, as the text explains, Baxandall explicitly recommended examining the social and cultural contexts in which older artworks were produced in order to appreciate the artists’ intentions. Thus, a widespread rejection of artistic intention as an interpretive guide would weaken, not support, the claim that Baxandall influenced the practice of art history. Choice B is incorrect because this statement considers a limitation in applying the period eye approach—namely, the difficulty of reconstructing original viewers’ understanding for some historical periods—instead of addressing whether the approach has influenced the practice of art history. Choice D is incorrect because the statement describes the practice of art historians working before the 1970s, prior to Baxandall’s introduction of the period eye. Pre-1970s scholarship cannot demonstrate Baxandall’s

influence on art history; if anything, it would suggest that some elements of his approach predated him, which has no bearing on whether his particular formulation has shaped the field since.

Question Difficulty: Hard

Question ID 20dab6a6

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 20dab6a6

In the 1980s, many musicians and journalists in the English-speaking world began to draw attention to music from around the globe—such as mbaqanga from South Africa and quan họ from Vietnam—that can’t be easily categorized according to British or North American popular music genres, typically referring to such music as “world music.” While some scholars have welcomed this development for bringing diverse musical forms to prominence in countries where they’d previously been overlooked, musicologist Su Zheng claims that the concept of world music homogenizes highly distinct traditions by reducing them all to a single category.

Which finding about mbaqanga and quan họ, if true, would most directly support Zheng’s claim?

- A. Mbaqanga and quan họ developed independently of each other and have little in common musically.
- B. Mbaqanga is significantly more popular in the English-speaking world than quan họ is.
- C. Mbaqanga and quan họ are now performed by a diverse array of musicians with no direct connections to South Africa or Vietnam.
- D. Mbaqanga and quan họ are highly distinct from British and North American popular music genres but similar to each other.

ID: 20dab6a6 Answer

Correct Answer: A

Rationale

Choice A is the best answer. Zheng’s claim is that the idea of world music “homogenizes” (meaning makes similar) distinct kinds of music by reducing them to one category. In other words, Zheng thinks the concept of world music is a harmful oversimplification of diverse musical forms. To support this claim, we need evidence that these musical traditions are so different from one another that they should not fall into the same category. If it’s true that mbaqanga and quan họ developed separately and have little in common musically, then it wouldn’t make sense to lump them into the same category.

Choice B is incorrect. If true, this wouldn’t affect the claim. To support the claim, we need evidence that these musical traditions are so different from one another that they should not fall into the same category. A difference in popularity doesn’t necessarily mean that the two musical traditions shouldn’t be categorized together: instead, we need to know if the music itself is similar or different. Choice C is incorrect. If true, this wouldn’t affect the claim. To support the claim, we need evidence that these musical traditions are so different from each other that they should not fall into the same category. This choice doesn’t do that. Choice D is incorrect. If true, this would actually weaken the claim. Zheng thinks it’s reductive or oversimplifying to put distinct musical traditions into a single category. But if mbaqanga and quan họ are similar to each other, then it would make sense to put them in the same category.

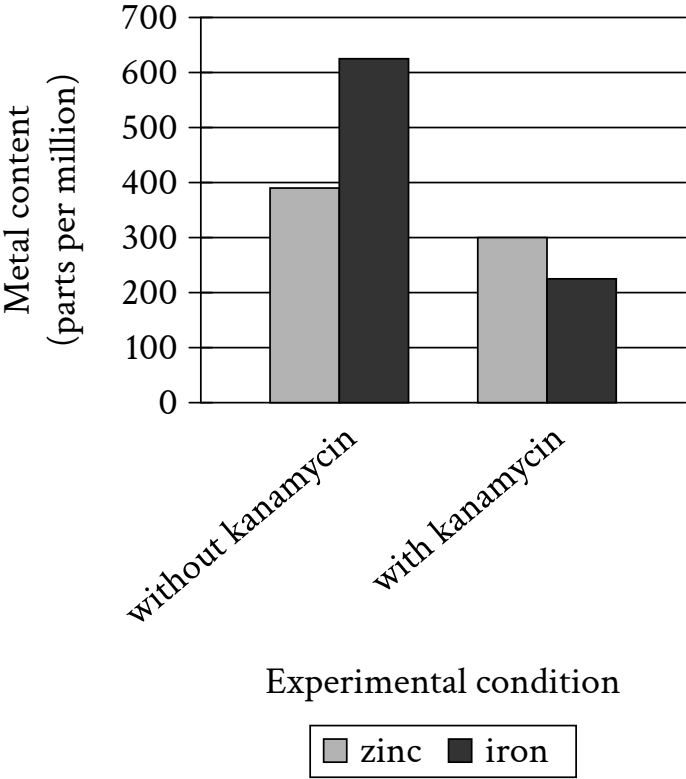
Question Difficulty: Hard

Question ID b0d0ffa8

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: b0d0ffa8

Metal Content of Plants with and without Kanamycin Exposure



Many plants lose their leaf color when exposed to kanamycin, an antibiotic produced by some soil microorganisms. Spelman College biologist Mentewab Ayalew and her colleagues hypothesized that plants’ response to kanamycin exposure involves altering their uptake of metals, such as iron and zinc. The researchers grew two groups of seedlings of the plant *Arabidopsis thaliana*, half of which were exposed to kanamycin and half of which were a control group without exposure to kanamycin, and measured the plants’ metal content five days after germination.

