Form D Appendix

Explanations and

Printable Online Practice Test

The New York City Department of Education

Specialized High Schools Admissions Test

Grade 8

General Directions

This test consists of 100 questions across two subjects, English Language Arts and Mathematics.

PART 1 — ENGLISH LANGUAGE ARTS
50 QUESTIONS

Questions 1–50

PART 2 — MATHEMATICS
50 QUESTIONS

Questions 51–100

Planning Your Time

- For practice tests with the timer enabled, your test session will end after 180 minutes.
- In a computer adaptive test (CAT), you must answer every question. For Math and stand-alone revising and editing questions, you will not be able to return to a question once you have advanced to the next question.
- ELA Reading Comprehension and Revising & Editing passage sets only:
  - For each passage set (a text and its related questions), you can return to the questions within the set and alter your responses; however, once you advance forward from the last question of that set, you will be unable to return to any questions in the set or change your answers.
- Do not spend too much time on any one question. If you are unsure, choose the response you think is best.
- You must complete the subject area you started with before moving on to the next subject area. Once you submit a subject area, you will be unable to return to it.

English Language Arts

READING COMPREHENSION

DIRECTIONS: Read each of the following texts and answer the related questions. As needed, you may use the online notepad tool or write on the scrap paper given to you to take notes. You should reread relevant parts of each text, while being mindful of time, before selecting the **best** answer for each question. Base your answers only on the content within the text.

Passage 1

A Memory Revolution

1 A high school senior logs on to a computer at the library to double-check the application due date listed on a college admissions website. Nearby, a librarian helps a group of biology students use a database to search for recent studies about mammals. In the past few decades, the Internet has become an integral component of daily life for many people. The seemingly limitless power of search engines made the Internet search extremely common, and today people increasingly rely on the Internet's vast accumulation of sources to access all types of information. Scientists are beginning to examine how this reliance is modifying the strategies people use to store and prioritize information in their mind.

A Dependable and Valuable Asset

2 Psychologist Benjamin Storm from the University of California, Santa Cruz, and researchers Sean Stone and Aaron Benjamin devised an experiment to study students' tendency to depend on the Internet for facts. To begin, the scientists divided sixty participants into multiple groups, including an "Internet" group and a "memory" group, and placed them in front of computers. The Internet group was required to use the search engine Google to answer eight challenging trivia questions. In contrast, participants in the memory group were permitted to use only their personal knowledge to answer the questions. In the second round, the researchers administered notably easier questions. This time, they allowed each group the option of using Google as they answered. Their results showed that 83 percent of the Internet group continued to consult Google in the second round, while only 63 percent of the memory group chose to do so.

3 People's growing inclination to rely on the Internet in order to retrieve information, particularly facts and figures, is called cognitive offloading. Canadian researcher Evan F. Risko and British researcher Sam Gilbert, who have written extensively about the topic, say a similar process has been taking place for centuries. In the past, people used resources like encyclopedias to assist their memories; however, today the Internet, serving as a vast extended memory, allows people to digitally access and retrieve much larger volumes of information. Consequently, people's minds are free for other cognitive feats, such as connecting data, learning new information, or solving problems.

Filing Information Away

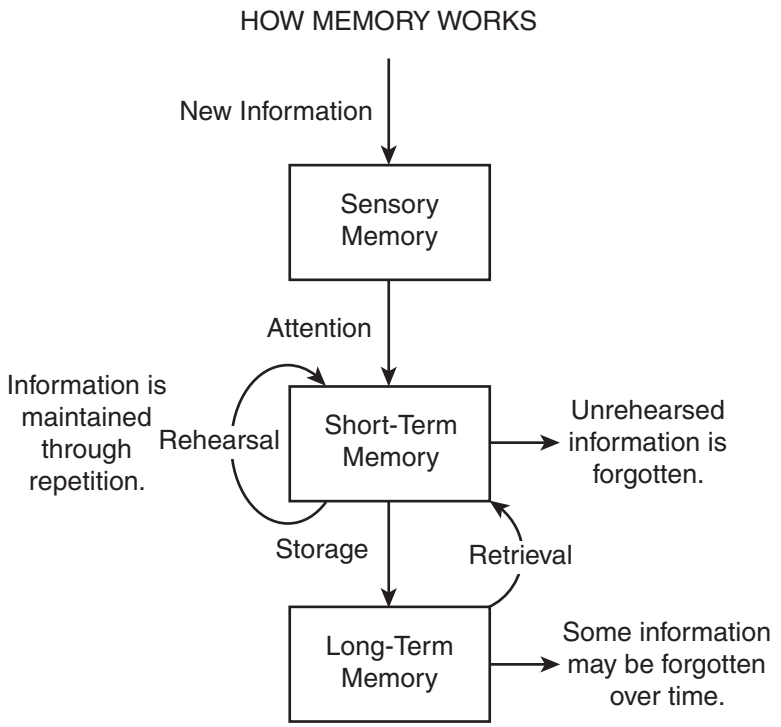
4 The use of the Internet also appears to be modifying the strategies people use to store information in their mind. Researchers Betsy Sparrow from Columbia University, Jenny Liu from the University of Wisconsin-Madison, and Daniel Wegner from Harvard University conducted several studies to discover how people efficiently manage their information intake.

5 To begin, the researchers examined how people evaluate which information deserves their effort to remember. For this experiment, participants read forty trivia facts, such as "An ostrich's eye is bigger than its brain," and typed the statements into a computer file. Half the participants had been previously told the file would be saved, while half believed it would be erased. Next, the participants wrote down every fact they could recall. Those who believed the information would be erased and no longer available could recall 40 percent more facts than those who thought the information would be saved.

6 In another experiment, the same researchers tested the ability of study participants to remember where to access information. For this trial, participants read and typed trivia statements, which they saved in folders with generic names such as "Facts" and "Items." After spending ten

minutes writing down all the facts they could recall from memory, participants were asked which folder contained a particular fact based on a keyword. For example, "Which folder has the fact about ostriches?" Overall, participants recalled the information's location more often than the content itself, correctly identifying 49 percent of the folders for specific facts while remembering only 23 percent of the actual trivia. The researchers concluded that our memory is adapting to the Internet age by prioritizing where to locate information even when the specific details are forgotten. According to Sparrow, the Internet has become an important form of transactive memory, an external source of the recollections and associative networks that constitute memory.

7 As the Internet's resources continue to expand our "external" memory, some question whether the process may cause people to depend too heavily on technology. However, Steven Pinker, a professor of psychology at Harvard University, says, "Knowledge is increasing exponentially; human brainpower and waking hours are not. Fortunately, the Internet and information technologies are helping us manage, search and retrieve our collective intellectual output at different scales, from Twitter and previews to e-books and online encyclopedias. Far from making us stupid, these technologies are the only things that will keep us smart."



Passage Set 1 Item 1

A Memory Revolution

1 A high school senior logs on to a computer at the library to double-check the application due date listed on a college admissions website. Nearby, a librarian helps a group of biology students use a database to search for recent studies about mammals. In the past few decades, the Internet has become an integral component of daily life for many people. The seemingly limitless power of search engines made the Internet search extremely common, and today people increasingly rely on the Internet's vast accumulation of sources to access all types of information. Scientists are beginning to examine how this reliance is modifying the strategies people use to store and prioritize information in their mind.

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The details in paragraph 3 about cognitive offloading convey a central idea of the passage by

A. suggesting that reliance on the Internet for information is inevitable.

B. demonstrating how the methods used to store and find information have changed over time.

C. explaining how encyclopedias and the Internet are similar sources of information.

D. implying that more information can be understood now than ever before.

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A Memory Revolution

The question asks how the details in paragraph 3 about cognitive offloading convey a central idea of the passage.

A. Incorrect. Although paragraph 3 describes the Internet as "a vast extended memory," it does not discuss reliance on the Internet for information. The paragraph states that the Internet "allows people to digitally access and retrieve much larger volumes of information" and indicates that this benefit leaves people free to focus on "connecting data, learning new information, or solving problems." However, these details about the benefits of the Internet do not express an opinion about the inevitability of Internet reliance.

B. **CORRECT.** A central idea of the passage is that the Internet is changing how people retain information. Paragraph 3 supports this idea by stating that "a similar process has been taking place for centuries" and that "in the past," resources such as encyclopedias were used to store and find information. The details provided in paragraph 3 about encyclopedias and the Internet show that people have always used resources to remember information and that these resources change over time as people develop new ways to "assist their memories."

C. Incorrect. While paragraph 3 does compare the use of encyclopedias to obtain information in the past with the use of today's Internet, this comparison fails to convey the central idea of the passage that the Internet is changing how people remember information.

D. Incorrect. Although paragraph 3 states that "much larger volumes of information" are available on the Internet than what has been available in previous methods of information storage, such as encyclopedias, this fact does not relate to an increase in the ability to understand that information and is not a central idea of the passage.

Passage Set 1 Item 2

A Memory Revolution

1 A high school senior logs on to a computer at the library to double-check the application due date listed on a college admissions website. Nearby, a librarian helps a group of biology students use a database to search for recent studies about mammals. In the past few decades, the Internet has become an integral component of daily life for many people. The seemingly limitless power of search engines made the Internet search extremely common, and today people increasingly rely on the Internet's vast accumulation of sources to access all types of information. Scientists are beginning to examine how this reliance is modifying the strategies people use to store and prioritize information in their mind.

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How do the details about the experiment described in paragraph 5 convey a central idea of the passage?

A. They suggest that the act of repeating information by typing it on a keyboard may improve a person's memory.

B. They explain that a person will forget information faster if the information is considered unimportant.

C. They indicate that a person may start to forget details when the amount of information becomes overwhelming.

D. They suggest that memory is affected by whether a person expects to have access to the information in the future.

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The question asks how the details of the experiment described in paragraph 5 convey a central idea of the passage.

A. Incorrect. Although paragraph 5 states that participants read the trivia facts and then "typed the statements into a computer file," it does not explain the impact of repetition on memory, nor does this convey a central idea of the passage.

B. Incorrect. Paragraph 5 acknowledges that people evaluate which information is important enough to remember, but it does not describe the rate at which people forget unimportant information. According to the paragraph, information is considered less important to remember if a person believes that he or she will be able to retrieve that information easily in the future. This does not mean the information is unimportant but rather that it is readily available for future access.

C. Incorrect. Paragraph 5 specifies the number of trivia facts that study participants were given to read (forty), but it does not describe the amount of information as a factor in the participants' memory performance. According to the paragraph, it was not the amount of information but rather the expectation of future availability that affected how much information participants were able to recall.

D. **CORRECT.** A central idea of the passage is that the way the human memory stores information is changing because of the Internet. The details of the experiment support this idea by indicating that study participants remembered different amounts of information based on whether they "thought the information would be saved" (paragraph 5). Those who "believed the information would be erased and no longer available" (paragraph 5) remembered 40 percent more than those who expected to be able to access the information again in a saved computer file. Therefore, paragraph 5 conveys the central idea that the expectation of future access to information is a key element in "how people evaluate which information deserves their effort to remember."

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Read this sentence from paragraph 7.

As the Internet's resources continue to expand our "external" memory, some question whether the process may cause people to depend too heavily on technology.

How does the sentence contribute to the structure and development of ideas in the passage?

A. It presents a claim about the risks of relying on the Internet that prompted the research described in paragraphs 2 and 6.

B. It contrasts a disadvantage of relying on the Internet with the benefits of Internet use that are described in paragraphs 2 and 6.

C. It signals a shift from a neutral viewpoint in paragraphs 2 and 6 to a presentation of an argument and a counterargument.

D. It introduces a counterargument and marks a transition from an optimistic tone in paragraphs 2 and 6 to a cautious tone as the counterargument is developed.

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The question asks how the sentence from paragraph 7 contributes to the structure and development of ideas in the passage.

A. Incorrect. Although the studies showed, in part, that reliance on the Internet is increasing ("participants recalled the information's location more often than the content itself" [paragraph 6]), the studies were not conducted in order to determine the risks of Internet use. The claim in the sentence did not prompt the research described in paragraphs 2 and 6.

B. Incorrect. While the sentence in paragraph 7 poses a question about the disadvantages of relying on the Internet, paragraphs 2 and 6 present the study data on Internet use and memory in a neutral tone ("correctly identifying 49 percent of the folders for specific facts while remembering only 23 percent of the actual trivia" [paragraph 6]). Neither study describes the availability of information on the Internet as an advantage or a disadvantage.

C. **CORRECT.** Paragraphs 2 and 6 describe the results of experiments related to the Internet's effect on memory without commenting on the advantages or disadvantages of relying on that technology, and the sentence in paragraph 7 presents a questioning viewpoint that moves away from the neutral perspective of the broader passage. The opinion in the sentence is directly argued against in the three sentences that follow it, which present an extended quote from Steven Pinker, a psychology professor at Harvard University. Pinker refutes the idea expressed by the sentence, stating that "knowledge is increasing exponentially; human brainpower and waking hours are not." He adds that technologies such as the Internet "are the only things that will keep us smart."

D. Incorrect. Although the sentence in paragraph 7 expresses caution about the possible effects of the Internet on memory, the passage does not shift from an optimistic tone to a cautious tone. Actually, paragraph 6 provides the data on Internet use and memory in a neutral tone. The argument expressed by the sentence is also not elaborated on in the sentences that follow, but is immediately argued against by Steven Pinker, a professor of psychology. The last sentence of paragraph 7 in fact refutes the culled sentence: " 'Far from making us stupid, these technologies are the only things that will keep us smart.' "

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The study described in paragraph 6 influenced researchers' ideas about memory in the digital age by

A. highlighting instances when organizing detailed information made it easier to remember.

B. confirming that keywords can be remembered more easily than large amounts of information.

C. identifying a shift in focus from remembering specific information to knowing where to find it.

D. emphasizing that remembering a basic idea is more important than storing detailed information.

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The question asks how the study described in paragraph 6 influenced researchers' ideas about memory in the digital age.

A. Incorrect. The study required participants to organize information into folders, but the results suggest that organizing the information did not make the information easier to remember; instead, participants remembered the folder in which to find the information but forgot the information itself.

B. Incorrect. Although the participants in the study were given a keyword, such as "ostrich," when asked to remember "which folder contained a particular fact," the study was significant for researchers because it demonstrated that "our memory is adapting to the Internet age by prioritizing where to locate information even when the specific details are forgotten" (paragraph 6). The study confirmed that participants were remembering where the information was stored, because they were able to provide the name of the folder (keyword) where the information was stored.

C. **CORRECT.** The study in paragraph 6 demonstrated that participants were better able to recall where to find certain information than to recall the information itself. This influenced researchers' ideas about memory in the digital age: "Overall, participants recalled the information's location more often than the content itself, correctly identifying 49 percent of the folders for specific facts while remembering only 23 percent of the actual trivia" (paragraph 6).

D. Incorrect. The study did not examine the relative importance of remembering basic information or storing detailed information. It examined the effect of the Internet on the information that people remember and concluded that human memory "is adapting to the Internet age by prioritizing where to locate information" (paragraph 6).

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How does the diagram provide additional support for the topic presented in the passage?

A. It reveals why human brains must adapt to obtaining information from the Internet as opposed to other sources.

B. It indicates how people can use the Internet to help improve their long-term recollection of information.

C. It shows how study participants' brains distinguished between important and unimportant details.

D. It depicts the idea that repetition and rehearsal are necessary to recall information when tools such as search engines are unavailable.

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The question asks how the diagram provides additional support for the topic presented in the passage.

- A. Incorrect. While the diagram indicates that the human brain has the ability to maintain different types of memory, the diagram does not show the need for the brain to adapt to obtaining information from the Internet rather than from other sources.
- B. Incorrect. The diagram enhances the reader's understanding of how long-term memories are formed, but it does not provide details about how the Internet can be used to improve long-term recollection of information.
- C. Incorrect. The diagram provides an understanding of how details that are important to people can become stored because of an effort made to recall them. However, the diagram does not show how people decide which information is important and which is not.
- D. **CORRECT.** The diagram depicts the connections that the human brain maintains between the different forms of memory. It also illustrates the idea that repetition and rehearsal are important steps in creating memories, as unrehearsed information will be forgotten. This supports the passage by highlighting the idea that access to search engines and other tools leads people to skip rehearsal and repetition steps that create memories, because people know that the information is readily accessible.

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Which evidence from the passage is **most** relevant to the claim in paragraph 7 that " 'far from making us stupid, these technologies are the only things that will keep us smart' "?

A. the revelation that most people opted to use the Internet to answer relatively easy trivia questions rather than relying on their own brainpower (paragraph 2)

B. the assertion that the storage of information on the Internet frees people to focus on higher-order tasks such as problem solving (paragraph 3)

C. the connection between how people organize information in their mind and their ability to recall that information (paragraph 5)

D. the description of transactive memory as an expansive external source that people can use to store information (paragraph 6)

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The question asks for the evidence from the passage that is **most** relevant to the claim in paragraph 7 that " 'far from making us stupid, these technologies are the only things that will keep us smart.' "

A. Incorrect. Whether the participants decided to use the Internet to answer easy trivia questions varied based on the options that the participants were given during the first part of the experiment and, therefore, cannot be relevant to the claim in paragraph 7. Even when given the option of using the Internet, some participants chose to recall information from memory instead.

B. **CORRECT.** The assertion made in paragraph 3 that states that cognitive offloading allows for "people's minds [to be] free for other cognitive feats, such as connecting data, learning new information, or solving problems" is relevant to the claim in paragraph 7 because it indicates that the ability to store large amounts of information within the brain does not necessarily make someone smart. It also suggests that if people did not have to use so much effort simply organizing and storing information, their brain would be free to conduct higher-order tasks: "the Internet, serving as a vast extended memory, allows people to digitally access and retrieve much larger volumes of information. Consequently, people's minds are free for other cognitive feats, such as connecting data, learning new information, or solving problems" (paragraph 3).

C. Incorrect. The discussion in the passage connecting how people organize information in their mind and their ability to recall that information focuses on the process of organizing information within human memory rather than on how technology helps keep people's minds available for complex thoughts.

D. Incorrect. Although the passage provides an accurate description of transactive memory, it provides no indication of how using such memory would advance a person's ability to maintain or improve intelligent thought.

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The effect of the Internet on a person's memory is illustrated in the passage through the presentation of studies that

A. examine how the use of search engines changes the way people evaluate and store information for future access.

B. highlight the difference between the capacity of the Internet and the ability of the human brain to locate information.