Which choice best describes data in the graph that support Ayalew and her colleagues’ hypothesis?

- A. The control plants contained higher levels of zinc than iron, but plants exposed to kanamycin contained higher levels of iron than zinc.
- B. Both groups of plants contained more than 200 parts per million of both iron and zinc.
- C. Zinc levels were around 300 parts per million in the control plants but nearly 400 parts per million in the plants exposed to kanamycin.

D. The plants exposed to kanamycin showed lower levels of iron and zinc than the control plants did.

ID: b0d0ffa8 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it best describes data in the graph supporting Ayalew and her colleagues' hypothesis that plants' response to kanamycin exposure involves altering their uptake of metals. The graph compares the metal content of two groups of plants, one with kanamycin exposure and a control group without such exposure. The amount of zinc in plants without kanamycin exposure is around 400 parts per million, while the amount of zinc in plants with kanamycin exposure is lower, at around 300 parts per million. Similarly, the amount of iron in plants without kanamycin exposure is a little over 600 parts per million, while the amount of iron in plants with kanamycin exposure is lower, at a little over 200 parts per million. Thus, the graph shows that plants with kanamycin exposure have significantly lower levels of both iron and zinc than the plants without kanamycin exposure. This is evidence supporting the hypothesis that kanamycin exposure results in plants altering their uptake of metals.

Choice A is incorrect because the graph shows that control plants contained higher levels of iron than zinc, not higher levels of zinc than iron; similarly, the plants exposed to kanamycin contained higher levels of zinc than iron, not higher levels of iron than zinc. Choice B is incorrect. Though the claim that both groups of plants contained more than 200 parts per million of both iron and zinc is supported by the graph, this alone does not state whether plants with kanamycin exposure have a different metal content than plants without kanamycin exposure. Choice C is incorrect. The graph shows that the zinc levels for the control plants (those without kanamycin exposure) were around 400 parts per million, not 300 parts per million, and that the zinc levels for plants with kanamycin exposure were around 300 parts per million, not 400 parts per million.

Question Difficulty: Hard

Question ID e31fda4b

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: e31fda4b

Simulated Change in Annual Aquifer Input and Irrigation Output if Precipitation Concentration Increases as Climate Models Predict

Baseline concentration of annual precipitation	% change in water entering aquifers	% change in surface water used for irrigation	% change in groundwater used for irrigation
Precipitation is currently somewhat concentrated	4.9	0.4	0.9
Precipitation is currently evenly distributed	11.0	9.0	7.9

Some climate models for the western United States predict that while total annual precipitation may remain unchanged from the present level, precipitation will become concentrated into fewer but more intense rain and snow events. University of Texas climate scientist Geeta Persad and her colleagues simulated how the amount of water entering aquifers and the amount being used for irrigation purposes would change if this were to occur. Persad and her colleagues concluded that concentration of precipitation into fewer events would result in a higher number of dry days, triggering more irrigation, but that this change in irrigation output is highly sensitive to the baseline concentration of precipitation that currently exists in an area.

Which choice best describes data from the table that support Persad and her colleagues’ conclusion?

- A. If baseline precipitation is somewhat concentrated, the amount of water being used for irrigation will increase 0.4% for surface water and 0.9% for groundwater, whereas the amount of water entering aquifers will increase 11.0% if baseline precipitation is evenly distributed.
- B. If baseline precipitation is somewhat concentrated, water use for irrigation will increase only slightly, whereas it will increase 9.0% for surface water and 7.9% for groundwater if baseline precipitation is evenly distributed.
- C. If baseline precipitation is somewhat concentrated, the amount of water entering aquifers will increase 4.9%, while the amount being used for irrigation will increase 0.4% for surface water and 0.9% for groundwater.
- D. If baseline precipitation is somewhat concentrated, water use for irrigation will decline by a small amount, whereas it will increase 11.0% for surface water and 9.0% for groundwater if baseline precipitation is evenly distributed.

ID: e31fda4b Answer

Correct Answer: B

Rationale

Choice B is the best answer because it describes data from the table that support Persad and her colleagues’ conclusion. The text explains that, according to some climate models, precipitation in the western United States will become concentrated into fewer, more intense rain and snow events. According to the text, Persad and her colleagues concluded that more irrigation will

consequently be needed but that the change in irrigation output will be highly sensitive to, or greatly affected by, the baseline concentration of precipitation in an area. This conclusion is supported by data from the researchers' simulations of changes in annual irrigation output in two different scenarios—one in which an area's annual precipitation is already somewhat concentrated and one in which its annual precipitation is evenly distributed. The table shows that if baseline precipitation is somewhat concentrated, water use for irrigation will increase only slightly, whereas if baseline precipitation is evenly distributed, water use for irrigation will increase much more—9.0% for surface water and 7.9% for groundwater. This difference illustrates the researchers' conclusion that the amount of additional water needed for irrigation will vary greatly depending on how concentrated or spread out the annual precipitation in an area already is.