C. compare the type of information that can be obtained from the Internet with the type of information that is stored in the human brain.

D. emphasize the ease of obtaining information through search engines rather than remembering it without assistance.

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The question asks how the studies presented in the passage are used to illustrate the effect of the Internet on a person's memory.

A. **CORRECT.** The study described in paragraph 5 examined the effect of computer use on the way people evaluate information, specifically "which information deserves their effort to remember," and determined that "those who believed the information would be erased and no longer available could recall 40 percent more facts than those who thought the information would be saved." The study described in paragraph 2 established that the use of Internet search engines increases the "inclination to rely on the Internet in order to retrieve information" (paragraph 3), and the study in paragraph 6 examined how this reliance on technology affects the way people store information: "Overall, participants recalled the information's location more often than the content itself."

B. Incorrect. Although a difference in the ability of the human brain and the capacity of the Internet to locate information might seem evident, the studies cited in the passage did not examine the ability or the capacity of either. The studies did not measure what the human brain is capable of but rather how memory is affected by the use of the Internet.

C. Incorrect. While the studies explored the Internet's effect on the way information is stored in human memory, the type of information was not described or compared. Instead, the studies indicated that location is the main difference between the information stored in the Internet and the information stored in human memory, noting that the Internet has become "an external source of the recollections and associative networks that constitute memory" (paragraph 6).

D. Incorrect. Although it is increasingly common to use the Internet to obtain information (paragraph 2) rather than try to memorize information (paragraph 5), the studies did not examine the difficulty or ease of obtaining/recalling information using either method.

There are no more questions for this passage set.

Use the review button Review to return to any questions about the passage you have just read.

Once you select the blue arrow at the top of this screen, you will **not** be able to return to any questions about this passage.

Passage 2

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

Excerpt from "How We Made the First Flight"

by Orville Wright

1 During the night of December 16, 1903, a strong cold wind blew from the north. When we arose on the morning of the 17th, the puddles of water, which had been standing about camp since the recent rains, were covered with ice. The wind had a velocity of 10 to 12 meters per second (22 to 27 miles an hour). We thought it would die down before long, and so remained indoors the early part of the morning. But when ten o'clock arrived, and the wind was as brisk as ever, we decided that we had better get the machine out and attempt a flight. We hung out the signal for the men of the Life Saving Station.[1] We thought that by facing the flyer into a strong wind, there ought to be no trouble in launching it from the level ground about camp. We realized the difficulties of flying in so high a wind, but estimated that the added dangers in flight would be partly compensated for by the slower speed in landing.

Final Preparations

2 We laid the track on a smooth stretch of ground about one hundred feet north of the new building. The biting cold wind made work difficult, and we had to warm up frequently in our living room, where we had a good fire in an improvised stove made of a large carbide[2] can. By the time all was ready, J. T. Daniels, W. S. Dough and A. D. Etheridge, members of the Kill Devil[3] Life Saving Station; W. C. Brinkley of Manteo, and Johnny Moore, a boy from Nags Head,[4] had arrived.

3 We had a "Richard" hand anemometer with which we measured the velocity of the wind. Measurements made just before starting the first flight showed velocities of 11 to 12 meters per second, or 24 to 27 miles per hour. . . .

Audacity—and Calculation

4 Wilbur having used his turn in the unsuccessful attempt on the 14th, the right to the first trial now belonged to me. After running the motor a few minutes to heat it up, I released the wire that held the machine to the track, and the machine started forward in the wind. Wilbur ran at the side of the machine, holding the wing to balance it on the track. Unlike the start on the 14th, made in a calm, the machine, facing a 27-mile wind, started very slowly. Wilbur was able to stay with it till it lifted from the track after a forty-foot run. One of the Life Saving men snapped the camera for us, taking a picture just as the machine had reached the end of the track and had risen to a height of about two feet. The slow forward speed of the machine over the ground is clearly shown in the picture by Wilbur's attitude. He stayed along beside the machine without any effort.

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[1] **Life Saving Station:** one of the rescue stations along the Atlantic coastline that provided assistance to mariners in distress

[2] **carbide:** a very hard material composed of carbon and other heavy metals

[3] **Kill Devil:** the town of Kill Devil Hills in eastern North Carolina

[4] **Nags Head:** a town in eastern North Carolina

Flight

The course of the flight up and down was exceedingly erratic, partly due to the irregularity of the air, and partly to lack of experience in handling this machine. The control of the front rudder was difficult on account of its being balanced too near the center. This gave it a tendency to turn itself when started; so that it turned too far on one side and then too far on the other. As a result the machine would rise suddenly to about ten feet, and then as suddenly dart for the ground. A sudden dart when a little over a hundred feet from the end of the track, or a little over 120 feet from the point at which it rose into the air, ended the flight. As the velocity of the wind was over 35 feet per second and the speed of the machine over the ground against this wind ten feet per second, the speed of the machine relative to the air was over 45 feet per second, and the length of the flight was equivalent to a flight of 540 feet made in calm air. This flight lasted only 12 seconds, but it was nevertheless the first in the history of the world in which a machine carrying a man had raised itself by its own power into the air in full flight, had sailed forward without reduction of speed and had finally landed at a point as high as that from which it started.

Passage Set 2 Item 1

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

Excerpt from "How We Made the First Flight"

by Orville Wright

1 During the night of December 16, 1903, a strong cold wind blew from the north. When we arose on the morning of the 17th, the puddles of water, which had been standing about camp since the recent rains, were covered with ice. The wind had a velocity of 10 to 12 meters per second (22 to 27 miles an hour). We thought it would die down before long, and so remained indoors the early part of the morning. But when ten o'clock arrived, and the wind was as brisk as ever, we decided that we had better get the machine out and attempt a flight. We hung out the signal for the men of the Life Saving Station. We thought that by facing the

How does paragraph 1 introduce the idea that the Wright brothers knew that their flight attempt was risky?

A. through the mention of a signal to notify lifesaving experts that the flight attempt was about to begin

B. by providing specific details about the speed of the wind and the Wright brothers' response to the windy conditions

C. by suggesting that a slower landing would be necessary at the end of the flight in order to maintain safety

D. through the indication that the Wright brothers waited indoors for most of the morning because of the poor weather

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

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Excerpt from "How We Made the First Flight"

The question asks how paragraph 1 introduces the idea that the Wright brothers knew that their flight attempt was risky.

A. **CORRECT.** Paragraph 1 describes the Wright brothers hanging out “the signal” to notify the lifesaving crew to stand by as they attempted flight; the need for lifesaving experts to be available in case of an accident introduces the idea that the attempted flight might crash.

B. Incorrect. The specifics on the speed of the wind by themselves do not emphasize the danger of the flight. While the brothers admitted that the strong wind posed certain risks, they also noted that the windy conditions might make landing safer (“estimated that the added dangers in flight would be partly compensated for by the slower speed in landing” [paragraph 1]).

C. Incorrect. A slower landing was expected as a result of the windy conditions, but it was not part of a plan to increase the safety of the flight.

D. Incorrect. While the Wright brothers’ initial decision to wait to see whether the wind would die down does suggest they were concerned about the safety of the flight, the explanation of their decision to proceed with the flight shows that they expected one benefit from the poor weather: “the slower speed in landing” (paragraph 1).

Passage Set 2 Item 2

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

Excerpt from "How We Made the First Flight"

by Orville Wright

1 During the night of December 16, 1903, a strong cold wind blew from the north. When we arose on the morning of the 17th, the puddles of water, which had been standing about camp since the recent rains, were covered with ice. The wind had a velocity of 10 to 12 meters per second (22 to 27 miles an hour). We thought it would die down before long, and so remained indoors the early part of the morning. But when ten o'clock arrived, and the wind was as brisk as ever, we decided that we had better get the machine out and attempt a flight. We hung out the signal for the men of the Life Saving Station. We thought that by facing the

Read this sentence from paragraph 4.

Wilbur having used his turn in the unsuccessful attempt on the 14th, the right to the first trial now belonged to me.

The sentence contributes to the development of ideas in the excerpt by

A. demonstrating the challenge of the extreme winter conditions during the flight.

B. revealing how many tries it took for Wilbur Wright to finally get the machine to take flight.

C. demonstrating that both Orville and Wilbur Wright were eager to pilot what could potentially be the first flight.

D. suggesting a sense that both brothers felt confident they would soon succeed in completing the first flight.

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

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The question asks how the sentence from paragraph 4 contributes to the development of ideas in the excerpt.

- A. Incorrect. The sentence from paragraph 4 does not refer to the challenge of the winter conditions during the flight attempt.
- B. Incorrect. While the sentence from paragraph 4 specifically references a previous flight several days earlier, it does not state how many attempts came before Wilbur’s attempt on December 14.
- C. **CORRECT.** The sentence from paragraph 4 indicates that the Wright brothers had agreed to take turns attempting to achieve the first flight, which suggests their eagerness to each be the first to successfully fly the machine.
- D. Incorrect. Orville’s trial came about simply because the brothers took turns, which would suggest that there was no greater likelihood of success or reason to be more confident at that moment than there had been for previous attempts.

Passage Set 2 Item 3

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

Excerpt from “How We Made the First Flight”

by Orville Wright

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The photograph mentioned in paragraph 4 is significant because it

A. documents that the machine rose into the air as soon as the tethering wire was released.

B. provides proof of the critical moment the machine took flight.

C. documents that the wind reduced the speed of the plane at the start of the flight.

D. provides proof that the pilot had to gradually increase the height of the plane in the air.

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

Excerpt from "How We Made the First Flight"

by Orville Wright

1 During the night of December 16, 1903, a strong cold wind blew from the north. When we arose on the morning of the 17th, the puddles of water, which had been standing about camp since the recent rains, were covered with ice. The wind had a velocity of 10 to 12 meters per second (22 to 27 miles an hour). We thought it would die down before long, and so remained indoors the early part of the morning. But when ten o'clock arrived, and the wind was as brisk as ever, we decided that we had better get the machine out and attempt a flight. We hung out the signal for the men of the Life Saving Station. We thought that by facing the

The question asks why the photograph mentioned in paragraph 4 is significant.

A. Incorrect. According to paragraph 4, the photograph was not taken immediately after the tethering wire was released but rather after an intervening period during which "Wilbur ran at the side of the machine, holding the wing to balance it on the track." The picture was not taken until "the machine had reached the end of the track," which occurred after a "forty-foot run" (paragraph 4).

B. **CORRECT.** The photograph mentioned in paragraph 4 is significant because it provides proof that the machine did, in fact, take flight: "One of the Life Saving men snapped the camera for us, taking a picture just as the machine had reached the end of the track and had risen to a height of about two feet. The slow forward speed of the machine over the ground is clearly shown in the picture by Wilbur's attitude. He stayed along beside the machine without any effort."

C. Incorrect. The photograph mentioned in paragraph 4 is described as showing the plane moving forward through the air at a height of two feet, but while the effect of the wind may be visible, it is not why the photo is significant. Instead, the photograph provides proof that the plane is, in fact, moving through the air ("One of the Life Saving men snapped the camera for us, taking a picture just as the machine had reached the end of the track and had risen to a height of about two feet. The slow forward speed of the machine over the ground is clearly shown in the picture by Wilbur's attitude").

D. Incorrect. Although the plane is shown at a height of two feet in the photograph mentioned in paragraph 4, the picture documents only one moment of the plane's flight and does not provide proof that the pilot had to gradually increase the height of the plane in the air.

Passage Set 2 Item 4

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

Excerpt from "How We Made the First Flight"

by Orville Wright

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How do the details in paragraph 5 about the uneven nature of the flight convey a central idea of the excerpt?

A. by explaining how the flawed design of the machine caused it to turn unpredictably in the air and brought the first flight by a person to an abrupt end

B. by indicating that the difficulty in controlling the flight was caused by the rudimentary instruments of the machine and the inexperience of the pilot

C. by explaining how the pilot and the plane overcame adverse conditions in order to complete the first piloted flight

D. by indicating that the gradual change in wind velocity created an extreme environment in which to maneuver the plane and maintain its flight

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

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The question asks how the details in paragraph 5 about the uneven nature of the flight convey a central idea of the excerpt.

A. Incorrect. Paragraph 5 explains that the rudder was unbalanced and the effect that this issue had on the flight, but the rudder was only part of the reason for the short flight. The length of the flight is not a central idea of the excerpt.

B. Incorrect. Although paragraph 5 does explain that the equipment contributed to the difficulty of controlling the plane's flight, the lack of control over the flight is not a central idea of the excerpt, which focuses instead on the Wright brothers' achievement of a successful flight despite the challenges involved.

C. **CORRECT.** The details in paragraph 5 describe the difficulties that the weather conditions and mechanical issues presented and how Orville's flight was successful despite those problems. The Wright brothers' ability to overcome difficult circumstances and complete the first flight is a central idea of the excerpt.

D. Incorrect. While paragraph 5 does emphasize the difficulty caused by the wind, it does not describe a "gradual change" in the wind, only that it was irregular.

Passage Set 2 Item 5

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

Excerpt from "How We Made the First Flight"

by Orville Wright

1 During the night of December 16, 1903, a strong cold wind blew from the north. When we arose on the morning of the 17th, the puddles of water, which had been standing about camp since the recent rains, were covered with ice. The wind had a velocity of 10 to 12 meters per second (22 to 27 miles an hour). We thought it would die down before long, and so remained indoors the early part of the morning. But when ten o'clock arrived, and the wind was as brisk as ever, we decided that we had better get the machine out and attempt a flight. We hung out the signal for the men of the Life Saving Station. We thought that by facing the

Read this sentence from paragraph 5.

As the velocity of the wind was over 35 feet per second and the speed of the machine over the ground against this wind ten feet per second, the speed of the machine relative to the air was over 45 feet per second, and the length of the flight was equivalent to a flight of 540 feet made in calm air.

How does the sentence help convey Orville Wright's perspective about this first flight?

A. It suggests that he was frustrated by the poor flying conditions on the day of the flight.

B. It emphasizes that he believed the flight was successful despite its short distance.

C. It provides a comparison between flight distances under calm and high wind conditions.

D. It highlights the importance of such calculations in the success of future flights.

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

Excerpt from "How We Made the First Flight"

by Orville Wright

1 During the night of December 16, 1903, a strong cold wind blew from the north. When we arose on the morning of the 17th, the puddles of water, which had been standing about camp since the recent rains, were covered with ice. The wind had a velocity of 10 to 12 meters per second (22 to 27 miles an hour). We thought it would die down before long, and so remained indoors the early part of the morning. But when ten o'clock arrived, and the wind was as brisk as ever, we decided that we had better get the machine out and attempt a flight. We hung out the signal for the men of the Life Saving Station. We thought that by facing the

The question asks how the sentence from paragraph 5 helps convey Orville Wright's perspective about the first flight.

A. Incorrect. Although the sentence from paragraph 5 refers to the velocity of the wind during the flight, there is no indication that Orville felt a sense of frustration with the windy conditions. Instead, the sentence emphasizes the "speed of the machine relative to the air" and presents the equivalent flight length if the machine had flown through calm air ("the length of the flight was equivalent to a flight of 540 feet made in calm air"), details that emphasize the importance of the Wrights' accomplishment.

B. **CORRECT.** In the sentence from paragraph 5, Orville uses the wind velocity and the machine speed to highlight the distance that the plane covered while in the air and to determine the distance that it would have flown on a day with calm winds, which emphasizes the magnitude of the accomplishment.

C. Incorrect. Since Orville does not suggest in the sentence from paragraph 5 how far the plane traveled under the actual conditions of high winds, the comparison is incomplete. Additionally, this statement does not address the reason that he would make such a comparison, which allowed him to describe the flight in more impressive terms (540 feet versus 120 feet).

D. Incorrect. Unlike the wind velocity calculations made in preparation for the flight, which might help in determining the success of future flights, the comparative calculations that Orville provides in the sentence from paragraph 5 help interpret the results of the first flight (by describing how fast and far the machine flew relative to the flying conditions) and thereby communicate its success. The calculations of the first flight's relative speed and equivalent distance would not affect the success of future flights, but the information does provide context for understanding the Wright brothers' accomplishment.

Passage Set 2 Item 6

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

Excerpt from "How We Made the First Flight"

by Orville Wright

1 During the night of December 16, 1903, a strong cold wind blew from the north. When we arose on the morning of the 17th, the puddles of water, which had been standing about camp since the recent rains, were covered with ice. The wind had a velocity of 10 to 12 meters per second (22 to 27 miles an hour). We thought it would die down before long, and so remained indoors the early part of the morning. But when ten o'clock arrived, and the wind was as brisk as ever, we decided that we had better get the machine out and attempt a flight. We hung out the signal for the men of the Life Saving Station. We thought that by facing the

Which sentence from the excerpt **best** supports the idea that the Wright brothers had to adapt their plans for the flight in order to accommodate the weather conditions?

A. "When we arose on the morning of the 17th, the puddles of water, which had been standing about camp since the recent rains, were covered with ice." (paragraph 1)

B. "We realized the difficulties of flying in so high a wind, but estimated that the added dangers in flight would be partly compensated for by the slower speed in landing." (paragraph 1)

C. "After running the motor a few minutes to heat it up, I released the wire that held the machine to the track, and the machine started forward in the wind." (paragraph 4)

D. "The course of the flight up and down was exceedingly erratic, partly due to the irregularity of the air, and partly to lack of experience in handling this machine." (paragraph 5)

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

Excerpt from “How We Made the First Flight”

by Orville Wright

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The question asks which sentence from the excerpt **best** supports the idea that the Wright brothers had to adapt their plans for the flight in order to accommodate weather conditions.

A. Incorrect. Although the sentence from paragraph 1 mentions the rainy weather and frozen puddles, it does not specifically explain how these weather conditions forced the brothers to adapt their plans for the flight.

B. **CORRECT.** The sentence from paragraph 1 reveals that the Wright brothers adapted by making a risk calculation, based on the wind speed, before the flight. The high speed of the wind could cause difficulties in flight while simultaneously allowing for a slower, more controlled landing.

C. Incorrect. The sentence from paragraph 4 does mention wind, but it describes what Orville was doing during the attempted flight, not the factors he considered before the flight in order to adapt the plan.

D. Incorrect. Although the sentence from paragraph 5 mentions the “irregularity of the air” during the flight, the sentence does not describe how the brothers adapted their plans for the flight based on the weather.

Passage Set 2 Item 7

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

Excerpt from "How We Made the First Flight"

by Orville Wright

1 During the night of December 16, 1903, a strong cold wind blew from the north. When we arose on the morning of the 17th, the puddles of water, which had been standing about camp since the recent rains, were covered with ice. The wind had a velocity of 10 to 12 meters per second (22 to 27 miles an hour). We thought it would die down before long, and so remained indoors the early part of the morning. But when ten o'clock arrived, and the wind was as brisk as ever, we decided that we had better get the machine out and attempt a flight. We hung out the signal for the men of the Life Saving Station. We thought that by facing the

The use of chronological structure contributes to the development of ideas in the excerpt by

A. outlining the actions that the Wright brothers took to prepare for and successfully complete the first flight.

B. identifying the primary factors that allowed the Wright brothers to overcome obstacles and achieve the first flight.

C. showing how the Wright brothers applied lessons learned from their previous flight attempts to accomplish the first flight.

D. demonstrating how the Wright brothers analyzed the impact of wind velocity to identify the ideal conditions for the first flight.

In 1903 brothers Wilbur and Orville Wright conducted experiments related to flying machines. These experiments would eventually lead to air travel becoming a reliable form of transportation.

Excerpt from “How We Made the First Flight”

by Orville Wright

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The question asks how the use of chronological structure contributes to the development of ideas in the excerpt.

- A. **CORRECT.** Through the chronological structure, Orville addresses all stages of the flight in a way that builds from flight concerns and preparations for takeoff to his experiences during the flight and his successful landing.
- B. Incorrect. While obstacles are presented within the excerpt, the chronological structure emphasizes the events that ended in the successful achievement of flight on that day rather than how the Wright brothers overcame obstacles.
- C. Incorrect. The chronological structure of the excerpt does not show that the Wright brothers applied lessons learned from their previous attempts at flight; instead, the structure describes Orville’s December 17 attempt.
- D. Incorrect. While Orville’s narrative certainly shows a strong need to analyze wind speed, this idea is not conveyed through the chronological structure of the excerpt. Additionally, the description of the first flight on December 17 indicates that it did not take place in ideal conditions (“We realized the difficulties of flying in so high a wind” [paragraph 1] and “The course of the flight up and down was exceedingly erratic, partly due to the irregularity of the air” [paragraph 5]).

There are no more questions for this passage set.

Use the review button Review to return to any questions about the passage you have just read.

Once you select the blue arrow at the top of this screen, you will **not** be able to return to any questions about this passage.

Passage 3

Wolves of the Sea

1 The cool and misty landscape of the Great Bear Rainforest can be found along the coast of British Columbia, Canada, and its nearby islands, from Vancouver Island to the Alaskan border. Within this protected area, wolves roam the forests, islands, and beaches. When biologist Chris Darimont began to study these wolves, he wanted to confer with local First Nations groups, as aboriginal Canadians are known, in order to learn what they knew about these wolves. He spoke with Chester Starr, an elder of the Heiltsuk Nation that has occupied the Great Bear Rainforest for thousands of years. What Starr had to say about the wolves changed Darimont's perception of the animals.

2 Starr asked Darimont which wolves he and his team were going to study—the timber wolves (mainland wolves) or the coastal wolves on the islands. The question took Darimont by surprise. Biologists had always believed that the wolves that are sometimes spotted swimming between islands and eating salmon are the same wolves that live on the mainland. Darimont was intrigued by Starr's classification of the wolves as two different groups. At first, he was hesitant to accept the idea. The distances between the mainland and the islands are small, less than a mile. Why would the wolves on the islands be any different from the wolves on the mainland? To find out, Darimont and his research team studied the wolves on the islands and in the densely forested territory of the Great Bear Rainforest for ten years.

3 Throughout the study, Darimont recorded several significant, observable differences between the "sea wolves," as they are nicknamed, and the mainland wolves. Compared with the mainland wolves, the sea wolves are smaller in size and are strong swimmers. In 1996 sea wolves were spotted on an island nearly eight miles from any other land formation. While mainland wolves almost exclusively eat meat, such as deer and elk, and teach their young to hunt for land animals, sea wolves get as much as 90 percent of their nutrition from the sea and teach their young to dig for clams and to catch fish. Sea wolves regularly swim between islands and have been known to sneak up on a seal sunning itself on a rock and make a leaping attack from the water. Some salmon-eating mainland wolves come and go from the islands with the fish-spawning season, but the sea wolves are full-time island residents. Darimont suspects that some sea wolves live their entire life on the islands.

4 The sea wolves displayed not only physical and behavioral differences but also genetic variations from the mainland wolves. After collecting and analyzing the DNA in 800 samples of gray fur and wolf waste, researchers could produce hard biological evidence that sea wolves had genetic markers that made them distinct from the mainland wolves. A genetic marker is a variation in a DNA sequence that can be used to identify individuals or a species because it is passed down to offspring. Darimont hypothesizes that a change in habitat led to the eventual genetic differences between sea wolves and mainland wolves. Many years ago, loss of habitat and food sources forced some mainland wolves out to the islands. They learned to eat everything from kelp and fish eggs to the remains of sea creatures that washed up on the beach. Wolves living on the islands and mainland wolves became more isolated and rarely mated with each other. Over time the two types of wolves became more distinct.

5 It turned out that Chester Starr was right all along. "It sounded totally bizarre at first," admits Darimont, "that there could be two versions of the species." But he now realizes that this skepticism "definitely reflected my ignorance of indigenous knowledge at the time." Learning to

trust the wisdom of the Heiltsuk people opened Darimont up to knowledge accumulated over millennia and positioned him so that he could gather new scientific evidence about one of British Columbia’s most elusive species, the sea wolf.

Passage Set 3 Item 1

Wolves of the Sea

1 The cool and misty landscape of the Great Bear Rainforest can be found along the coast of British Columbia, Canada, and its nearby islands, from Vancouver Island to the Alaskan border. Within this protected area, wolves roam the forests, islands, and beaches. When biologist Chris Darimont began to study these wolves, he wanted to confer with local First Nations groups, as aboriginal Canadians are known, in order to learn what they knew about these wolves. He spoke with Chester Starr, an elder of the Heiltsuk Nation that has occupied the Great Bear Rainforest for thousands of years. What Starr had to say about the wolves changed Darimont's perception of the animals.

2 Starr asked Darimont which wolves he and his team were going to study—the timber wolves (mainland wolves) or the coastal wolves on the islands. The question took Darimont by surprise. Biologists had always believed that the wolves that are sometimes

The details in paragraph 1 contribute to a central idea of the passage by showing that Darimont

A. believed the Great Bear Rainforest was an ideal location to study wolves in their natural habitat because it is a protected area.

B. values different perspectives, because the information that Starr provided influenced the focus of Darimont's research.

C. thought the Great Bear Rainforest would provide opportunities to study different groups of wolves because the area includes forests and islands.

D. understands the importance of respecting local community members, because Darimont sought permission from an elder of the Heiltsuk Nation before starting his research.

Wolves of the Sea

1 The cool and misty landscape of the Great Bear Rainforest can be found along the coast of British Columbia, Canada, and its nearby islands, from Vancouver Island to the Alaskan border. Within this protected area, wolves roam the forests, islands, and beaches. When biologist Chris Darimont began to study these wolves, he wanted to confer with local First Nations groups, as aboriginal Canadians are known, in order to learn what they knew about these wolves. He spoke with Chester Starr, an elder of the Heiltsuk Nation that has occupied the Great Bear Rainforest for thousands of years. What Starr had to say about the wolves changed Darimont's perception of the animals.

2 Starr asked Darimont which wolves he and his team were going to study—the timber wolves (mainland wolves) or the coastal wolves on the islands. The question took Darimont by surprise. Biologists had always believed that the wolves that are sometimes

Wolves of the Sea

The question asks how the details about Darimont in paragraph 1 contribute to a central idea of the passage.

- A. Incorrect. Although paragraph 1 includes the detail that the Great Bear Rainforest is a protected area, finding an ideal location to study wolves is not a central idea of the passage. Additionally, the paragraph does not describe Darimont's beliefs about the Great Bear Rainforest.

- B. **CORRECT.** Paragraph 1 explains why Darimont wanted to consult with Chester Starr, an elder of the Heiltsuk Nation: "When biologist Chris Darimont began to study these wolves, he wanted to confer with local First Nations groups, as aboriginal Canadians are known, in order to learn what they knew about these wolves." The details in paragraph 1 show that Darimont valued Starr's perspective ("What Starr had to say about the wolves changed Darimont's perception of the animals"), even though it was different from Darimont's own perspective at that time.

- C. Incorrect. Paragraphs 1 and 2 show that Darimont did not initially believe that the mainland wolves and the coastal wolves were different groups. Therefore, the details in paragraph 1 do not provide evidence that Darimont chose Great Bear Rainforest because of an expectation that there were separate groups of island wolves and timber wolves. Instead, he chose the Great Bear Rainforest for the opportunity to study what he had presumed to be one group of wolves.

- D. Incorrect. Although Darimont sought out Chester Starr, an elder of the Heiltsuk Nation, before beginning his research, Darimont's purpose in doing so was not to request Starr's permission to study the wolves but to learn from Starr's expert knowledge of the area and its wolves ("When biologist Chris Darimont began to study these wolves, he wanted to confer with local First Nations groups, as aboriginal Canadians are known, in order to learn what they knew about these wolves" [paragraph 1]).

Passage Set 3 Item 2

Wolves of the Sea

1 The cool and misty landscape of the Great Bear Rainforest can be found along the coast of British Columbia, Canada, and its nearby islands, from Vancouver Island to the Alaskan border. Within this protected area, wolves roam the forests, islands, and beaches. When biologist Chris Darimont began to study these wolves, he wanted to confer with local First Nations groups, as aboriginal Canadians are known, in order to learn what they knew about these wolves. He spoke with Chester Starr, an elder of the Heiltsuk Nation that has occupied the Great Bear Rainforest for thousands of years. What Starr had to say about the wolves changed Darimont's perception of the animals.

2 Starr asked Darimont which wolves he and his team were going to study—the timber wolves (mainland wolves) or the coastal wolves on the islands. The question took Darimont by surprise. Biologists had always believed that the wolves that are sometimes

Why does the author include details about the conversation between Starr and Darimont in paragraph 2?

A. to explain why Starr had closely observed the relationship between the two groups of wolves Darimont wanted to study

B. to show that Darimont was hoping to work with Starr and to study both groups of wolves in the area

C. to highlight that Darimont was unfamiliar with the area and expected Starr to help him find wolves to study

D. to emphasize that the question asked by Starr caused Darimont to review his initial assumption about the wolves

Wolves of the Sea

1 The cool and misty landscape of the Great Bear Rainforest can be found along the coast of British Columbia, Canada, and its nearby islands, from Vancouver Island to the Alaskan border. Within this protected area, wolves roam the forests, islands, and beaches. When biologist Chris Darimont began to study these wolves, he wanted to confer with local First Nations groups, as aboriginal Canadians are known, in order to learn what they knew about these wolves. He spoke with Chester Starr, an elder of the Heiltsuk Nation that has occupied the Great Bear Rainforest for thousands of years. What Starr had to say about the wolves changed Darimont's perception of the animals.

2 Starr asked Darimont which wolves he and his team were going to study—the timber wolves (mainland wolves) or the coastal wolves on the islands. The question took Darimont by surprise. Biologists had always believed that the wolves that are sometimes

The question asks why the author includes details about the conversation between Starr and Darimont in paragraph 2.

A. Incorrect. The details in paragraph 2 do not explain why Starr had closely observed the two groups of wolves. Instead, they convey that Starr believed the wolves to be separate groups ("Starr asked Darimont which wolves he and his team were going to study—the timber wolves (mainland wolves) or the coastal wolves on the islands"), a supposition that intrigued Darimont and ultimately changed the course of his research study.

B. Incorrect. Although paragraph 1 indicates that Darimont did hope to work with Starr ("he wanted to confer with local First Nations groups, as aboriginal Canadians are known, in order to learn what they knew about these wolves"), Darimont did not initially plan to study both groups of wolves in the area because, as the conversation in paragraph 2 indicates, he did not initially know they were two distinct groups of wolves.

C. Incorrect. The details about the conversation in paragraph 2 highlight that Darimont was eager to learn from Starr's knowledge of the wolves ("Darimont was intrigued by Starr's classification of the wolves as two different groups"), but they do not indicate that Darimont expected Starr's help to find the wolves.

D. **CORRECT.** According to paragraph 2, Starr wanted to know which group of wolves Darimont planned to study —"the timber wolves (mainland wolves) or the coastal wolves on the islands." The author states that the question "took Darimont by surprise," adding that "Darimont was intrigued by Starr's classification of the wolves as two different groups." The author adds that Darimont was initially "hesitant to accept the idea" that the wolves were separate groups but ultimately spent years studying the two groups of wolves. These details indicate that the question Starr posed to Darimont forced Darimont to reevaluate his initial assumption "that the wolves that are sometimes spotted swimming between islands and eating salmon are the same wolves that live on the mainland" and investigate Starr's observation that the wolves had separated into two distinct groups.

Passage Set 3 Item 3

Wolves of the Sea

1 The cool and misty landscape of the Great Bear Rainforest can be found along the coast of British Columbia, Canada, and its nearby islands, from Vancouver Island to the Alaskan border. Within this protected area, wolves roam the forests, islands, and beaches. When biologist Chris Darimont began to study these wolves, he wanted to confer with local First Nations groups, as aboriginal Canadians are known, in order to learn what they knew about these wolves. He spoke with Chester Starr, an elder of the Heiltsuk Nation that has occupied the Great Bear Rainforest for thousands of years. What Starr had to say about the wolves changed Darimont's perception of the animals.

2 Starr asked Darimont which wolves he and his team were going to study—the timber wolves (mainland wolves) or the coastal wolves on the islands. The question took Darimont by surprise. Biologists had always believed that the wolves that are sometimes

Read this sentence from paragraph 4.

After collecting and analyzing the DNA in 800 samples of gray fur and wolf waste, researchers could produce hard biological evidence that sea wolves had genetic markers that made them distinct from the mainland wolves.

The phrase "hard biological evidence" conveys that the goal of the research team was to

A. develop a procedure in order to ensure their study yielded plentiful data about the wolves.

B. seek definitive scientific proof of the number of wolf species present in the area of the study.

C. conduct a study to evaluate multiple theories about the diets of different wolf species.

D. discover if the new data would provide information different from that of previous studies.

Wolves of the Sea

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2 Starr asked Darimont which wolves he and his team were going to study—the timber wolves (mainland wolves) or the coastal wolves on the islands. The question took Darimont by surprise. Biologists had always believed that the wolves that are sometimes

The question asks what the phrase "hard biological evidence" in the sentence from paragraph 4 conveys about the goal of the research team.

A. Incorrect. Although the research team followed a labor-intensive procedure, the phrase "hard biological evidence" refers to the product of their scientific research (the genetic markers revealed within the DNA samples), not the process by which they collected it. Their goal was not to develop a procedure for data collection but to determine precisely how many species of wolf were present in the area.

B. **CORRECT.** The research team wanted to prove or disprove the theory that two separate groups of wolves were present in the area, an idea that was already supported by the observations of scientists and local indigenous people. The phrase "hard biological evidence" conveys that the scientists wanted to bolster their observations of the wolves with concrete scientific data about the wolves' biological makeup. The goal of the researchers was to use the data to prove how many species of wolf were present in the area of the study.

C. Incorrect. The research team gathered extensive data during their study ("After collecting and analyzing the DNA in 800 samples of gray fur and wolf waste" [paragraph 4]), and their goal in doing so was to evaluate a single theory about the wolves: that the wolves had evolved into two separate and genetically distinct species. The research team did not conduct the study in order to evaluate multiple theories about the diets of the wolves.

D. Incorrect. The phrase "hard biological evidence" does not suggest that the research team was hoping to discover if the new data would provide information that was different from previous studies. In fact, the goal of the research team was to use the genetic data to supplement their initial sources of information about the wolves and their own observations from the field.

Passage Set 3 Item 4

Wolves of the Sea

1 The cool and misty landscape of the Great Bear Rainforest can be found along the coast of British Columbia, Canada, and its nearby islands, from Vancouver Island to the Alaskan border. Within this protected area, wolves roam the forests, islands, and beaches. When biologist Chris Darimont began to study these wolves, he wanted to confer with local First Nations groups, as aboriginal Canadians are known, in order to learn what they knew about these wolves. He spoke with Chester Starr, an elder of the Heiltsuk Nation that has occupied the Great Bear Rainforest for thousands of years. What Starr had to say about the wolves changed Darimont's perception of the animals.

2 Starr asked Darimont which wolves he and his team were going to study—the timber wolves (mainland wolves) or the coastal wolves on the islands. The question took Darimont by surprise. Biologists had always believed that the wolves that are sometimes

The author uses the word "admits" in paragraph 5 **most likely** to

A. note that Darimont's genetic research verified a theory based solely on field observations.

B. imply that Darimont's study was disappointing because the conclusion that he reached was not original.

C. emphasize that Darimont's study ultimately confirmed an idea that he had initially doubted.

D. highlight that Darimont's results led him to draw a conclusion from his research that his team did not agree with.

Wolves of the Sea

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2 Starr asked Darimont which wolves he and his team were going to study—the timber wolves (mainland wolves) or the coastal wolves on the islands. The question took Darimont by surprise. Biologists had always believed that the wolves that are sometimes

The question asks for the **most likely** reason why the author uses the word "admits" in paragraph 5.

A. Incorrect. The word "admits" highlights the surprising difference between Darimont's initial idea and the conclusion he ultimately drew from the results of the study. Though Darimont's genetic research did, in fact, verify the field observations of the wolves, this does not explain the author's use of the word "admits" in paragraph 5.

B. Incorrect. The conclusion that Darimont reached was actually quite original, since biologists widely believed the two separate groups of wolves to be one ("Biologists had always believed that the wolves that are sometimes spotted swimming between islands and eating salmon are the same wolves that live on the mainland," [paragraph 2]). The author uses the word "admits" in paragraph 5 to emphasize how unexpected Darimont found the conclusion to be ("The distances between the mainland and the islands are small, less than a mile. Why would the wolves on the islands be any different from the wolves on the mainland?" [paragraph 2]), not to indicate that the study was a disappointment.