Choice A is incorrect because it compares changes in the amount of water being used for irrigation to changes in the amount of water entering aquifers. Persad and her colleagues' conclusion doesn't focus on changes to the amount of water entering aquifers; rather, the researchers' conclusion focuses on changes to irrigation output relative to how concentrated or spread out the annual precipitation in an area is. Choice C is incorrect because it supports only part of Persad and her colleagues' conclusion. According to the text, the researchers concluded that the concentration of precipitation into fewer events will trigger more irrigation but that this change in irrigation output will be highly sensitive to an area's baseline concentration of annual precipitation. The data in this choice support the idea that more irrigation will be needed, but to support the rest of the researchers' conclusion, additional data from the table are required to show that the increases in water use for irrigation will vary depending on how concentrated or spread out the annual precipitation in an area already is. Choice D is incorrect because data in the table indicate no declines in water use for irrigation, showing only increases in the form of positive values.

Question Difficulty: Hard

Question ID 2f9b88ce

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 2f9b88ce

Jean-Bernard Caron and colleagues recently discovered a cache of jellyfish fossils in the Burgess Shale, a site in the Canadian Rockies that is rich in fossils from the Cambrian period (over 500 million years ago). Caron and colleagues claim that these are the oldest jellyfish fossils ever discovered. In the past twenty years, two sites in China and the United States have yielded fossils of a similar age that some experts believe are most likely jellyfish due to their shapes and the appearance of projecting tentacles. But Caron and colleagues argue that the apparent tentacles are in fact the comb rows of ctenophores, gelatinous animals that are only distantly related to jellyfish.

Which statement, if true, would most directly weaken the claim by Caron and colleagues about the fossils found in China and the United States?

- A. Sites in the Canadian Rockies from later periods than the Cambrian period have yielded fossils that have been conclusively identified as ctenophore fossils.
- B. The fossils found in China and the United States are so poorly preserved that though they cannot be conclusively identified as jellyfish, they cannot be conclusively identified as ctenophores either.
- C. While ctenophore fossils have been discovered in China and the United States, they have never been discovered in the Burgess Shale.
- D. The fossils discovered by Caron and colleagues in the Burgess Shale were better preserved than the fossils discovered by other researchers in China and the United States.

ID: 2f9b88ce Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents a statement that, if true, would most directly weaken Caron and colleagues' claim that the apparent tentacles in the Chinese and American fossils are actually ctenophore comb rows. If the fossils are so poorly preserved that they cannot be conclusively identified as either organism, neither the claim that they are jellyfish nor, as Caron claims, that they are ctenophores would be supported.

Choice A is incorrect. Caron's claim is that fossils from the US and China are ctenophores, not jellyfish. These fossils are said to be "of a similar age" to the Cambrian fossils found in the Canadian Rockies. And nothing in the text or this choice suggests that the presence or absence of ctenophores after the Cambrian would have any bearing on whether the Cambrian fossils from the US and China are ctenophores. Choice C is incorrect. Caron's claim is that fossils from the US and China are ctenophores, not jellyfish. Nothing in the text suggests that the presence or absence of ctenophores in the Burgess Shale (in Canada) would affect whether the fossils found in the US and China are ctenophores. Choice D is incorrect. Caron's claim is that fossils from the US and China are ctenophores, not jellyfish. Although fossil quality is a plausible issue for the research described in the text, nothing in the text or this choice suggests that the fossils from US and China would have been too poorly preserved for proper identification.

Question Difficulty: Hard

Question ID 7883425c

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 7883425c

In a research paper, a student criticizes some historians of modern African politics, claiming that they have evaluated Patrice Lumumba, the first prime minister of what is now the Democratic Republic of the Congo, primarily as a symbol rather than in terms of his actions.

Which quotation from a work by a historian would best illustrate the student’s claim?

- A. “Lumumba is a difficult figure to evaluate due to the starkly conflicting opinions he inspired during his life and continues to inspire today.”
- B. “The available information makes it clear that Lumumba’s political beliefs and values were largely consistent throughout his career.”
- C. “Lumumba’s practical accomplishments can be passed over quickly; it is mainly as the personification of Congolese independence that he warrants scholarly attention.”
- D. “Many questions remain about Lumumba’s ultimate vision for an independent Congo; without new evidence coming to light, these questions are likely to remain unanswered.”

ID: 7883425c Answer

Correct Answer: C

Rationale

Choice C is the best answer because it illustrates the student’s claim about some historians viewing Lumumba primarily as a symbol. This quotation argues that Lumumba “warrants” (or deserves) “scholarly attention” as a symbol and not for his “practical accomplishments”—that is, his actions as prime minister—which “can be passed over quickly,” or dismissed as being of comparatively little importance. Thus, the quotation expresses the view that the student criticizes some historians for holding.

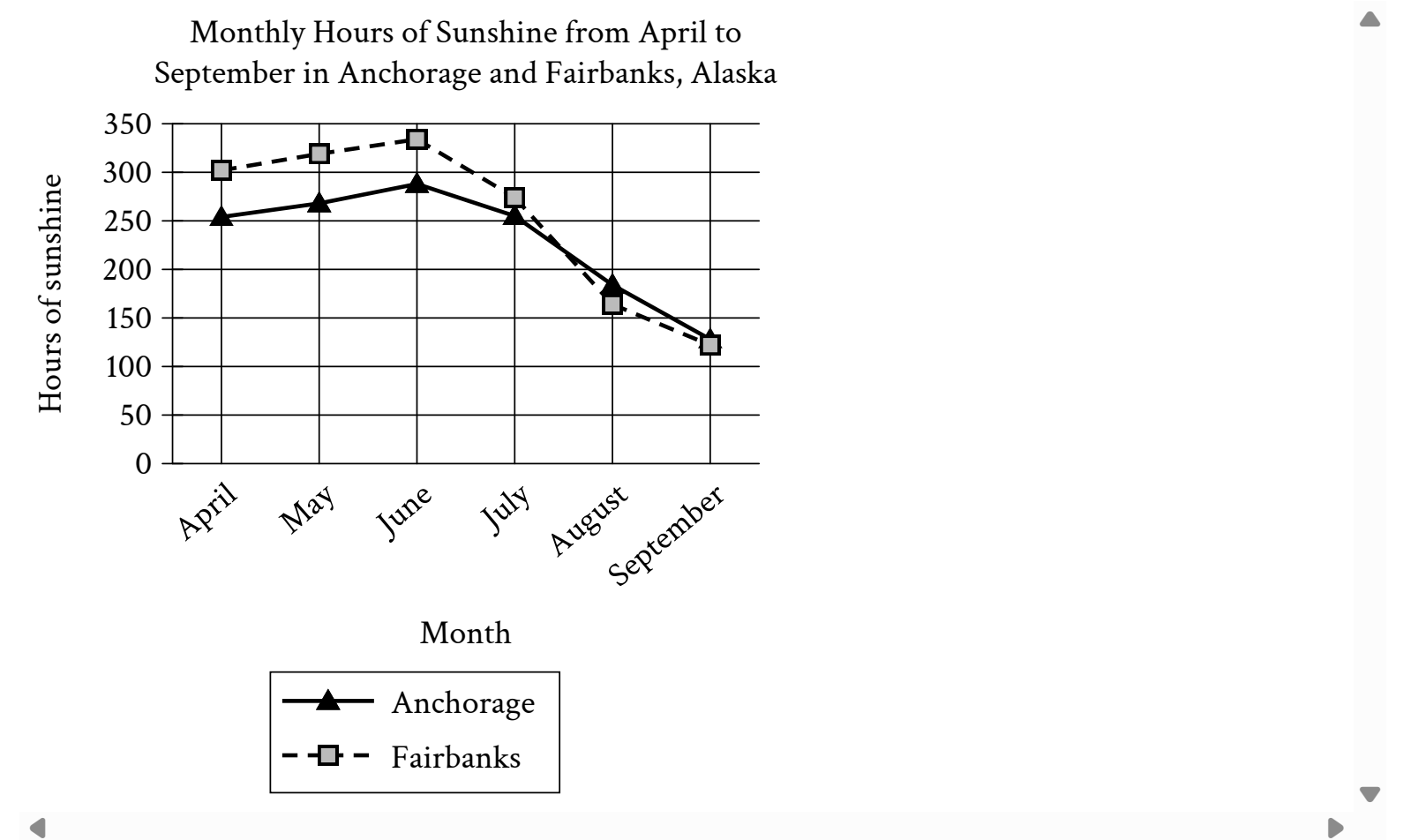
Choice A is incorrect. Although this quotation touches on the difficulty of evaluating Lumumba’s legacy, it doesn’t address how historians of modern African politics view him as a symbol. Choice B is incorrect. While this quotation mentions Lumumba’s political beliefs, it doesn’t discuss historians viewing him as a symbol. Choice D is incorrect. This quotation touches on Lumumba’s vision for his country, but it doesn’t discuss historians viewing him as a symbol.

Question Difficulty: Hard

Question ID d1116bb7

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: d1116bb7



A student is researching monthly hours of sunshine in different cities in Alaska. When comparing trends in Anchorage and Fairbanks, the student concludes that the two cities show a similar pattern in the monthly hours of sunshine from April to September.

- Which choice best describes data from the graph that support the student’s conclusion?
- A. The monthly hours of sunshine in both Anchorage and Fairbanks hold steady in June and July before beginning to decline in August.
 - B. The monthly hours of sunshine in both Anchorage and Fairbanks increase from April to June and then decrease from June to September.
 - C. Anchorage and Fairbanks both have less than 200 monthly hours of sunshine from April to September.
 - D. Anchorage and Fairbanks both have more than 300 monthly hours of sunshine from April to June and less than 200 hours from July to September.

Correct Answer: B

Rationale

Choice B is the best answer because it best describes data from the graph that support the student's conclusion about weather patterns in Anchorage and Fairbanks. According to the graph, the amount of sunshine increases in both cities from April to June: in Anchorage, the number of monthly hours increases from about 250 to just under 300, and in Fairbanks the number of monthly hours increases from about 300 to just under 350. Also according to the graph, the amount of sunshine decreases in both cities from June to September: in Anchorage the number of monthly hours decreases from just under 300 to about 125, and in Fairbanks the number of monthly hours decreases from just under 350 to about 125. Thus, the monthly hours of sunshine in both cities follow a similar pattern, increasing from April to June and then decreasing from June to September.