C. **CORRECT.** The use of "admits" emphasizes that Darimont found the idea of two species of wolves " 'totally bizarre at first' " (paragraph 5) but ultimately proved it to be correct. Paragraph 2 suggests that Darimont, like other scientists, "had always believed that the wolves that are sometimes spotted swimming between islands and eating salmon are the same wolves that live on the mainland." Therefore, the results of the study were likely to strike biologists as bizarre, and the use of the word "admits" in paragraph 5 highlights Darimont's shift from doubt to confirmation.

D. Incorrect. Darimont's team conducted the research that helped him confirm Starr's idea and draw the conclusion that the wolves were separate species ("After collecting and analyzing the DNA in 800 samples of gray fur and wolf waste, researchers could produce hard biological evidence that sea wolves had genetic markers that made them distinct from the mainland wolves" [paragraph 4]). However, the opinions of Darimont's research team are not described in the passage, and the word "admits" does not indicate that they disagreed with his conclusion.

Passage Set 3 Item 5

Wolves of the Sea

1 The cool and misty landscape of the Great Bear Rainforest can be found along the coast of British Columbia, Canada, and its nearby islands, from Vancouver Island to the Alaskan border. Within this protected area, wolves roam the forests, islands, and beaches. When biologist Chris Darimont began to study these wolves, he wanted to confer with local First Nations groups, as aboriginal Canadians are known, in order to learn what they knew about these wolves. He spoke with Chester Starr, an elder of the Heiltsuk Nation that has occupied the Great Bear Rainforest for thousands of years. What Starr had to say about the wolves changed Darimont's perception of the animals.

2 Starr asked Darimont which wolves he and his team were going to study—the timber wolves (mainland wolves) or the coastal wolves on the islands. The question took Darimont by surprise. Biologists had always believed that the wolves that are sometimes

Which sentence from the passage **best** supports the idea that sea wolves had successfully adapted to living on the islands?

A. "While mainland wolves almost exclusively eat meat, such as deer and elk, and teach their young to hunt for land animals, sea wolves get as much as 90 percent of their nutrition from the sea and teach their young to dig for clams and to catch fish." (paragraph 3)

B. "Sea wolves regularly swim between islands and have been known to sneak up on a seal sunning itself on a rock and make a leaping attack from the water." (paragraph 3)

C. "Darimont suspects that some sea wolves live their entire life on the islands." (paragraph 3)

D. "Darimont hypothesizes that a change in habitat led to the eventual genetic differences between sea wolves and mainland wolves." (paragraph 4)

Wolves of the Sea

1 The cool and misty landscape of the Great Bear Rainforest can be found along the coast of British Columbia, Canada, and its nearby islands, from Vancouver Island to the Alaskan border. Within this protected area, wolves roam the forests, islands, and beaches. When biologist Chris Darimont began to study these wolves, he wanted to confer with local First Nations groups, as aboriginal Canadians are known, in order to learn what they knew about these wolves. He spoke with Chester Starr, an elder of the Heiltsuk Nation that has occupied the Great Bear Rainforest for thousands of years. What Starr had to say about the wolves changed Darimont's perception of the animals.

2 Starr asked Darimont which wolves he and his team were going to study—the timber wolves (mainland wolves) or the coastal wolves on the islands. The question took Darimont by surprise. Biologists had always believed that the wolves that are sometimes

The question asks for the sentence from the passage that **best** supports the idea that sea wolves had successfully adapted to living on the islands.

A. **CORRECT.** This sentence from paragraph 3 describes a significant difference in the diets of the mainland and sea wolves: the mainland wolves "almost exclusively eat meat, such as deer and elk, and teach their young to hunt for land animals," whereas the sea wolves had adapted to the point where they derive "as much as 90 percent of their nutrition from the sea and teach their young to dig for clams and to catch fish." This sentence emphasizes the dietary difference between the two groups of wolves and best supports the idea that sea wolves had successfully adapted to living on the islands.

B. Incorrect. Although this sentence from paragraph 3 describes one technique that the sea wolves used to hunt, it does not offer evidence as strong as that provided by the preceding sentence, which explains that sea wolves were able to derive "as much as 90 percent" (paragraph 3) of their sustenance from the sea alone (versus the mainland wolves, which "almost exclusively eat meat" from land animals [paragraph 3]).

C. Incorrect. Although this sentence from paragraph 3 states that "some sea wolves live their entire life on the islands," it does not provide strong evidence of the necessary adaptations—namely, how these wolves were able to successfully live their whole lives on the islands. Living on the islands was not necessarily an adaptation in and of itself; the adaptation was the sea-based diet that enabled the sea wolves to live on the islands without access to land animals.

D. Incorrect. Although this sentence from paragraph 4 presents Darimont's hypothesis that "a change in habitat led to the eventual genetic differences" between the wolves, the sentence does not describe any of the sea wolves' adaptations nor best support the idea that the sea wolves successfully adapted to living on the islands.

Passage Set 3 Item 6

Wolves of the Sea

1 The cool and misty landscape of the Great Bear Rainforest can be found along the coast of British Columbia, Canada, and its nearby islands, from Vancouver Island to the Alaskan border. Within this protected area, wolves roam the forests, islands, and beaches. When biologist Chris Darimont began to study these wolves, he wanted to confer with local First Nations groups, as aboriginal Canadians are known, in order to learn what they knew about these wolves. He spoke with Chester Starr, an elder of the Heiltsuk Nation that has occupied the Great Bear Rainforest for thousands of years. What Starr had to say about the wolves changed Darimont's perception of the animals.

2 Starr asked Darimont which wolves he and his team were going to study—the timber wolves (mainland wolves) or the coastal wolves on the islands. The question took Darimont by surprise. Biologists had always believed that the wolves that are sometimes

How did a change in habitat **most** affect the wolf population of the Great Bear Rainforest over time?

A. It caused some of the wolves to learn new hunting techniques in order to catch increasingly scarce prey.

B. It caused the wolves to form smaller packs and eventually separate, establishing distinct territories.

C. It caused some of the wolves to gradually become a new, genetically distinct species as they adapted behaviorally.

D. It caused the wolves to adapt their diet as different food sources became available in the area.

Wolves of the Sea

1 The cool and misty landscape of the Great Bear Rainforest can be found along the coast of British Columbia, Canada, and its nearby islands, from Vancouver Island to the Alaskan border. Within this protected area, wolves roam the forests, islands, and beaches. When biologist Chris Darimont began to study these wolves, he wanted to confer with local First Nations groups, as aboriginal Canadians are known, in order to learn what they knew about these wolves. He spoke with Chester Starr, an elder of the Heiltsuk Nation that has occupied the Great Bear Rainforest for thousands of years. What Starr had to say about the wolves changed Darimont's perception of the animals.

2 Starr asked Darimont which wolves he and his team were going to study—the timber wolves (mainland wolves) or the coastal wolves on the islands. The question took Darimont by surprise. Biologists had always believed that the wolves that are sometimes

The question asks how a change in habitat **most** affected the wolf population of the Great Bear Rainforest over time.

A. Incorrect. Although the island wolves learned new hunting techniques ("dig for clams and to catch fish," "sneak up on a seal sunning itself on a rock and make a leaping attack from the water" [paragraph 3]), there is no evidence in the passage that these hunting techniques were developed in response to scarcity of prey. The most significant effect of the change in habitat was not an influence on hunting techniques but the behavior differences that evolved because of the isolation of the groups of wolves from each other.

B. Incorrect. The change in habitat did not cause the wolves to form smaller packs but rather served to create distinctive behaviors because of the isolation of one pack from another, eventually causing the groups of wolves to became distinct species.

C. **CORRECT.** The change in habitat caused the wolves to gradually become two distinct species. Though the "sea wolves regularly swim between islands" and "some salmon-eating mainland wolves come and go from the islands," the "sea wolves are full-time island residents" (paragraph 3). This behavioral adaptation to their environment caused the sea wolves to "became more isolated" from the mainland wolves; as a result, the two groups "rarely mated with each other," and "over time the two types of wolves became more distinct" (paragraph 4).

D. Incorrect. Only the sea wolves adapted their diet. They did this not because different food sources became available in the area but because they were in an entirely different area from the mainland wolves.

There are no more questions for this passage set.

Use the review button Review to return to any questions about the passage you have just read.

Once you select the blue arrow at the top of this screen, you will **not** be able to return to any questions about this passage.

Passage 4

Ode to Fireworks

In autumn my mother drove us to the edge of the field
where the fair was set up year after year:
the carousel, the bumper cars, the long, low sheds
filled with prizewinning animals.
We—my sister, my cousin, and I—were ready for bed,
already in our pajamas. This was a treat we waited
all year for. We waited in the darkness
for the first low, dull *thwumps*, like someone
beating an old, filthy rug hung on a wash line.
Then we counted the seconds between the lightning
and thunder, as we also used to do, until the sky
lit up: red, blue, green, gold. In my mind's eye
I can still see the straggly, ancient oak whose branches
reached up past the exhibition halls, silhouetted
against the spectrum of stars that cascaded behind it.

It was one thing to look up into the sky
and imagine yourself in it or to make out pictures
among the clouds, which my sister liked to do.
No, I would tell her, that cloud
does *not* look like an elephant, a hat, an umbrella.
But it was another thing to see
the sky at night written upon
with those jewels. (We lived in the country:
night was *night*.) All around us, crickets
stridulated in the stubble of what had been
somebody's cornfield, their song rising and falling.
You could smell winter on the air's edge.

Now, in the city, when the sky dips into shadow
at New Year's or on the Fourth of July, I find myself
craning my neck upward at odd moments.
The city sky is always lit up. This is where we live now,
and it is how we live now, awash in light
of every hue. Everything is a constant celebration:
picking up washing at the cleaner's or stopping by
the corner market for a loaf of heavy bread.
And the music around me is the music of people,
their voices rising and falling in a hundred languages.
But beneath the yellowish glow deep in the sky
of all our city lights pelting out into the universe,
I remember the feel of the pickup truck bumping
across the ridged field, as I kept waiting for those
childhood bursts, watching as they escorted us home.

Passage Set 4 Item 1

Ode to Fireworks

In autumn my mother drove us to the edge of the field
where the fair was set up year after year:
the carousel, the bumper cars, the long, low sheds
filled with prizewinning animals.
We—my sister, my cousin, and I—were ready for bed,
already in our pajamas. This was a treat we waited
all year for. We waited in the darkness
for the first low, dull *thwumps*, like someone
beating an old, filthy rug hung on a wash line.
Then we counted the seconds between the lightning
and thunder, as we also used to do, until the sky
lit up: red, blue, green, gold. In my mind's eye
I can still see the straggly, ancient oak whose branche
reached up past the exhibition halls, silhouetted
against the spectrum of stars that cascaded behind it.

It was one thing to look up into the sky
and imagine yourself in it or to make out pictures

The comparison in lines 8–9 of the poem is used to convey

A. the muffled pounding of explosions in the distance.

B. the way lightning streaks through the clouds.

C. the echoes of thunder on an autumn night.

D. the glow of sparks falling from the sky.

Ode to Fireworks

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where the fair was set up year after year:
the carousel, the bumper cars, the long, low sheds
filled with prizewinning animals.
We—my sister, my cousin, and I—were ready for bed,
already in our pajamas. This was a treat we waited
all year for. We waited in the darkness
for the first low, dull *thwumps*, like someone
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and thunder, as we also used to do, until the sky
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I can still see the straggly, ancient oak whose branche
reached up past the exhibition halls, silhouetted
against the spectrum of stars that cascaded behind it.

It was one thing to look up into the sky
and imagine yourself in it or to make out pictures

Ode to Fireworks

The question asks what the comparison in lines 8–9 of the poem is used to convey.

A. **CORRECT.** In lines 8–9 the speaker compares the deep thumping noises at the start of a fireworks show to the muffled thumping sound made when beating a rug to clean it. The imagery of "low, dull *thwumps*" (line 8) (onomatopoeia) describes a sound that is not clear or powerful. To the speaker, these low, distant explosions are the signal that the fireworks display is starting and that the loud, cracking sound of fireworks will be heard soon ("Then we counted the seconds between the lightning / and thunder" [lines 10–11]).

B. Incorrect. The comparison in lines 8–9 deals with the low sound of the first fireworks shooting off rather than the streaks of light they emit. To the speaker, the low *thwumps* (onomatopoeia) are the signal that fireworks are about to explode overhead, much like the way a streak of lightning during a storm indicates that a crash of thunder will follow in a few seconds.

C. Incorrect. The *thwump* (onomatopoeia) sounds are the start of the fireworks show, not thunder. As a comparison, the speaker says the initial *thwumps* of the fireworks signal anticipation for the full explosion that will come, much like the way the speaker would watch for lightning and count the seconds before an impending thunderclap (lines 10–11).

D. Incorrect. The muffled *thwump* (onomatopoeia) sounds occur before the dazzling explosion of lights and before sparks start to fall from the sky. The comparison focuses on the sounds of the experience, not the sight of the experience.

Passage Set 4 Item 2

Ode to Fireworks

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all year for. We waited in the darkness
for the first low, dull *thwumps*, like someone
beating an old, filthy rug hung on a wash line.
Then we counted the seconds between the lightning
and thunder, as we also used to do, until the sky
lit up: red, blue, green, gold. In my mind's eye
I can still see the straggly, ancient oak whose branche
reached up past the exhibition halls, silhouetted
against the spectrum of stars that cascaded behind it.

It was one thing to look up into the sky
and imagine yourself in it or to make out pictures

Read lines 22–23 from the poem.

the sky at night written upon
with those jewels.

What does the word choice in these lines convey about the speaker?

- A. The speaker values material possessions.
- B. The speaker imagines that the fireworks are magical.
- C. The speaker believes that the country setting is distinctive.
- D. The speaker cherishes the memory of seeing fireworks as a child.

Ode to Fireworks

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where the fair was set up year after year:
the carousel, the bumper cars, the long, low sheds
filled with prizewinning animals.
We—my sister, my cousin, and I—were ready for bed,
already in our pajamas. This was a treat we waited
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and thunder, as we also used to do, until the sky
lit up: red, blue, green, gold. In my mind's eye
I can still see the straggly, ancient oak whose branche
reached up past the exhibition halls, silhouetted
against the spectrum of stars that cascaded behind it.

It was one thing to look up into the sky
and imagine yourself in it or to make out pictures

The question asks what the word choice in lines 22–23 of the poem conveys about the speaker.

A. Incorrect. The word "jewels" is used figuratively to indicate the sentimental value that the experience of watching the fireworks holds for the speaker. There is no indication in the poem that the speaker values material possessions.

B. Incorrect. The use of the word "jewels" highlights the importance of the memory in the speaker's mind. The imagery in the words "written upon" expresses the way the bright streaks of light curve and fly across the night sky, not that the speaker views the fireworks display as magical.

C. Incorrect. The speaker describes the elements of the fireworks display that stand out most clearly. The view of the bright, colorful fireworks streaking across the sky is distinct, but it is not unique to the country setting.

D. **CORRECT.** The word "jewels" creates a picture of watching shining and sparkling explosions in the night sky and suggests that this experience holds sentimental and emotional value for the speaker. The speaker cherishes the memory of the experience.

Passage Set 4 Item 3

Ode to Fireworks

In autumn my mother drove us to the edge of the field
where the fair was set up year after year:
the carousel, the bumper cars, the long, low sheds
filled with prizewinning animals.
We—my sister, my cousin, and I—were ready for bed,
already in our pajamas. This was a treat we waited
all year for. We waited in the darkness
for the first low, dull *thwumps*, like someone
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Then we counted the seconds between the lightning
and thunder, as we also used to do, until the sky
lit up: red, blue, green, gold. In my mind's eye
I can still see the straggly, ancient oak whose branche
reached up past the exhibition halls, silhouetted
against the spectrum of stars that cascaded behind it.

It was one thing to look up into the sky
and imagine yourself in it or to make out pictures

The use of italics on the word *"night"* in line 24 is most likely intended to emphasize the

- A. sense of mystery in the darkness.
- B. sense of absolute darkness.
- C. speaker's fear of night.
- D. speaker's certainty about that night.

Ode to Fireworks

In autumn my mother drove us to the edge of the field
where the fair was set up year after year:
the carousel, the bumper cars, the long, low sheds
filled with prizewinning animals.
We—my sister, my cousin, and I—were ready for bed,
already in our pajamas. This was a treat we waited
all year for. We waited in the darkness
for the first low, dull *thwumps*, like someone
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Then we counted the seconds between the lightning
and thunder, as we also used to do, until the sky
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I can still see the straggly, ancient oak whose branche
reached up past the exhibition halls, silhouetted
against the spectrum of stars that cascaded behind it.

It was one thing to look up into the sky
and imagine yourself in it or to make out pictures

The question asks what the use of italics on the word "*night*" in line 24 is most likely intended to emphasize.

A. Incorrect. The purpose of italicizing the word "*night*" is not to convey mystery. While the speaker refers to not knowing the exact location where the firework viewing took place ("in the stubble of what had been / somebody's cornfield" [lines 25–26]), the emphasis on "*night*" is meant to highlight the darkness and contrast the bright light from the fireworks soaring across the sky.

B. **CORRECT.** The italics are intended to place emphasis on one key aspect of nighttime—total darkness. The speaker is making a point that night in the country was truly dark, unlike the night the speaker currently experiences in a city, where light emitted from buildings and vehicles prevents complete darkness.

C. Incorrect. The tone in the second stanza is positive, showing admiration for the beauty visible in true darkness rather than fear: "But it was another thing to see / the sky at night written upon / with those jewels" (lines 21–23).

D. Incorrect. The speaker is talking about the general experience of watching fireworks on several occasions, not focusing on the events of a specific night. The use of italics on the word "*night*" emphasizes the speaker's memory of the persistent darkness.

Passage Set 4 Item 4

Ode to Fireworks

In autumn my mother drove us to the edge of the field
where the fair was set up year after year:
the carousel, the bumper cars, the long, low sheds
filled with prizewinning animals.
We—my sister, my cousin, and I—were ready for bed,
already in our pajamas. This was a treat we waited
all year for. We waited in the darkness
for the first low, dull *thwumps*, like someone
beating an old, filthy rug hung on a wash line.
Then we counted the seconds between the lightning
and thunder, as we also used to do, until the sky
lit up: red, blue, green, gold. In my mind's eye
I can still see the straggly, ancient oak whose branche
reached up past the exhibition halls, silhouetted
against the spectrum of stars that cascaded behind it.

It was one thing to look up into the sky
and imagine yourself in it or to make out pictures

What is the purpose of the repeated words "rising and falling" in lines 26 and 37?

A. to create a distinction between solitude and meaningful interaction

B. to demonstrate a connection between the speaker's past and present

C. to emphasize the speaker's attention to the surrounding sounds

D. to compare the fireworks to common sights and sounds

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The question asks how the memory in lines 41–42 affects the speaker.

○ A. Incorrect. The speaker does not express concern in these lines about the impossibility of returning to childhood or the past. For the speaker, the past and the memories associated with it are a source of comfort and a way to remember simpler times ("I remember the feel of the pickup truck bumping / across the ridged field" [lines 40–41]).

○ B. Incorrect. While the speaker recalls anticipation before the start of a fireworks display, there is no hint that the speaker is impatient. Particularly in lines 41–42, the speaker is reminded of the expectation of hearing and seeing fireworks and the sense of simple contentment felt in the experience ("I find myself / craning my neck upward at odd moments" [lines 29–30]).

○ C. Incorrect. The speaker is reflecting on past experiences and pointing out the elements of the city that remind the speaker of these past experiences. The speaker acknowledges the differences between the country and city settings but does not convey regret for leaving the rural area ("This is where we live now, / and it is how we live now, awash in light / of every hue" [lines 31–33]).

○ D. **CORRECT.** The memory of watching the fireworks on the way home creates a sense of comfort that stays with the speaker ("escorted us home"). The speaker looks forward to moments when the youthful experience ("childhood bursts") of being excited by something like a fireworks display can be a source of happiness.

Passage Set 4 Item 5

Ode to Fireworks

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Read lines 41–42 from the poem.

I kept waiting for those
childhood bursts, watching as they escorted us home.

How does this memory affect the speaker?

A. The speaker believes it is impossible to ever return to a place in the past.

B. The speaker is still amused by the impatience felt during fireworks displays.

C. The speaker now regrets abandoning the rural way of life.

D. The speaker feels a sense of comfort when reflecting on the past.

Ode to Fireworks

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It was one thing to look up into the sky
and imagine yourself in it or to make out pictures

The question asks what the purpose is of the repeated words "rising and falling" in lines 26
and 37.

○ A. Incorrect. These lines do not provide insight into the speaker's interactions or feelings of solitude. The speaker mentions the emptiness of the country and the crowds in the city, but these repeated words are meant to draw a connection between the locations rather than show differences between them.

○ B. **CORRECT.** The first mention of these words occurs during a recollection of the speaker's past, and the second takes place during a description of the speaker's present. The speaker looks to the connections between the country setting ("All around us, crickets / stridulated in the stubble of what had been / somebody's cornfield, their song rising and falling" [lines 24–26]) and the city setting ("And the music around me is the music of people, / their voices rising and falling in a hundred languages" [lines 36–37]) as a source of comfort.

○ C. Incorrect. Even though the lines call out specific sounds, the purpose of the repetition of the words in the two parts of the poem is to show how the speaker connects the two settings. The "rising and falling" of the sounds is one detail the speaker highlights.

○ D. Incorrect. The repetition of the words "rising and falling" is used to compare the different locations in the speaker's life, not to compare fireworks to the sounds of crickets in the country or to the sounds of people moving and talking in the city.

Passage Set 4 Item 6

Ode to Fireworks

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It was one thing to look up into the sky
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The fireworks in the poem represent the speaker's

A. wish to return to a simpler way of living.

B. bittersweet feelings about leaving the past behind.

C. high expectations for everyday life.

D. reflections on past interactions with relatives.

Ode to Fireworks

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It was one thing to look up into the sky
and imagine yourself in it or to make out pictures

The question asks what the fireworks in the poem represent about the speaker.

A. Incorrect. While the speaker misses elements of the past, the speaker is also positive about the present, with comparisons to a "constant celebration" (line 33) and descriptions of "the music of people" (line 36). The speaker does not indicate a desire to return to a simpler way of living.

B. **CORRECT.** The speaker misses the experience of watching the fireworks display with family and friends but understands that time has progressed and that life is now different. The lines "This was a treat we waited / all year for" (lines 6–7) highlight the significance of the memory of waiting for and watching the fireworks. In the speaker's present, the lines "I remember the feel of the pickup truck bumping / across the ridged field" (lines 40–41) emphasize the key details from the experience that stand out in the speaker's mind when something in the current environment reminds the speaker of the past.

C. Incorrect. While the speaker does share details about the present and the tone is generally positive, the fireworks do not suggest that the speaker has high expectations for how everyday life should be. The third stanza (lines 28–42) describes some of the speaker's imaginings about the aspects of going about one's daily life, but the speaker does not form expectations from these fantasies.

D. Incorrect. While the speaker does mention discussing cloud shapes with a family member in lines 19–20, the fireworks serve as a more general reminder of the speaker's past life. Viewing the bright lights of the city makes the speaker recall memories of the speaker's past and the feelings of anticipation before the fireworks show.

There are no more questions for this passage set.

Use the review button Review to return to any questions about the passage you have just read.

Once you select the blue arrow at the top of this screen, you will **not** be able to return to any questions about this passage.

Passage 5

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

Excerpt from *The Highest Tide*

by Jim Lynch

1 I rounded the oyster beds, to the far side. . . . It was low tide by then, and I saw the water hesitating at its apex, neither leaving nor returning, patiently waiting for the gravitational gears to shift. Dozens of anxious clams started squirting in unison like they did whenever vibrating grains of sand warned them predators were approaching. I stopped and waited with them, to actually see the moment when the tide started returning with its invisible buffet of plankton for the clams, oysters, mussels and other filter feeders. It was right then, ankle deep in the Sound, feet numbing, eyes relaxed, that I saw the nudibranch.

2 In all my time on the flats I'd never seen one before. I'd read about them, sure. I'd handled them at aquariums but never in the wild, and I'd never even seen a photo of one this stunning. It was just three inches long but with dozens of fluorescent, orange-tipped hornlike plumes jutting from the back of its see-through body that appeared to be lit from within.

3 Nudibranchs are often called the butterflies of the sea, but even that understates their dazzle. Almost everything else in the northern Pacific is dressed to blend with pale surroundings. Nudibranchs don't bother, in part because they taste so lousy they don't need camouflage to survive. But also, I decided right then, because their beauty is so startling it earns them a free pass, the same way everyday life brakes for peacocks, parade floats. . . .

4 The dark mudflats loomed like wet, flattened dunes stretching deep into Skookumchuck Bay in front of our house. From a distance, they looked too barren to support sea life. Up close, they still did, unless you knew where to find the hearty clams, worms and tiny creatures that flourish in mud. . . . I'm not sure why I decided to take a look. It was still an hour before sunrise, and I knew exactly what the bars[1] looked like in the moonlight, but for some reason, I couldn't resist.

5 I heard it long before I saw it. It was an exhale, a release of sorts, and I instantly wondered if a whale was stranded again. We had a young minke[2] stuck out there two summers prior, and it made similar noises until the tide rose high enough for rescuers to help free it. . . . I looked for a hulking silhouette but couldn't find one. I waited, but there were no more sounds. Still, I went toward what I thought I'd heard, avoiding stepping into the mud until I had to. I knew the flats well enough to know I could get stuck just about anywhere. The general rule was you didn't venture out past the shells and gravel with an incoming tide. I sank up to my knees twice, and numbing water filled my boots.

6 . . . I kept stepping toward the one sound I'd heard, a growing part of me hoping I'd find nothing at all. When I stopped to rest and yank up my socks, my headlamp crossed it. My first thought? A giant octopus.

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[1] **bars:** sandbars

[2] **minke:** species of small whale

7 Puget Sound has some of the biggest octopi in the world. They often balloon to a hundred pounds. Even the great Jacques Cousteau[3] himself came to study them. But when I saw the long tubular shape of its upper body and the tangle of tentacles below it, I knew it was more than an octopus. I came closer, within fifty feet, close enough to see its large cylindrical siphon[4] quiver. I couldn't tell if it was making any sounds at that point, because it was impossible to hear anything over the blood in my ears. . . .

8 The creature's body came to a triangular point above narrow fins that lay flat on the mud like wings, but it was hard to be sure exactly where it all began or ended, or how long its tentacles truly were, because I was afraid to pry my eyes off its jumble of arms for more than half a second. I didn't know whether I was within reach, and its arms were as big around as my ankle and lined with suckers the size of half-dollars. If they even twitched I would have run. So, I was looking at it and not looking at it while my heart spangled my vision. I saw fragments, pieces, and tried to fuse them in my mind but couldn't be certain of the whole. I knew what it had to be, but I wouldn't allow myself to even think the two words. Then I gradually realized the dark shiny disc in the middle of the rubbery mass was too perfectly round to be mud or a reflection.

9 It was too late to smother my scream. Its eye was the size of a hubcap.

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[3]**Jacques Cousteau:** renowned French oceanographer

[4]**siphon:** tube-like organ that is used for drawing in or removing fluids

Passage Set 5 Item 1

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

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In paragraph 3, the phrase "the butterflies of the sea" conveys the idea that

A. nudibranchs do not have to work as hard as other animals to survive in the ocean.

B. nudibranchs have colorful features that make them stand out.

C. nudibranchs are delicate and have trouble adapting to their environment.

D. nudibranchs are rare and difficult to find in the ocean.

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

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Excerpt from *The Highest Tide*

The question asks what idea the phrase "the butterflies of the sea" in paragraph 3 conveys.

- A. Incorrect. While the narrator does say that they "taste so lousy they don't need camouflage to survive" (paragraph 3), the phrase explains that their bright appearance poses no threat to their lives.

- B. **CORRECT.** The narrator describes the vibrant colors of the nudibranch in paragraph 2. Then in paragraph 3, the narrator says that "their beauty is so startling." The nudibranchs are colorful and unique, just as many butterflies are.

- C. Incorrect. The narrator describes the distinct appearance of the nudibranch but does not suggest that nudibranchs struggle to adapt to their environment because of this trait.

- D. Incorrect. In paragraph 2, the narrator states, "I'd handled them at aquariums but never in the wild, and I'd never even seen a photo of one this stunning." Although this suggests that the narrator has rarely encountered a nudibranch in the wild, it does not suggest that they are rare in the wild in general.

Passage Set 5 Item 2

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

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Read these sentences from paragraph 4.

I'm not sure why I decided to take a look. It was still an hour before sunrise, and I knew exactly what the bars looked like in the moonlight, but for some reason, I couldn't resist.

The sentences contribute to the overall structure of the excerpt by

A. introducing the mysterious creature that the narrator discovers.

B. indicating a shift from the narrator recalling the past to the narrator reflecting on the present.

C. establishing a struggle with fear that the narrator must overcome.

D. building tension through indicating that the narrator is going to see something unexpected.

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

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The question asks for an explanation of how selected sentences from paragraph 4 contribute to the overall structure of the excerpt.

A. Incorrect. These sentences set a tense and mysterious tone for what is about to happen in the excerpt, but they do not introduce the creature the narrator discovers.

B. Incorrect. While the narrator reveals that he is familiar with the terrain ("I knew exactly what the bars looked like in the moonlight"), this does not show the narrator recalling the past or reflecting on the present; it demonstrates the narrator's knowledge of the mudflats.

C. Incorrect. These sentences reveal the narrator's curiosity, which is his prime motivation for venturing out to the mudflats, and his familiarity with the terrain shows that at this point, he does not feel afraid.

D. **CORRECT.** The narrator creates a feeling of mystery and suspense with language that shows how the situation is unknown. Phrases such as "I couldn't resist" and "I'm not sure why" reveal the narrator's curiosity, as well as the tension of feeling drawn to explore the mudflats in the moonlight.

Passage Set 5 Item 3

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The narrator's actions in paragraph 5 reveal that he is

A. expecting to see the familiar sight of a stranded minke.

B. confident about exploring farther into the mudflats.

C. unconcerned about becoming stuck in the mudflats.

D. determined to discover the source of the sound.

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

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The question asks what the narrator's actions in paragraph 5 reveal about him.

A. Incorrect. The paragraph begins with the narrator wondering "if a whale was stranded again" because of one that had gotten stuck before and had "made similar noises." However, the narrator explains that he "looked for a hulking silhouette but couldn't find one" before he "went toward what [he] thought [he'd] heard," so readers can conclude that he continues to walk through the dangerous mudflats not because he expects to find a whale but because he is curious to find out what made the noise.

B. Incorrect. The fact that the narrator knows about a whale that was stranded on the mudflats "two summers prior" indicates that he is familiar with the area, and he does mention that he has some knowledge of the mudflats. However, in the paragraph, he reveals that his knowledge is of the dangers there: "I knew the flats well enough to know I could get stuck just about anywhere." He also explains that as he moves, he avoids "stepping into the mud until [he] had to." The fact that he acknowledges the danger and tries to avoid it indicates that he is cautious rather than confident.

C. Incorrect. In the paragraph, the narrator's recollection that even though he could not see the silhouette of a whale, "still, [he] went toward what [he] thought [he'd] heard" might make him seem unconcerned about getting stuck. However, even as he continues, he moves carefully, avoiding "stepping into the mud until [he] had to" because he knows the mudflats "well enough to know [he] could get stuck just about anywhere."

D. **CORRECT.** In the paragraph, the narrator describes the dangers of walking on the mudflats by stating that he "knew the flats well enough to know [he] could get stuck just about anywhere," but he continues walking toward the sound. Despite knowing the dangers, he still "went toward what [he] thought [he'd] heard," and this shows that he is determined to find out what made the sound.

Passage Set 5 Item 4

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

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How does the setting affect the plot of the excerpt?

A. The darkness of the mudflats before sunrise causes the narrator to pay close attention to his surroundings.

B. The rugged terrain of the mudflats makes it more difficult for the narrator to do his job.

C. The slow return of the tide along the mudflats forces the narrator to be patient during his journey.

D. The barren appearance of the mudflats creates a sense of mystery that unsettles the narrator.

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

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The question asks how the setting affects the plot of the excerpt.

- A. **CORRECT.** In paragraph 4, the narrator says that it is an hour before sunrise. It is difficult to see because the mudflats are dark, so the narrator, while familiar with the terrain of the mudflats, is cautious.

- B. Incorrect. While the terrain of the mudflats is challenging because of the "wet, flattened dunes" (paragraph 4), the narrator is familiar with the terrain and moves carefully. In addition, the excerpt shows that the narrator explores the mudflats for curiosity and enjoyment, not work.

- C. Incorrect. In paragraph 1, the narrator watches the water "hesitating at its apex" and "patiently waiting for the gravitational gears to shift." This illustrates that the narrator is already familiar with the changes in his surroundings, that the tide is slow to move in, and that he can move carefully through the mudflats without the threat of rising water.

- D. Incorrect. While the narrator is on the mudflats for the entire excerpt, the phrase "eyes relaxed" in paragraph 1 indicates that the narrator feels comfortable there. The narrator does not show fear until paragraph 6, when a growing fear about the unknown creature arises.

Passage Set 5 Item 5

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

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Which sentence from paragraph 5 supports the idea that the narrator is taking a risk?

A. "It was an exhale, a release of sorts, and I instantly wondered if a whale was stranded again."

B. "I looked for a hulking silhouette but couldn't find one."

C. "I waited, but there were no more sounds."

D. "I knew the flats well enough to know I could get stuck just about anywhere."

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

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The question asks which sentence from paragraph 5 supports the idea that the narrator is taking a risk.

A. Incorrect. In this sentence, the narrator is describing the exhale of a creature and his concern that the sound might be coming from a whale in danger. At no point does the narrator suggest that this is a dangerous situation.

B. Incorrect. This sentence describes a "hulking silhouette" because the narrator is searching for a whale that might be stranded. This expression refers to the size of the whale and not to any danger the narrator might face.

C. Incorrect. The narrator's words "no more sounds" are used to illustrate his listening for what may be a whale. At this point, the narrator is still concerned about the possibility that a whale may be stranded, not the possibility of being in danger.

D. **CORRECT.** The idea that the narrator could become stuck in the mud of the flats means that the surroundings pose some danger or difficulty.

Passage Set 5 Item 6

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

Excerpt from *The Highest Tide*

by Jim Lynch

1 I rounded the oyster beds, to the far side. . . . It was low tide by then, and I saw the water hesitating at its apex, neither leaving nor returning, patiently waiting for the gravitational gears to shift. Dozens of anxious clams started squirting in unison like they did whenever vibrating grains of sand warned them predators were approaching. I stopped and waited with them, to actually see the moment when the tide started returning with its invisible buffet of plankton for the clams, oysters, mussels and other filter feeders. It was right then, ankle

Read this sentence from paragraph 6.

I kept stepping toward the one sound I'd heard, a growing part of me hoping I'd find nothing at all.

How do the narrator's actions develop a central idea of the excerpt?

A. The narrator's concern about the origin of the noise shows dedication to helping preserve sea life in the mudflats.

B. The narrator's curiosity about the sea life in the mudflats outweighs any fear about the situation.

C. The narrator's knowledge about a variety of sea life encourages a search for more specimens to study.

D. The narrator's eagerness about new specimens of sea life outweighs the reality that the area is an unlikely place to find them.

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

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The question asks how the narrator's actions, as described in the sentence from paragraph 6, develop a central idea of the excerpt.

A. Incorrect. The sentence highlights the narrator's concern about sea life and the creatures living within the flats. However, these ideas do not develop what is being described in the excerpt.

B. **CORRECT.** The narrator "kept stepping toward the one sound," indicating a sense of curiosity. However, the words "a growing part of me hoping I'd find nothing" suggest a rising fear or concern. Ultimately, the narrator's curiosity outweighs his growing fear and is a central idea in the excerpt, as shown by the fact that the narrator does not run away when finally encountering the creature.

C. Incorrect. While the narrator's descriptions of the nudibranch and other sea life demonstrate a knowledge of these creatures, as well as a desire to discover more in the mudflats, the knowledge the narrator exhibits is not what is being illustrated in the excerpt.