Choice A is incorrect because, according to the graph, the monthly hours of sunshine in both Anchorage and Fairbanks decrease from June to July. They don't hold steady. In June there are slightly less than 300 hours of sunshine in Anchorage and slightly less than 350 hours in Fairbanks. Then, in July there are approximately 250 hours of sunshine in both cities. Choice C is incorrect because the graph shows that Anchorage and Fairbanks have less than 200 monthly hours of sunshine only in August and September. For the rest of the months represented in the graph, both cities have more than 200 monthly hours of sunshine. Choice D is incorrect because, according to the graph, Anchorage doesn't have more than 300 monthly hours of sunshine from April to June. In addition, both cities have more than 200 hours of sunshine in July, although the amount of sunshine does decrease to less than 200 monthly hours in August and September.

Question Difficulty: Hard

Question ID 221697ef

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 221697ef

The Milky Way galaxy is composed of millions of stars in a relatively flat structure containing a thin disk and a thick disk. Based on computer simulations and analysis of data on the brightness, position, and chemical composition of about 250,000 stars in the thick disk (collected from two telescopes, one in China and one orbiting in space), astrophysicists Maosheng Xiang and Hans-Walter Rix claim that the thick disk of the Milky Way formed in two distinct phases rather than a single one.

Which finding, if true, would most directly support the researchers’ claim?

- A. The telescopes used by the researchers have detected stars of similar ages in galaxies other than the Milky Way.
- B. There’s an age difference of about 2 billion years between certain stars in the thick disk.
- C. The thin disk contains about twice as many stars that can be seen from Earth as the thick disk does.
- D. The stars in the Milky Way tend to have very similar chemical compositions.

ID: 221697ef Answer

Correct Answer: B

Rationale

Choice B is the best answer. A consistent age difference of 2 billion years between certain stars within the thick disk would support the claim that the thick disk formed in two phases instead of one, with the second phase beginning 2 billion years after the first phase.

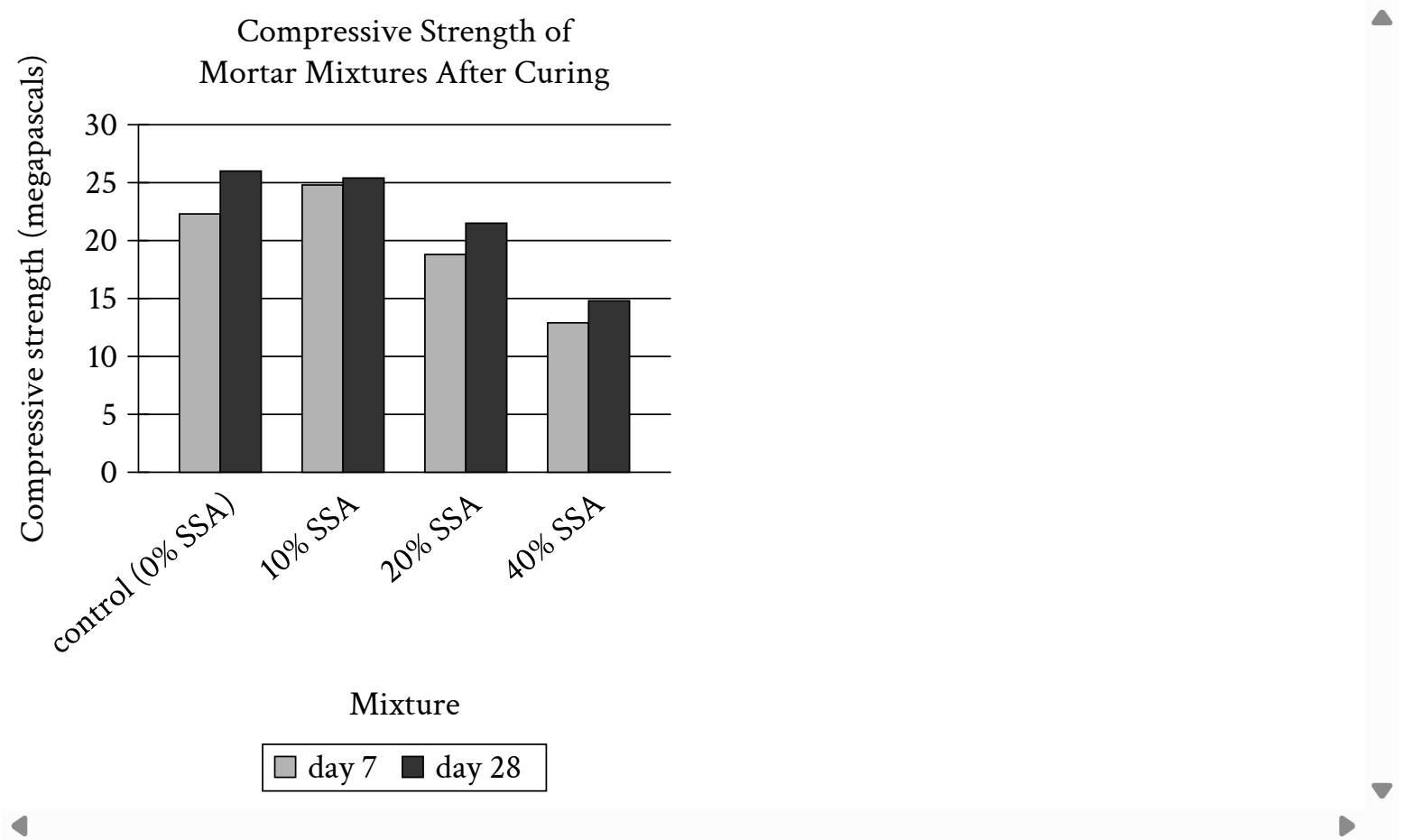
Choice A is incorrect. This choice doesn’t support the claim. The researchers base their claim on their study of stars inside the thick disk of the Milky Way. This choice makes a comparison to stars in other galaxies, which isn’t relevant. Choice C is incorrect. This choice doesn’t support the claim. The researchers base their claim on their study of stars inside the thick disk. This choice makes a comparison to the thin disk, which isn’t relevant. Choice D is incorrect. This choice doesn’t support the claim. It’s too general. The claim is specifically about the thick disk.

Question Difficulty: Hard

Question ID 26180e44

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 26180e44



Mollusk shells are mainly composed of calcium carbonate, a chemical compound used in mortar and other construction materials. A research team led by Ariane da Silva Cardoso investigated pulverizing discarded Sururu mussel shells to create a substitute for fine aggregates (such as sand) in mortar mixtures. The team prepared mixtures with Sururu shell aggregate (SSA) replacing varying percentages of sand and then tested the mortars’ compressive strength on days 7 and 28 of curing. Based on their findings, the team recommended SSA substitution in relatively small proportions to avoid compromising strength.

- Which choice most effectively uses data from the graph to support the researchers’ recommendation?
- A. The 10% SSA mixture’s compressive strength was greater than or approximately equal to that of the control mixture on day 7 and on day 28, but on both days the 20% and 40% SSA mixtures had less compressive strength than the control mixture did.
 - B. The compressive strength of the 10% SSA mixture remained nearly the same from day 7 to day 28, while that of the 20% and 40% SSA mixtures changed substantially.
 - C. The 10% SSA mixture’s compressive strength was greater than that of the control mixture on day 7, but by day 28 the 10% SSA mixture’s compressive strength had decreased while that of the control mixture had increased.

D. The compressive strength of the 10% SSA mixture never surpassed the compressive strength measured for the control mixture on day 28.

ID: 26180e44 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most effectively uses data from the graph to support the researchers' recommendation that Sururu shell aggregate (SSA) substitution be done in relatively small proportions to avoid compromising the compressive strength of mortar mixtures. The text explains that a research team investigated whether SSA can serve as a substitute for sand in mortar mixtures. The graph presents the compressive strength (in megapascals) of mortar mixtures with SSA replacing 0% (control), 10%, 20%, and 40% of the sand on day 7 and day 28 of curing. The graph shows that the compressive strength of the 10% SSA mixture was approximately 25 megapascals on day 7, which is greater than the control mixture's approximately 22 megapascals on the same day. The graph also shows that the 10% SSA mixture's compressive strength was slightly more than 25 megapascals on day 28, which is only slightly less than the control's compressive strength on the same day (about 26 megapascals). Therefore, the graph shows that the compressive strength of the 10% SSA mixture was greater than that of the control on day 7 and roughly equal to that of the control on day 28, suggesting that substituting only 10% of the sand with SSA avoids compromising the mortar's compressive strength. The graph also shows that on day 7, the 20% and 40% SSA mixtures had compressive strengths of about 19 and 13 megapascals, respectively (both lower than the control's), and on day 28, they had compressive strengths of about 22 and 15 megapascals, respectively (once again lower than the control's). Thus, the data support the recommendation by indicating that substituting relatively small proportions of sand with SSA in mortar mixtures doesn't compromise strength compared with the control, whereas substituting larger proportions does.

Choice B is incorrect because the comparison it makes isn't relevant to the researchers' recommendation. Although the graph does show that the bars representing the compressive strength of the 10% SSA mixture on day 7 and day 28 are roughly the same height (suggesting that the mixture's compressive strength changed by only a small amount), and although there are relatively large gaps between the bars showing the compressive strength of the 20% and 40% SSA mixtures on day 7 and day 28 (suggesting that their compressive strength changed over time by a greater amount), this comparison concerns only how each SSA mixture's strength changed over time and doesn't compare the SSA mixtures with the control mixture. Supporting the recommendation that SSA substitution be done in small proportions requires evidence that small substitutions don't compromise strength relative to the control while larger substitutions do. Choice C is incorrect because it doesn't accurately represent the data in the graph, nor is the comparison it makes relevant to the researchers' recommendation. While the graph does show that the compressive strength of the 10% SSA mixture was greater than that of the control on day 7 (about 25 megapascals vs. about 22 megapascals) and, moreover, that the compressive strength of the control increased from day 7 to day 28 (from about 22 megapascals to about 26 megapascals), the graph shows that the compressive strength of the 10% SSA mixture increased by a small amount (from about 25 megapascals to slightly more than 25 megapascals), not that it decreased. Moreover, the researchers recommended substituting relatively small proportions (compared with larger proportions) of the mixtures with SSA; comparing the compressive strength of the 10% SSA mixture with that of the control without also considering how the compressive strength of the 10% SSA mixture compared with that of the 20% and 40% SSA mixtures wouldn't support the recommendation. Choice D is incorrect. Though the graph indicates that the 10% SSA mixture's compressive strength on day 7 and day 28 (about 25 megapascals and slightly more than 25 megapascals, respectively) didn't surpass the control mixture's compressive strength on day 28 (about 26 megapascals), this observation doesn't support the recommendation. The recommendation concerns the trade-off between SSA proportion and compressive strength; supporting it requires not just evidence about how the 10% SSA mixture compared with the control but also evidence about how the mixtures with larger proportions of SSA (20% and 40%) compared with the 10% SSA mixture and the control.