D. Incorrect. The excerpt does describe the narrator's enjoyment at seeing a nudibranch in paragraph 2, and in paragraph 4, the narrator clearly states that there is an abundance of life in the seemingly barren mudflats, including "hearty clams, worms and tiny creatures that flourish in mud." However, the sentence demonstrates the narrator's curiosity in spite of fear, not an eagerness about or fascination with the mudflats.

Passage Set 5 Item 7

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

Excerpt from *The Highest Tide*

by Jim Lynch

1 I rounded the oyster beds, to the far side. . . . It was low tide by then, and I saw the water hesitating at its apex, neither leaving nor returning, patiently waiting for the gravitational gears to shift. Dozens of anxious clams started squirting in unison like they did whenever vibrating grains of sand warned them predators were approaching. I stopped and waited with them, to actually see the moment when the tide started returning with its invisible buffet of plankton for the clams, oysters, mussels and other filter feeders. It was right then, ankle

Read these sentences from paragraph 8.

So, I was looking at it and not looking at it while my heart spangled my vision. I saw fragments, pieces, and tried to fuse them in my mind but couldn't be certain of the whole.

The sensory language "spangled my vision," "I saw fragments, pieces," and "tried to fuse them in my mind" conveys the narrator's

A. extreme excitement about making a great discovery.

B. reluctant acceptance that he needs to leave the mudflats.

C. terrified confusion about the creature in the mudflats.

D. sudden concern about his personal safety.

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

Excerpt from *The Highest Tide*

by Jim Lynch

1 I rounded the oyster beds, to the far side. . . . It was low tide by then, and I saw the water hesitating at its apex, neither leaving nor returning, patiently waiting for the gravitational gears to shift. Dozens of anxious clams started squirting in unison like they did whenever vibrating grains of sand warned them predators were approaching. I stopped and waited with them, to actually see the moment when the tide started returning with its invisible buffet of plankton for the clams, oysters, mussels and other filter feeders. It was right then, ankle

The question asks what the sensory language in the sentences from paragraph 8 conveys about the narrator.

A. Incorrect. While the narrator does not leave the mudflats and is curious about what has been found, the main emotions described in paragraph 8 are fear and confusion as the narrator tries to comprehend the size of the animal.

B. Incorrect. The language focuses on the narrator's inability to organize what he sees into useful thoughts and conclusions, and while the narrator feels fear in paragraph 8—"I was afraid" and "I would have run"—the narrator refuses to leave the mudflats out of curiosity.

C. **CORRECT.** The phrase "spangled my vision" illustrates that the narrator cannot fully recognize what has appeared on the mudflats. The sight is so amazing, the narrator is trying to "fuse" together "fragments" and "pieces" because seeing the creature has created so much emotion in the narrator that he feels confused.

D. Incorrect. While the narrator is feeling some fear, as expressed in paragraph 8, the phrases actually indicate that the narrator's amazement causes him to struggle to take in the view of the creature before him.

Passage Set 5 Item 8

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

Excerpt from *The Highest Tide*

by Jim Lynch

1 I rounded the oyster beds, to the far side. . . . It was low tide by then, and I saw the water hesitating at its apex, neither leaving nor returning, patiently waiting for the gravitational gears to shift. Dozens of anxious clams started squirting in unison like they did whenever vibrating grains of sand warned them predators were approaching. I stopped and waited with them, to actually see the moment when the tide started returning with its invisible buffet of plankton for the clams, oysters, mussels and other filter feeders. It was right then, ankle

The author develops the narrator's point of view when the narrator sees the creature by

A. describing the narrator's movements as he approaches the creature.

B. emphasizing the odds of finding the creature in an area inhabited by a rival species.

C. showing the narrator's growing realization of the creature's identity.

D. comparing the size of the creature to the size of a vehicle.

The narrator's summer job is collecting marine specimens in Puget Sound, Washington. In this excerpt, he is looking for specimens in the mudflats before daybreak. Mudflats, or flats, are coastal landforms created when sediment and silt from tides are deposited as the tides recede.

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The question asks how the author develops the narrator's point of view when the narrator sees the creature.

A. Incorrect. The author's description of how the narrator moves toward the creature has to do with the terrain and the narrator's sense of awe. The narrator's perspective is not represented through how he approaches the creature; it is presented later in the excerpt when the narrator is studying the creature.

B. Incorrect. In this excerpt, while the narrator does discuss other large animals (minke whale, paragraph 5; octopi, paragraph 7) that have appeared on the mudflats, these are examples to show the variety of animal life that can be discovered on the mudflats, not rivals of the creature discovered at the end of the excerpt.

C. **CORRECT.** In paragraph 7, the narrator describes the largest octopi in the world and then states that this creature is "more than an octopus." The narrator then states that it is "impossible to hear anything over the blood in my ears," and in paragraph 8, he describes the creature's body in detail, as well as his growing fear and amazement as he begins to realize what the creature really is.

D. Incorrect. While the narrator observes that the creature's eye is as large as a hubcap in paragraph 9, a comparison to an entire car is never made. This detail is for description but does not give the narrator's point of view.

There are no more questions for this passage set.

Use the review button Review to return to any questions about the passage you have just read.

Once you select the blue arrow at the top of this screen, you will **not** be able to return to any questions about this passage.

ELA_RP_SEC2

English Language Arts

REVISING/EDITING PART A

DIRECTIONS: Read the text or texts that follow and answer the related questions. You will be asked to improve the writing quality of each text and to correct errors so that each text follows the conventions of standard written English. You should reread relevant parts of each text, while being mindful of time, before selecting the **best** answer for each question.

Passage 6

Martial Arts for the Mind and Body

(1) The martial arts blend a series of physical movements with strategic mental discipline so that practitioners can defend themselves, physically defeat an opponent, or both. (2) Historians are unsure of exactly when and where martial arts were first used. (3) Martial arts have been practiced by several different societies for many centuries. (4) Martial arts such as karate, kung fu, tae kwon do, and judo are still taught and practiced as methods of self-defense, but they offer students more than that. (5) The study of martial arts can provide students with a way to enhance their mental discipline as well as their physical fitness.

(6) Discipline, focus, and respect are important qualities for everyone to have. (7) However, for most people these qualities are not innate; they must be learned and practiced. (8) The study of martial arts can provide an opportunity to develop these skills. (9) Students are rewarded for their dedication by passing tests and advancing to higher ranks or levels. (10) For example, in a typical tae kwon do class, students learn discipline by diligently practicing moves, improve focus by listening carefully, and demonstrate respect by bowing to the instructor and following directions.

(11) For teenagers, martial arts classes provide a safe and structured environment for gaining physical skills, building confidence, and enjoying a sense of community. (12) A lot of teens go through hard situations as they try to do well in school and in life. (13) A martial arts class can provide teens with a physical outlet for stress while also challenging them mentally.
(14) Participating in a martial arts program also helps children and teens focus on self-improvement rather than on competition. (15) Progressing through levels of achievement involves mastering more physically demanding techniques. (16) It requires students to take responsibility and be accountable for achieving set goals. (17) Students gain confidence and experience companionship with other students who are progressing through the ranks.

(18) Adults who practice martial arts can experience many of the same benefits that younger people do, but perhaps the greatest of these is health and fitness. (19) Adult martial arts students often see changes in their body within weeks of beginning a program.

(20) For people interested in studying a martial art, there are many ways to learn and practice.
(21) In addition to private studios, community recreation centers often offer low-cost or free martial arts classes. (22) There are even online videos that introduce students to the basic concepts.
(23) People should study martial arts.

Passage Set 6 Item 1

Martial Arts for the Mind and Body

(1) The martial arts blend a series of physical movements with strategic mental discipline so that practitioners can defend themselves, physically defeat an opponent, or both. (2) Historians are unsure of exactly when and where martial arts were first used. (3) Martial arts have been practiced by several different societies for many centuries. (4) Martial arts such as karate, kung fu, tae kwon do, and judo are still taught and practiced as methods of self-defense, but they offer students more than that. (5) The study of martial arts can provide students with a way to enhance their mental discipline as well as their physical fitness.

(6) Discipline, focus, and respect are important qualities for everyone to have. (7) However, for most people these qualities are not innate; they must be learned and practiced. (8) The study of martial arts can provide an opportunity to develop these skills. (9) Students are rewarded for their dedication by passing tests and

What is the **best** way to combine sentences 2 and 3?

A. Historians, who are unsure of exactly when and where martial arts were first used, know that martial arts have been practiced by several different societies for many centuries.

B. While historians are unsure of exactly when and where martial arts were first used, they do know that martial arts have been practiced by several different societies for many centuries.

C. Because historians know that martial arts have been practiced by several different societies for many centuries, they are unsure of exactly when and where martial arts were first used.

D. Martial arts have been practiced by several different societies for many centuries, and historians are unsure of exactly when and where martial arts were first used.

Martial Arts for the Mind and Body

(1) The martial arts blend a series of physical movements with strategic mental discipline so that practitioners can defend themselves, physically defeat an opponent, or both. (2) Historians are unsure of exactly when and where martial arts were first used. (3) Martial arts have been practiced by several different societies for many centuries. (4) Martial arts such as karate, kung fu, tae kwon do, and judo are still taught and practiced as methods of self-defense, but they offer students more than that. (5) The study of martial arts can provide students with a way to enhance their mental discipline as well as their physical fitness.

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Martial Arts for the Mind and Body

The question asks for the **best** way to combine sentences 2 and 3.

A. Incorrect. This way of combining sentences 2 and 3 places unnecessary emphasis on characterizing historians, and it does not clearly show the contrasting relationship between the idea from sentence 2 that historians do not know the exact origins of martial arts and the idea in sentence 3 that historians know that martial arts have a long history.

B. **CORRECT.** This option is correct because the word “while” at the beginning of the sentence best indicates the contrast between the ideas in sentences 2 and 3. Sentence 2 states that historians do not know the exact origins of martial arts (“unsure of exactly when and where”). Sentence 3 describes what historians do know about these origins (“practiced by several different societies for many centuries”). This combination indicates that historians have a general understanding about the origins of martial arts even though they cannot confirm the exact details.

C. Incorrect. Starting this sentence with the word “because” indicates a cause-and-effect relationship that does not exist between the ideas in the original sentences. The idea from sentence 3, that historians know that martial arts have been practiced for many years, did not cause the idea in sentence 2, that historians do not know exact details about the origins of martial arts.

D. Incorrect. The conjunction (connecting word) “and” does not clearly show how the ideas in sentences 2 and 3 are related. While “and” can be used to combine related sentences, it does not demonstrate the contrast between the idea in sentence 2, that historians do not know the exact origins of martial arts, and the idea in sentence 3, that historians know that martial arts have a long history.

Passage Set 6 Item 2

Martial Arts for the Mind and Body

(1) The martial arts blend a series of physical movements with strategic mental discipline so that practitioners can defend themselves, physically defeat an opponent, or both. (2) Historians are unsure of exactly when and where martial arts were first used. (3) Martial arts have been practiced by several different societies for many centuries. (4) Martial arts such as karate, kung fu, tae kwon do, and judo are still taught and practiced as methods of self-defense, but they offer students more than that. (5) The study of martial arts can provide students with a way to enhance their mental discipline as well as their physical fitness.

(6) Discipline, focus, and respect are important qualities for everyone to have. (7) However, for most people these qualities are not innate; they must be learned and practiced. (8) The study of martial arts can provide an opportunity to develop these skills. (9) Students are rewarded for their dedication by passing tests and

Where should sentence 10 be moved to improve the organization of the second paragraph (sentences 6–10)?

- A. to the beginning of the paragraph (before sentence 6)
- B. between sentences 6 and 7
- C. between sentences 7 and 8
- D. between sentences 8 and 9

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The question asks where sentence 10 should be moved to improve the organization of the second paragraph.

A. Incorrect. Starting this paragraph with sentence 10 would weaken the paragraph's organization because it would place a supporting detail sentence (sentence 10) before the topic sentence (sentence 6). Sentence 6 belongs at the beginning of the paragraph because it introduces the topic—the qualities of discipline, focus, and respect. Sentence 10 supports the key idea of the paragraph, that these qualities can be developed through the study of martial arts. If sentence 10 preceded sentence 6, the transitional phrase "for example" would refer to an unspecified topic and idea.

B. Incorrect. Sentence 6 presents the idea that "discipline, focus, and respect are important qualities for everyone to have," but the example in sentence 10 does not directly relate to this idea. Sentence 10 explains how martial arts develop these qualities, not why they are important qualities to have. Because sentence 10 is not directly related to the idea in sentence 6 (the qualities are important), it should not follow sentence 6.

C. Incorrect. Sentences 7 and 8 should not be separated, because the idea presented in sentence 8—that "the study of martial arts can provide an opportunity to develop these skills"—is directly related to the idea from sentence 7—that the skills of discipline, focus, and respect "are not innate; they must be learned and practiced." Sentence 10 supports the idea from sentence 8 by describing an example from a typical martial arts class, so sentence 10 should not precede sentence 8.

D. **CORRECT.** This option is correct because sentence 10 logically follows and supports the idea in sentence 8 that "the study of martial arts can provide an opportunity to develop" the qualities of discipline, focus, and respect. Sentence 10 explains this idea with examples, describing three specific ways that students in a typical tae kwon do class develop discipline, focus, and respect—by "diligently practicing," "listening carefully," and "bowing to the instructor and following directions."

Passage Set 6 Item 3

Martial Arts for the Mind and Body

(1) The martial arts blend a series of physical movements with strategic mental discipline so that practitioners can defend themselves, physically defeat an opponent, or both. (2) Historians are unsure of exactly when and where martial arts were first used. (3) Martial arts have been practiced by several different societies for many centuries. (4) Martial arts such as karate, kung fu, tae kwon do, and judo are still taught and practiced as methods of self-defense, but they offer students more than that. (5) The study of martial arts can provide students with a way to enhance their mental discipline as well as their physical fitness.

(6) Discipline, focus, and respect are important qualities for everyone to have. (7) However, for most people these qualities are not innate; they must be learned and practiced. (8) The study of martial arts can provide an opportunity to develop these skills. (9) Students are rewarded for their dedication by passing tests and

Which revision of sentence 12 **best** maintains the formal style established in the passage?

A. A lot of teens have to put up with difficult things while trying to do well in school and in life.

B. Many teenagers deal with tough situations as they try to stay on top of their studies and do well in life.

C. Many teenagers encounter challenges as they work to succeed both academically and personally.

D. A lot of teens face problems as they work to keep up with their schoolwork and find personal success.

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The question asks for the revision of sentence 12 that **best** maintains the formal style established in the passage.

A. Incorrect. The phrases “A lot,” “put up with,” “difficult things,” and “do well in school” are worded informally; therefore, this sentence does not consistently maintain the formal style established in the passage.

B. Incorrect. The phrases “deal with,” “tough situations,” “stay on top of,” and “do well in life” are worded informally; therefore, this sentence does not consistently maintain the formal style established in the passage.

C. **CORRECT.** This option is correct because it uses clear and scholarly wording throughout the whole sentence. The phrases “many teenagers,” “encounter challenges,” and “succeed both academically and personally” make the sentence’s style more consistently formal than the other options.

D. Incorrect. The phrases “A lot,” “face problems,” and “keep up with” are worded informally; therefore, this sentence does not consistently maintain the formal style established in the passage.

Passage Set 6 Item 4

Martial Arts for the Mind and Body

(1) The martial arts blend a series of physical movements with strategic mental discipline so that practitioners can defend themselves, physically defeat an opponent, or both. (2) Historians are unsure of exactly when and where martial arts were first used. (3) Martial arts have been practiced by several different societies for many centuries. (4) Martial arts such as karate, kung fu, tae kwon do, and judo are still taught and practiced as methods of self-defense, but they offer students more than that. (5) The study of martial arts can provide students with a way to enhance their mental discipline as well as their physical fitness.

(6) Discipline, focus, and respect are important qualities for everyone to have. (7) However, for most people these qualities are not innate; they must be learned and practiced. (8) The study of martial arts can provide an opportunity to develop these skills. (9) Students are rewarded for their dedication by passing tests and

Which transitional phrase should be added to the beginning of sentence 17?

- A. Over time,
- B. In fact,
- C. Even so,
- D. For instance,

Martial Arts for the Mind and Body

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The question asks for the transitional phrase that should be added to the beginning of sentence 17.

A. **CORRECT.** This option is correct because it best shows the chronological progression between the ideas in sentence 16—progressing through levels of achievement "requires students to take responsibility and be accountable for achieving set goals"—and the ideas in sentence 17—"students gain confidence and experience companionship with other students who are progressing through the ranks." The transitional phrase "over time" shows the gradual nature of the relationship between the cause in sentence 16 and the effect in sentence 17.

B. Incorrect. Though the ideas in sentences 16 and 17 are related, "in fact" does not show the correct relationship between the ideas. The transitional phrase "in fact" emphasizes an idea by giving a detail or example of greater intensity, but the ideas in sentence 16—progressing through levels "requires students to take responsibility and be accountable for achieving set goals"—and the ideas in sentence 17—"students gain confidence and experience companionship with other students who are progressing through the ranks"—are related by cause and effect rather than by (degree of) intensity.

C. Incorrect. The transitional phrase "even so" is used to connect opposing ideas, but the ideas in sentence 16—progressing through levels "requires students to take responsibility and be accountable for achieving set goals"—does not contrast with the ideas in sentence 17—"students gain confidence and experience companionship with other students who are progressing through the ranks."

D. Incorrect. Although the transitional phrase "for instance" connects an idea with a related example, it does not show the cause-and-effect relationship between the ideas in sentence 16—progressing through levels "requires students to take responsibility and be accountable for achieving set goals"—and the ideas in sentence 17—"students gain confidence and experience companionship with other students who are progressing through the ranks."

Passage Set 6 Item 5

Martial Arts for the Mind and Body

(1) The martial arts blend a series of physical movements with strategic mental discipline so that practitioners can defend themselves, physically defeat an opponent, or both. (2) Historians are unsure of exactly when and where martial arts were first used. (3) Martial arts have been practiced by several different societies for many centuries. (4) Martial arts such as karate, kung fu, tae kwon do, and judo are still taught and practiced as methods of self-defense, but they offer students more than that. (5) The study of martial arts can provide students with a way to enhance their mental discipline as well as their physical fitness.

(6) Discipline, focus, and respect are important qualities for everyone to have. (7) However, for most people these qualities are not innate; they must be learned and practiced. (8) The study of martial arts can provide an opportunity to develop these skills. (9) Students are rewarded for their dedication by passing tests and

Which sentence would **best** follow and support sentence 18?