Question Difficulty: Hard

Question ID 47b44139

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 47b44139

Annual Spending by International Tourists in Four Countries (in billions of US dollars)

Country	2016	2017	2018
South Korea	\$21.0	\$17.2	\$23.1
Japan	\$33.5	\$37.0	\$45.3
Thailand	\$48.5	\$57.1	\$61.4
Malaysia	\$19.7	\$20.3	\$21.8

One measure of international tourism is how much money visitors from abroad spend in a country. A student writing a report about tourism in several Asian countries notes that among the countries in the table, most had annual increases in international tourism revenue in 2017 and 2018, but that trend wasn’t universal. For example, _____

Which choice most effectively uses data from the table to complete the example?

- A. in each year shown, the revenue from tourism by residents of those countries was greater than the revenue from international tourism.
- B. Japan’s international tourism revenue was higher in 2016 than it was in 2018.
- C. South Korea’s annual international tourism revenue decreased from 2016 to 2017.
- D. in each year shown, Thailand had higher international tourism income than any of the other countries.

ID: 47b44139 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most effectively uses data from the table to complete the text, providing an example that illustrates that the annual increases in international tourism revenue in 2017 and 2018 weren’t universal. The table shows the annual spending by international tourists (which indicates annual international tourism revenue) in 2016–2018 in four Asian countries. According to the table, annual spending by international tourists in South Korea was \$21.0 billion in 2016 and then decreased to \$17.2 billion in 2017. This decrease shows that not all of the countries included in the table saw increases in annual international tourism revenue in 2017.

Choice A is incorrect because the table doesn’t provide any data regarding revenue from tourism by residents of those countries. Even if that data were provided, it wouldn’t be relevant to the claim that the trend of annual increases in international tourism revenue in 2017 and 2018 was not universal. Choice B is incorrect because the data in the table do not support the statement that

Japan’s international tourism revenue was higher in 2016 than it was in 2018: the table indicates that Japan’s annual international tourism revenue was \$33.5 billion in 2016, which is less than Japan’s annual international tourism revenue of \$45.3 billion in 2018. Choice D is incorrect. Although the table does indicate that Thailand’s revenue from international tourism was higher than that of the other three Asian countries in 2016, 2017, and 2018, this information has no direct bearing on the text’s claim that not all the Asian countries represented in the table saw an increase in revenue from international tourism.

Question Difficulty: Hard

Question ID b6f90541

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: b6f90541

Effects of Mycorrhizal Fungi on 3 Plant Species

Plant species	Mycorrhizal host	Average mass of plants grown in soil containing mycorrhizal fungi (in grams)	Average mass of plants grown in soil treated to kill fungi (in grams)
Corn	yes	15.1	3.8
Marigold	yes	10.2	2.4
Broccoli	no	7.5	7

Mycorrhizal fungi in soil benefits many plants, substantially increasing the mass of some. A student conducted an experiment to illustrate this effect. The student chose three plant species for the experiment, including two that are mycorrhizal hosts (species known to benefit from mycorrhizal fungi) and one nonmycorrhizal species (a species that doesn't benefit from and may even be harmed by mycorrhizal fungi). The student then grew several plants from each species both in soil containing mycorrhizal fungi and in soil that had been treated to kill mycorrhizal and other fungi. After several weeks, the student measured the plants' average mass and was surprised to discover that _____

Which choice most effectively uses data from the table to complete the statement?

- A. broccoli grown in soil containing mycorrhizal fungi had a slightly higher average mass than broccoli grown in soil that had been treated to kill fungi.
- B. corn grown in soil containing mycorrhizal fungi had a higher average mass than broccoli grown in soil containing mycorrhizal fungi.
- C. marigolds grown in soil containing mycorrhizal fungi had a much higher average mass than marigolds grown in soil that had been treated to kill fungi.
- D. corn had the highest average mass of all three species grown in soil that had been treated to kill fungi, while marigolds had the lowest.

ID: b6f90541 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most effectively uses data from the table to complete the statement. The text explains that mycorrhizal hosts are plants that benefit from the presence of mycorrhizal fungi in the soil and that some such plants produce more mass when grown in the presence of these fungi, while for nonmycorrhizal species the fungi either have no effect or may be harmful. The experiment included two mycorrhizal hosts (corn and marigold) and one nonmycorrhizal species (broccoli). Given the claim in the text that nonmycorrhizal species will see either no difference or a decrease in mass when

exposed to mycorrhizal fungi, the student would likely have been surprised by the higher average mass for broccoli grown in the presence of the fungi than the broccoli grown in the soil treated to kill fungi.