A. Adult students gain discipline, focus, self-control, and respect, which are qualities that help them advance in their careers.

B. Many adults initially train in a martial art simply to get exercise without realizing that the training also helps develop other skills.

C. The exercise involved in training helps people strengthen their heart, boost endurance, improve balance, and develop muscle tone.

D. People who commit to training in the martial arts are usually concerned about improving their overall physical health.

Martial Arts for the Mind and Body

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The question asks for the concluding sentence that **best** replaces sentence 23 and supports the topic presented in the passage.

A. Incorrect. The phrase “the skills needed to progress in rank” is vague, and progressing in rank is not related to the overall topic of the passage, which is the benefits of studying martial arts. The topic of the passage is not the “many ways to begin studying martial arts” or how “people can easily discover” the benefits of martial arts.

B. **CORRECT.** This option is correct because it best supports the topic of the passage—the benefits of studying martial arts—by stating two reasons why people should study martial arts: to “experience the satisfaction of achieving goals while also improving themselves.”

C. Incorrect. Some readers may choose this option because it refers to the benefits of martial arts, but the word “because” and the detail that “enrollment in martial arts courses has increased” make this sentence unrelated to the overall topic of the passage, which is about the benefits of studying martial arts, not the number of people who participate.

D. Incorrect. Although the benefits of studying martial arts are described for both teens (in the third paragraph) and adults (in the fourth paragraph), the topic of the passage is the overall benefits of studying martial arts, which include mental discipline (discussed in the first, second, and third paragraphs) in addition to health benefits. Furthermore, the passage does not compare the health effects of studying martial arts across age groups.

Passage Set 6 Item 6

Martial Arts for the Mind and Body

(1) The martial arts blend a series of physical movements with strategic mental discipline so that practitioners can defend themselves, physically defeat an opponent, or both. (2) Historians are unsure of exactly when and where martial arts were first used. (3) Martial arts have been practiced by several different societies for many centuries. (4) Martial arts such as karate, kung fu, tae kwon do, and judo are still taught and practiced as methods of self-defense, but they offer students more than that. (5) The study of martial arts can provide students with a way to enhance their mental discipline as well as their physical fitness.

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Which concluding sentence should replace sentence 23 to **best** support the topic presented in the passage?

A. With so many ways to begin studying martial arts, people can easily discover how the skills needed to progress in rank may help them in life.

B. By taking advantage of opportunities to practice martial arts, people can experience the satisfaction of achieving goals while also improving themselves.

C. Because people are eager to reap the mental and physical benefits of studying martial arts, enrollment in martial arts courses has increased.

D. While taking martial arts classes can improve health for both young people and adults, the effects are clearly more immediate for adults.

Martial Arts for the Mind and Body

(1) The martial arts blend a series of physical movements with strategic mental discipline so that practitioners can defend themselves, physically defeat an opponent, or both. (2) Historians are unsure of exactly when and where martial arts were first used. (3) Martial arts have been practiced by several different societies for many centuries. (4) Martial arts such as karate, kung fu, tae kwon do, and judo are still taught and practiced as methods of self-defense, but they offer students more than that. (5) The study of martial arts can provide students with a way to enhance their mental discipline as well as their physical fitness.

(6) Discipline, focus, and respect are important qualities for everyone to have. (7) However, for most people these qualities are not innate; they must be learned and practiced. (8) The study of martial arts can provide an opportunity to develop these skills. (9) Students are rewarded for their dedication by passing tests and

The question asks for the sentence that would **best** follow and support sentence 18.

A. Incorrect. Though the idea of advancing one's career is certainly appealing for adults, this benefit is not directly tied to "health and fitness" and, therefore, does not support sentence 18.

B. Incorrect. While the passage does discuss potential benefits related to discipline, focus, and confidence (sentences 6 and 11), sentence 18 is solely related to health and fitness benefits and should not be followed by a description of "other skills."

C. **CORRECT.** This option is correct because sentence 18 conveys that the greatest benefit of practicing martial arts is "health and fitness," and the sentence illustrates some specific ways that martial arts training helps improve physical fitness—"strengthen their heart, boost endurance, improve balance, and develop muscle tone."

D. Incorrect. Some readers may choose this option because sentence 5, sentence 15, and sentence 18 discuss the physical aspects of practicing martial arts, but the idea that people who practice martial arts are concerned about their overall health does not provide further details about the connection between training and health.

There are no more questions for this passage set.

Use the review button Review to return to any questions about the passage you have just read.

Once you select the blue arrow at the top of this screen, you will **not** be able to return to any questions about this passage.

Passage 7

Moving through Mountains

(1) An age-old proverb says that necessity is the mother of invention. (2) Centuries of human ingenuity in the face of obstacles prove this to be true. (3) For many years the Swiss Alps, a mountain range spanning southern Switzerland and northern Italy, were such an obstacle. (4) Roads and railways had to navigate around the mountains or through winding tunnels inside the mountains, making the transportation of people and goods difficult and time-consuming. (5) In 2016 these burdens were eased with the completion of the Gotthard Base Tunnel.

(6) Construction of the high-speed railway tunnel began in 1996. (7) The tunnel was created through the use of tunnel-boring machines, which are giant drills with a flat rotating head called a cutter head. (8) Each of the tunnel-boring machines used during the construction of the tunnel was about the length of four football fields arranged end-to-end. (9) During the seventeen-year construction period, 28 million tons of rock were removed, enough to rebuild the Great Pyramid of Giza five times. (10) This massive construction project is reported to have cost $12 billion. (11) After that, 4 million cubic meters of concrete, or enough concrete to build eighty-four Empire State Buildings, were used to construct and support the tunnel.

(12) In a few years, the high-speed railway will carry more than 250 freight trains and 55 passenger trains a day, with most traveling at speeds of around 100 to 125 miles per hour. (13) It will be faster for people to travel between northern and southern Europe. (14) The travel time between the European cities of Zurich, Switzerland, and Milan, Italy, will be reduced by an hour. (15) Many European leaders compare the Gotthard Base Tunnel to the Channel Tunnel, a 33-mile underwater tunnel that connects the United Kingdom and France. (16) While there is no roadway in the Channel Tunnel, people can drive their cars onto special trains that will carry vehicles through to the other side.

(17) Just as traffic congestion in major cities led to the construction of underground local transportation, natural formations, such as mountain ranges, have also sent people underground for faster, easier, and cheaper methods of transportation across larger areas. (18) There is renewed interest in constructing innovative methods of transportation that will help eliminate problems associated with traveling to and from certain areas.

Passage Set 7 Item 1

Moving through Mountains

(1) An age-old proverb says that necessity is the mother of invention. (2) Centuries of human ingenuity in the face of obstacles prove this to be true. (3) For many years the Swiss Alps, a mountain range spanning southern Switzerland and northern Italy, were such an obstacle. (4) Roads and railways had to navigate around the mountains or through winding tunnels inside the mountains, making the transportation of people and goods difficult and time-consuming. (5) In 2016 these burdens were eased with the completion of the Gotthard Base Tunnel.

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Which sentence should be added after sentence 5 to introduce the main topic of the passage?

A. The construction of the Gotthard Base Tunnel was approved by Swiss voters in 1992 and was funded by tolls, fuel taxes, and government loans.

B. Leaders from several European countries attended the opening ceremonies for the Gotthard Base Tunnel, a Swiss tunnel.

C. The Gotthard Base Tunnel is the world's longest and deepest railway tunnel, stretching 35.5 miles straight through the base of the Swiss Alps.

D. The Gotthard Base Tunnel continues to help reduce the number of freight trucks on the roadways in the Swiss Alps.

Moving through Mountains

(1) An age-old proverb says that necessity is the mother of invention. (2) Centuries of human ingenuity in the face of obstacles prove this to be true. (3) For many years the Swiss Alps, a mountain range spanning southern Switzerland and northern Italy, were such an obstacle. (4) Roads and railways had to navigate around the mountains or through winding tunnels inside the mountains, making the transportation of people and goods difficult and time-consuming. (5) In 2016 these burdens were eased with the completion of the Gotthard Base Tunnel.

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Moving Through Mountains

The question asks which sentence should be added to the end of the first paragraph in order to introduce the topic of the passage, which is the description, construction, and use of the Gotthard Base Tunnel.

- A. Incorrect. The option is incorrect because it offers information about the funding used to build the Gotthard Base Tunnel but does not provide a description of the tunnel.
- B. Incorrect. The option is incorrect because it gives details about the opening ceremony of the tunnel but does not provide a description of the tunnel.
- C. **CORRECT.** The option correctly presents and describes the Gotthard Base Tunnel.
- D. Incorrect. The option is incorrect because it offers a result of completing the Gotthard Base Tunnel rather than offering an introductory statement presenting and describing the tunnel.

Passage Set 7 Item 2

Moving through Mountains

(1) An age-old proverb says that necessity is the mother of invention. (2) Centuries of human ingenuity in the face of obstacles prove this to be true. (3) For many years the Swiss Alps, a mountain range spanning southern Switzerland and northern Italy, were such an obstacle. (4) Roads and railways had to navigate around the mountains or through winding tunnels inside the mountains, making the transportation of people and goods difficult and time-consuming. (5) In 2016 these burdens were eased with the completion of the Gotthard Base Tunnel.

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Which sentence should be added to follow and support sentence 7?

A. The tunnel-boring machine is helpful to tunnel builders in the modern era and has been an improvement over dynamite.

B. These enormous tunnel-boring machines function somewhat like a cheese grater, with the cutter head grinding slowly through rock and stone.

C. Engineers had considered making a tunnel under the mountains for many years, but it was impossible to do without modern tunnel-boring machines.

D. Different types of cutter heads are used with tunnel-boring machines depending on the geology of the area where the tunnel is being created.

Moving through Mountains

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The question asks for a sentence that provides additional details about the tunnel-boring machines used to build the Gotthard Base Tunnel in order to support the description of the machines in sentence 7.

A. Incorrect. The option is incorrect because it offers information about how tunnel-boring machines were an improvement over previous methods but does not include information about how the machines work.

B. **CORRECT.** The option is correct because it offers specific details about how tunnel-boring machines, such as the ones used to create the Gotthard Base Tunnel, drill through rock.

C. Incorrect. The option is incorrect because it presents the idea that the tunnel could not be built until advances were made in tunnel-boring machine technology and does not describe how the machines function.

D. Incorrect. The option is incorrect because, though it explains that there are different types of cutter heads used for different geologies, the geology of the tunnel area is not discussed in sentence 7 or in the rest of the paragraph.

Passage Set 7 Item 3

Moving through Mountains

(1) An age-old proverb says that necessity is the mother of invention. (2) Centuries of human ingenuity in the face of obstacles prove this to be true. (3) For many years the Swiss Alps, a mountain range spanning southern Switzerland and northern Italy, were such an obstacle. (4) Roads and railways had to navigate around the mountains or through winding tunnels inside the mountains, making the transportation of people and goods difficult and time-consuming. (5) In 2016 these burdens were eased with the completion of the Gotthard Base Tunnel.

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Where should sentence 11 be moved in order to improve the organization of the second paragraph (sentences 6–11)?

- A. to the beginning of the paragraph (before sentence 6)
- B. between sentences 6 and 7
- C. between sentences 8 and 9
- D. between sentences 9 and 10

The question asks where sentence 11, which completes the detailed steps of how the tunnel was built, should be moved within the second paragraph in order to improve the organization of the paragraph.

- A. Incorrect. The option, placing the sentence at the beginning of the paragraph (before sentence 6), is incorrect because it would not make sense since the process of building the tunnel has not yet been introduced.

- B. Incorrect. The option is incorrect because placing the sentence after sentence 6 would not make sense given that adding concrete would have to happen after the rock was broken down and removed from the tunnel.

- C. Incorrect. The option, placing the sentence between sentences 8 and 9, would be incorrect because the use of concrete did not take place before the removal of “28 million tons of rock” (sentence 9).

- D. **CORRECT.** The option, placing the sentence between sentences 9 and 10, is correct because placing the sentence there helps the reader understand the full sequence of steps performed in constructing the tunnel before the cost of the project is introduced.

Passage Set 7 Item 4

Moving through Mountains

(1) An age-old proverb says that necessity is the mother of invention. (2) Centuries of human ingenuity in the face of obstacles prove this to be true. (3) For many years the Swiss Alps, a mountain range spanning southern Switzerland and northern Italy, were such an obstacle. (4) Roads and railways had to navigate around the mountains or through winding tunnels inside the mountains, making the transportation of people and goods difficult and time-consuming. (5) In 2016 these burdens were eased with the completion of the Gotthard Base Tunnel.

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Which sentence presents information that shifts away from the main topic of the third paragraph (sentences 12–16) and should be removed?

- A. sentence 13
- B. sentence 14
- C. sentence 15
- D. sentence 16

Moving through Mountains

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The question asks which sentence should be removed because it presents an idea that shifts away from the main idea of the third paragraph, which is about the transportation benefits of the Gotthard Base Tunnel.

A. Incorrect. The option (sentence 13) is incorrect because the idea of faster travel times is important to the development of the main idea of the paragraph.

B. Incorrect. The option (sentence 14) is incorrect because the sentence provides a specific example of decreased travel time between two cities when traveling through the Gotthard Base Tunnel, supporting the development of ideas in the paragraph.

C. Incorrect. The option (sentence 15) is incorrect because the sentence compares the Gotthard Base Tunnel to another tunnel that provides an important connection between places; thus, the sentence supports the idea that transportation innovations are beneficial.

D. **CORRECT.** The option (sentence 16) is the correct response because, even though the sentence provides additional information about the Channel Tunnel, it does not help the reader understand the benefits of the Gotthard Base Tunnel.

Passage Set 7 Item 5

Moving through Mountains

(1) An age-old proverb says that necessity is the mother of invention. (2) Centuries of human ingenuity in the face of obstacles prove this to be true. (3) For many years the Swiss Alps, a mountain range spanning southern Switzerland and northern Italy, were such an obstacle. (4) Roads and railways had to navigate around the mountains or through winding tunnels inside the mountains, making the transportation of people and goods difficult and time-consuming. (5) In 2016 these burdens were eased with the completion of the Gotthard Base Tunnel.

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Which transition phrase should be added to the beginning of sentence 18?

A. Although the Gotthard Base Tunnel is mainly for freight trains,

B. With the Gotthard Base Tunnel taking ten years to complete,

C. Because of the successful completion of the Gotthard Base Tunnel,

D. As the number of trains using the Gotthard Base Tunnel increases,

Moving through Mountains

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The question asks for a transition that bridges the ideas between sentences 17 and 18 and accurately presents the relationship.

- A. Incorrect. The option is incorrect because the use of the word “although” and the mention of freight trains suggest that sentence 18 will be about other types of vehicles that use the Gotthard Base Tunnel, and the transition phrase does not logically precede the sentence.
- B. Incorrect. The option is incorrect because the reference to the amount of time it took to build the tunnel does not help lead into the idea presented in sentence 18.
- C. **CORRECT.** The option is correct because it bridges the sentences by referring to the Gotthard Base Tunnel as a solution to the problems described in sentence 17 and logically introduces sentence 18.
- D. Incorrect. The option is incorrect because it suggests that sentence 18 is related to the increasing number of trains using the Gotthard Base Tunnel, which is not accurate.

Passage Set 7 Item 6

Moving through Mountains

(1) An age-old proverb says that necessity is the mother of invention. (2) Centuries of human ingenuity in the face of obstacles prove this to be true. (3) For many years the Swiss Alps, a mountain range spanning southern Switzerland and northern Italy, were such an obstacle. (4) Roads and railways had to navigate around the mountains or through winding tunnels inside the mountains, making the transportation of people and goods difficult and time-consuming. (5) In 2016 these burdens were eased with the completion of the Gotthard Base Tunnel.

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Which concluding sentence should be added after sentence 18 to support the topic presented in the passage?

A. There is proof that underground tunnels such as the Gotthard Base Tunnel are beneficial to the economy of the surrounding area.

B. The Gotthard Base Tunnel is an extraordinary example of how human ingenuity and persistence can overcome great obstacles.

C. The completion of the Gotthard Base Tunnel shows that people can work together to achieve important goals.

D. The Swiss government is confident that the economic impact of the Gotthard Base Tunnel will be worth its construction cost.

Moving through Mountains

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The question asks for a concluding sentence that supports key ideas about the topic developed earlier in the passage.

A. Incorrect. The option is incorrect because the economies of surrounding areas are never mentioned in the passage.

B. **CORRECT.** The option is correct because it supports the points made in the introductory paragraph by affirming the idea that the Gotthard Base Tunnel is an example of a way people have improved life by overcoming obstacles.

C. Incorrect. The option is incorrect because, although the construction of the Gotthard Base Tunnel appears to have required many people to work together, the passage does not explicitly mention people or groups working together.

D. Incorrect. The option is incorrect because it focuses on the cost of the Gotthard Base Tunnel, which is referred to only in sentence 10 of the passage.

There are no more questions for this passage set.

Use the review button Review to return to any questions about the passage you have just read.

Once you select the blue arrow at the top of this screen, you will **not** be able to return to any questions about this passage.

English Language Arts

REVISING/EDITING PART B

DIRECTIONS: Read and answer the following questions. You will be asked to recognize and correct errors so that the sentences or short paragraphs follow the conventions of standard written English. As needed, you may use the notepad tool or write on the scrap paper given to you to take notes. You should reread relevant parts of the sentences or paragraphs, while being mindful of time, before selecting the **best** answer for each question.

Standalone Item 1

Which sentence contains an error in its construction and should be revised?

(1) Walking dogs, cleaning kennels, hand-feeding newborn kittens, and supporting the pet-adoption process, the animal shelter is looking for volunteers to help with a variety of tasks. (2) Working at the animal shelter is a great way for young people, especially those who aspire to care for and protect animals, to gain valuable work experience. (3) In addition to hands-on training with animal care, volunteers will learn important job skills, such as punctuality, responsibility, and personal initiative. (4) Caring for animals can also help volunteers develop empathy, which is the awareness and understanding of the feelings of others.

- A. sentence 1
- B. sentence 2
- C. sentence 3
- D. sentence 4

The question asks for the identification of the sentence in the paragraph that has an error in its construction and should be revised.