Choice B is incorrect. Although this choice accurately describes the corn data from the table, the fact that the mycorrhizal host corn is more massive in the presence of the fungi likely fits with what the student expected and would therefore not be surprising. Choice C is incorrect. Although this choice accurately describes the marigold data from the table, the fact that the mycorrhizal host marigold is more massive in the presence of the fungi is likely what the student expected and thus would not be surprising. Choice D is incorrect because it does not accurately represent the data in the table—when grown in soil treated to kill fungi, corn had an average mass of 3.8 g while broccoli had an average mass of 7g—and because making comparisons among the plants in the no-fungi condition, by itself, does not provide a basis to compare the average mass of mycorrhizal hosts and nonmycorrhizal species grown in the presence of the fungi with those grown in the soil treated to kill fungi.

Question Difficulty: Hard

Question ID 6d814df5

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 6d814df5

“Lines Written in Early Spring” is a 1798 poem by William Wordsworth. In the poem, the speaker describes having contradictory feelings while experiencing the sights and sounds of a spring day: _____

Which quotation from “Lines Written in Early Spring” most effectively illustrates the claim?

- A. “Through primrose-tufts, in that sweet bower, / The periwinkle trail’d its wreathes; / And ’tis my faith that every flower / Enjoys the air it breathes.”
- B. “The budding twigs spread out their fan, / To catch the breezy air; / And I must think, do all I can, / That there was pleasure there.”
- C. “The birds around me hopp’d and play’d: / Their thoughts I cannot measure, / But the least motion which they made, / It seem’d a thrill of pleasure.”
- D. “I heard a thousand blended notes, / While in a grove I [sat] reclined, / In that sweet mood when pleasant thoughts / Bring sad thoughts to the mind.”

ID: 6d814df5 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most effectively illustrates the claim that the speaker has contradictory feelings while experiencing the sights and sounds of spring. This quotation indicates that the speaker is reclined in a grove listening to a thousand sounds. Even though the speaker is in a "sweet mood" and thinking "pleasant thoughts," those pleasant thoughts also bring to mind "sad thoughts." In other words, these lines illustrate the claim that the speaker is having contradictory thoughts while immersed in the sights and sounds of spring.

Choice A is incorrect. Although this quotation refers to several flowers (primroses and periwinkles) and indicates that the speaker is in a "bower," or shady spot among the trees—details which suggest that the speaker is experiencing the sights of spring—it doesn’t suggest that the speaker is having contradictory feelings, only that the speaker believes that the flowers are experiencing enjoyment. Choice B is incorrect. Although this quotation focuses on the sights of spring—namely, new leaves on nearby trees appear to be opening up ("The budding twigs spread out their fan") to feel the breeze—the quotation doesn’t suggest that the speaker feels conflicted about this: the statement "And I must think, do all I can" suggests the speaker’s determination to attribute feelings of pleasure to the trees, not that the speaker is experiencing contradictory feelings. Choice C is incorrect. Although this quotation indicates that the speaker isn’t certain what the birds are thinking ("Their thoughts I cannot measure"), there’s nothing to suggest that the speaker is experiencing contradictory feelings. Rather, the quotation suggests that although the speaker is uncertain about the birds’ feelings, the speaker believes that the birds’ movements likely suggest their pleasure.

Question Difficulty: Hard

Question ID 251677a1

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Reading and Writing	Information and Ideas	Command of Evidence	<div><div></div><div></div><div></div></div>

ID: 251677a1

Art collectives, like the United States- and Vietnam-based collective The Propeller Group or Cuba’s Los Carpinteros, are groups of artists who agree to work together: perhaps for stylistic reasons, or to advance certain shared political ideals, or to help mitigate the costs of supplies and studio space. Regardless of the reasons, art collectives usually involve some collaboration among the artists. Based on a recent series of interviews with various art collectives, an arts journalist claims that this can be difficult for artists who are often used to having sole control over their work.

Which quotation from the interviews best illustrates the journalist’s claim?

- A. “The first collective I joined included many amazingly talented artists, and we enjoyed each other’s company, but because we had a hard time sharing credit and responsibility for our work, the collective didn’t last.”
- B. “We work together, but that doesn’t mean that individual projects are equally the work of all of us. Many of our projects are primarily the responsibility of whoever originally proposed the work to the group.”
- C. “Having worked as a member of a collective for several years, it’s sometimes hard to recall what it was like to work alone without the collective’s support. But that support encourages my individual expression rather than limits it.”
- D. “Sometimes an artist from outside the collective will choose to collaborate with us on a project, but all of those projects fit within the larger themes of the work the collective does on its own.”

ID: 251677a1 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents the quotation that best illustrates the journalist’s claim. By indicating that a collective didn’t continue because it was hard to share credit and responsibilities within the group even though the company was enjoyable, the quotation shows that working collaboratively can be difficult for artists who are used to having complete control over their work.

Choice B is incorrect because the quotation indicates that members of a collective are able to collaborate together and have agreed on a fair way to manage their responsibilities; this doesn’t demonstrate the challenge of sharing control among members of a collective. Choice C is incorrect because the quotation highlights the support and encouragement of individual expression an artist experiences due to working in a collective; these positive aspects don’t demonstrate the challenge of sharing control among members of a collective. Choice D is incorrect because the quotation doesn’t address any challenges of sharing control among members of a collective; it simply indicates that artists sometimes choose to work with collectives without having to be a member. Therefore, the quotation doesn’t illustrate the journalist’s claim.

Question Difficulty: Hard