- A. **CORRECT.** Sentence 1 contains a structural error. The sentence begins with a list of modifying phrases: “Walking dogs, cleaning kennels, hand-feeding newborn kittens, and supporting the pet-adoption process.” As written, this list modifies the closest noun phrase, “the animal shelter,” which is illogical because the list describes tasks at the animal shelter, not the shelter itself. The list should follow the word it modifies, “tasks,” at the end of the sentence, so that it is closer to the word that it modifies.

- B. Incorrect. Sentence 2 does not contain structural errors. The phrase “especially those who aspire to care for and protect animals” in sentence 2 correctly modifies “young people.”

- C. Incorrect. Sentence 3 does not contain structural errors. The structure of sentence 3 allows the words “In addition to hands-on training with animal care” to correctly modify “volunteers will learn.”

- D. Incorrect. Sentence 4 does not contain structural errors. The phrase “which is the awareness and understanding of the feelings of others” in sentence 4 correctly modifies the word “empathy.”

Standalone Item 2

Read this sentence.

> In the Whispering Gallery of Grand Central Terminal, people whispering a message in one corner can be clearly heard in the opposite corner, regardless of surrounding noise, because the tiled archways send the sound through the environment.

Which revision to the words ***send the sound through the environment*** uses the most precise language?

Drag the correct phrase into the box.

guide the sound waves in a specific direction

focus the sound waves to travel through the space

direct the sound waves to move along the curves of the arches

transfer the sound waves to a variety of different locations

In the Whispering Gallery of Grand Central Terminal, people whispering a message in one corner can be clearly heard in the opposite corner, regardless of surrounding noise, because the tiled archways

[ ].

The question asks for the revision to the words ***send the sound through the environment*** that uses the most precise language.

- Incorrect. The phrase “guide the sound waves in a specific direction” is not the most precise revision. “A specific direction” does not explain precisely where the sound waves travel.

- Incorrect. The phrase “focus the sound waves to travel through the space” is not the most precise revision, because it does not precisely describe where the waves move. The phrase “through the space” does not provide the reader with more specific information as to where in the space the sound waves travel.

- **CORRECT**. The phrase “direct the sound waves to move along the curves of the arches” uses precise language to explain how the waves travel. The wording “direct the sound waves” is more specific than “send the sound” as in the original sentence, and the action “move along the curves” conveys more detail than the phrase “moving through the environment.”

- Incorrect. The phrase “transfer the sound waves to a variety of different locations” is not the most precise revision, because it does not precisely convey where the waves move to. The phrase “variety of different locations” is vague and does not add clarity.

Standalone Item 3

Read this sentence.

> Robert Cornelius is credited with taking the first, official selfie as a daguerreotype, an image recorded on a copper plate coated in silver, using a process that was more complicated than photos of today which are digitized or printed from film and do not require subjects to sit for nearly fifteen minutes to avoid blurring the image.

Which **two** edits should be made to correct the sentence?

Select the **two** correct answers.

- [ ] A. Delete the comma after ***first***.
- [ ] B. Delete the comma after ***daguerreotype***.
- [ ] C. Delete the comma after ***silver***.
- [ ] D. Add a comma after ***today***.
- [ ] E. Add a comma after ***film***.

The question asks which **two** edits should be made to correct the sentence.

A. **CORRECT.** The comma after “first” must be deleted to correct the sentence. The adjectives “first” and “official” are not coordinate adjectives that independently modify the noun “selfie.” Cornelius did not take the “first selfie” and also the “official selfie.” Rather, he took the first selfie that was considered official. Placing a comma between the words “first” and “official” incorrectly separates two adjectives that work together to describe the selfie.

B. Incorrect. The comma after “daguerreotype” must not be deleted, because it is used correctly to introduce an explanation. The phrase “an image recorded on a copper plate coated in silver” is an appositive—a noun phrase that defines “daguerreotype.”

C. Incorrect. The comma after “silver” is placed correctly, marking the end of the phrase “an image recorded on a copper plate coated in silver” that defines “daguerreotype.” Because the sentence continues to explain the process Robert Cornelius used, the comma after “silver” is needed to separate the clauses.

D. **CORRECT.** A comma is needed after “today” because the following phrase, “which are digitized or printed from film,” is a nonrestrictive clause that gives nonessential information about the “photos of today” preceding it.

E. Incorrect. No comma is needed after “film,” because the words “and do not require subjects to sit” are part of the same relative clause that begins with “which are digitized…”. The conjunction “and” joins two predicates within the same clause. Both actions belong to the same clause and the same subject (which); they are not separate independent clauses that need to be punctuated with a comma.

Standalone Item 4

What is the **best** way to combine the sentences?

(1) Scientists now believe that Jupiter may have as many as seventy-nine moons.

(2) One of Jupiter's moons is named Io.

(3) Io has the greatest number of active volcanoes in the solar system.

A. Io, which is one of Jupiter's moons, has the greatest number of active volcanoes in the solar system, and scientists now believe that Jupiter may have as many as seventy-nine moons.

B. Scientists now believe that Jupiter may have as many as seventy-nine moons, and one of them is named Io, which has the greatest number of active volcanoes in the solar system.

C. Scientists now believe that Jupiter may have as many as seventy-nine moons, including one named Io, which has the greatest number of active volcanoes in the solar system.

D. Io, a moon with the greatest number of active volcanoes in the solar system, is one of Jupiter's moons, and scientists now believe that Jupiter may have as many as seventy-nine moons.

The question asks for the **best** way to combine the sentences.

A. Incorrect. Although the sentence incorporates the ideas presented in the three original sentences, it is incorrect because the combination suggests an incorrect relationship between the ideas. By beginning with “Io,” the sentence places emphasis on the moon and the detail about the number of active volcanoes rather than the key idea that “scientists now believe that Jupiter may have as many as seventy-nine moons.” Since Io is an example of one of Jupiter’s moons, the details about Io should follow and be subordinate to the main clause, which provides new information about the number of Jupiter’s moons in general.

B. Incorrect. Although the sentence incorporates all three ideas from the original sentences and correctly places the detail about the number of active volcanoes on Io in a dependent clause, this option is incorrect because it presents an imprecise relationship between the ideas. By using the conjunction (connecting word) “and,” the sentence construction suggests that scientists “now believe” that “Jupiter may have as many as seventy-nine moons” and that “one of them is named Io,” instead of presenting Io as an example of one of Jupiter’s moons.

C. **CORRECT.** This sentence is the best way to combine the original sentences because it uses a complex sentence to present ideas clearly and precisely, and it shows the relationship between the ideas in the original sentences. The sentence starts by stating the number of moons scientists now believe Jupiter may have and then specifies that one of those moons is named Io. The dependent clause “which has the greatest number of active volcanoes in the solar system” immediately follows the word “Io” to provide additional information about the moon. A dependent clause contains a subject (“which,” referring to Io) and a verb (“has”) but is not a complete sentence on its own.

D. Incorrect. The sentence incorporates the key ideas from the original sentences, but its structure does not accurately present the relationship between these ideas. The beginning of the sentence includes the detail about Io having “the greatest number of active volcanoes in the solar system” before specifying that Io is one of the seventy-nine moons of Jupiter. The presentation of the details about Io at the beginning lessens the emphasis of the key idea that “scientists now believe that Jupiter may have as many as seventy-nine moons.”

MATHEMATICS
IMPORTANT NOTES

1. Formulas and definitions of mathematical terms and symbols are **not** provided.

2. Diagrams other than graphs are **not** necessarily drawn to scale. Do not assume any relationship in a diagram unless it is specifically stated or can be determined from the information given.

3. Assume that a diagram is in one plane unless the question specifically states that it is not.

4. Graphs are drawn to scale. Unless stated otherwise, you can assume relationships according to appearance. For example, lines on a graph that appear to be parallel can be assumed to be parallel. This is also true for concurrent lines, straight lines, collinear points, right angles, etc.

DIRECTIONS:

Solve each problem. Select the answer from the choices given or enter your answer in the space provided. When you are solving problems, you can use the online notepad tool or write on the scrap paper given to you.

Math Item 1

What is the prime factorization of 3,575?

- A. $5 \cdot 11 \cdot 13$
- B. $5^2 \cdot 11 \cdot 13$
- C. $5 \cdot 715$
- D. $5^2 \cdot 143$

(B) By observation, 3,575 ends in 75; therefore, 3,575 is divisible by 25.

$3{,}575 \div 25 = 143$

Test 143 for factors and eliminate 3, 5, and 7, but 11 is a factor.

$143 \div 11 = 13$; both 11 and 13 are prime numbers.

The first factor, 25, is **not** prime but is the product of primes, $5 \times 5 = 5^2$.

The prime factorization of 3,575 is $5^2 \times 11 \times 13$.

Math Item 2

What is the value of z in $\frac{x}{10} + \frac{y-x}{5} = \frac{z}{10}$?

A. 1

B. 5

C. y

D. $2y - x$

(D) First, multiply both sides of the equation by 10 to eliminate the fractions. In other words, multiply each term by 10.

$$\frac{x}{10} + \frac{y-x}{5} = \frac{z}{10}$$
$$10\left(\frac{x}{10} + \frac{y-x}{5}\right) = 10\left(\frac{z}{10}\right)$$
$$\frac{10x}{10} + \frac{10(y-x)}{5} = \frac{10z}{10}$$
$$x + 2\,(y - x) = z$$

Then, distribute and combine like terms to find the value for *z*.

$$x + 2(y - x) = z$$
$$x + 2y - 2x = z$$
$$2y - x = z$$

Math Item 3

Two sets, R and S, are described below. The sum of the elements in set R equals the sum of the elements in set S.

$$\mathrm{R} = \{5,\ x,\ 3,\ 8\}$$
$$\mathrm{S} = \{6,\ y,\ 4,\ 1\}$$

What is the value of $x - y$?

- A. -7
- B. -5
- C. 5
- D. 7

(B) First, find the sum for each set by adding the terms in each set separately.

The sum for set R is $5 + x + 3 + 8$, which is $x + 16$.

The sum for set S is $6 + y + 4 + 1$, which is $y + 11$.

The question states that these two sums are equal to each other, so write the equation and then rearrange using inverse operations.

$x + 16 = y + 11$
$x = y - 5$
$x - y = -5$

If the rearranging to obtain the target value is unclear, use the equation $x + 16 = y + 11$ and find a few possible values for *x* and *y*.

For example, if $x = 1$, then $y = 6$ because $1 + 16 = 6 + 11$. If $x = 2$, then $y = 7$ because $2 + 16 = 7 + 11$. Then find the value of $x - y$. No matter which values are chosen, $x - y$ will always be -5.

Math Item 4

If $x = \frac{1}{4}$, what is the value of $\frac{2}{2-x}$?

- A. $\frac{3}{4}$
- B. $\frac{8}{9}$
- C. $1\frac{1}{7}$
- D. $3\frac{1}{2}$

(C) The first step is to substitute the value for *x* into the expression to get $\frac{2}{2-\frac{1}{4}}$.

Then, evaluate the denominator and finally divide the numerator by the denominator.

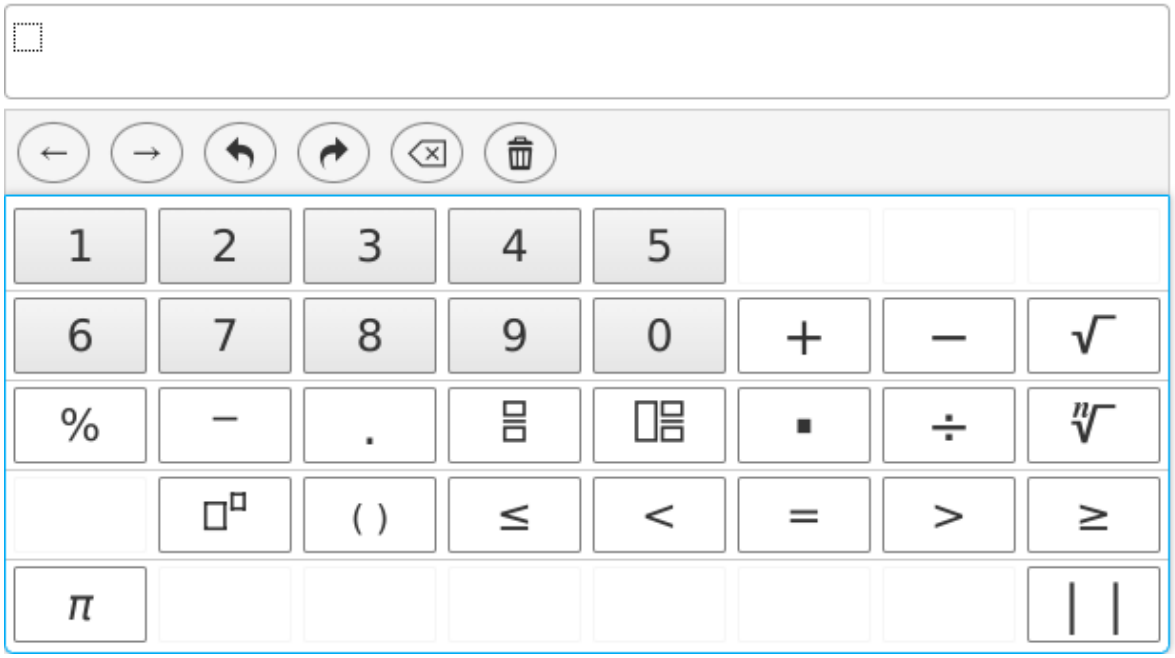
$$\frac{2}{\left(\frac{7}{4}\right)} = 2 \div \left(\frac{7}{4}\right) = 2\left(\frac{4}{7}\right) = \frac{8}{7} = 1\frac{1}{7}$$

Math Item 5

In a school raffle, 1 out of every 25 students wins a prize. Each prize includes a randomly selected trading card from a set of 100 different cards, labeled C1 through C100, with each card equally likely to be chosen. If one student is selected at random, what is the probability that the student both wins a prize and receives Card C17?

Write an expression that represents the probability that a student wins the prize and receives Card C17.

Enter your answer in the space provided. Enter only your answer.



$\left(\frac{1}{25} \cdot \frac{1}{100}\right)$

To calculate the joint probability, first determine the probability of each independent event.

The probability that a randomly selected student wins the prize is $\frac{1}{25}$.

The probability that a randomly selected student will receive Card C17 is $\frac{1}{100}$, because Card C17 is 1 card out of 100 labeled cards.

The probability that a student wins the prize and receives Card C17 is the product of those two probabilities, $\frac{1}{25} \cdot \frac{1}{100}$.

Math Item 6

The cost of shipping a package is $12, plus $2 for each additional pound over 3 pounds. Which expression represents the total cost, in dollars, of shipping a package that weighs p pounds? Assume that $p \geq 3$.

- A. $12 + 2\,(p + 3)$
- B. $12 + 2\,(p - 3)$
- C. $14p + 3$
- D. $14p - 3$

(B) Since the additional cost per pound is **not** added until the package weighs more than 3 pounds, the total cost for 1, 2, or 3 pounds is $12.

- 1 pound is $12
- 2 pounds is $12
- 3 pounds is $12

Since *p* is greater than or equal to 3 pounds, the total cost for:

- 4 pounds is

$$12 + (4 - 3)(2) = 14$$

- 5 pounds is

$$12 + (5 - 3)(2) = 16$$

- *p* pounds is

$$12 + (p - 3)(2) = 12 + 2(p - 3)$$

You may try to write the expression without generating the pattern by recognizing that subtracting 3 from the number of pounds for the package before multiplying by $2 and then adding $12 results in the total cost.

Math Item 7

A middle school library has a shelf with 40 books, each labeled with a different number from 201 to 240. One book is selected at random. What is the probability, as a **percentage**, of selecting book number 223?

Enter your answer in the space provided.

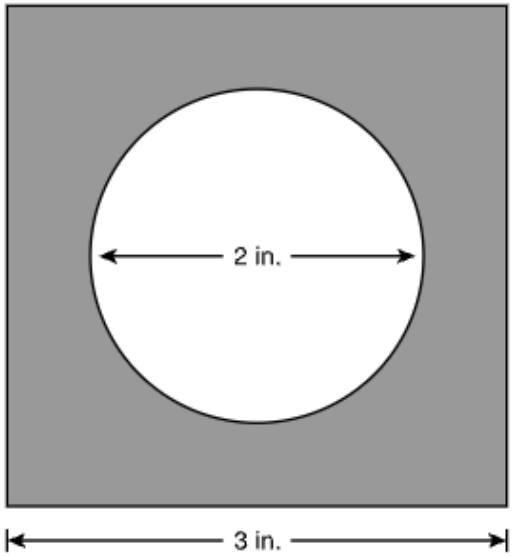
(2.5%) The probability that book number 223 will be selected at random from 40 books is 1 out of 40. To find the probability as a percentage, convert the fraction to a decimal.

The chance of selecting one specific book is $\frac{1}{40} = 0.025$.

Convert the decimal to a percentage: $0.025 \times 100 = 2.5\%$

Math Item 8

A square metal plate has a side length of 3 inches. A circular hole with a diameter of 2 inches is cut out from the center of the plate.



What is the area of the shaded region, to the nearest hundredth of a square inch?

Enter your answer in the space.

(5.86) To determine the area of a square, use $A = s^2$.

Begin by finding the length of the side of the square, which is 3 inches. The area of the square is $(3 \text{ in})^2 = 9 \text{ square inches}$.

To determine the area of the circle, use $A = \pi r^2$.

The radius of the circle (the hole) is one-half the diameter or $2 \text{ in.} \div 2 = 1 \text{ in.}$, so the area of the entire circle is $\pi(1 \text{ in.})^2 \cong 3.14 \text{ sq in.}$

To determine the area of the shaded region, subtract the area of the hole in the square from the area of the square:

$$9 \text{ sq in.} - \pi \text{ sq in.} =$$
$$9 \text{ sq in.} - (3.14) \text{ sq in.} =$$
$$5.86 \text{ sq in.}$$

The shaded area to the nearest hundredth of a square inch $= 5.86$ sq in.

Math Item 9

Let m be a negative integer and k be a positive integer.

Which of the expressions below must result in a **positive** value?

Select the **three** correct answers.

- [ ] A. $-m + k$
- [ ] B. $-m \cdot k$
- [ ] C. $m - k$
- [ ] D. $-k \cdot m$
- [ ] E. $\frac{m}{k}$

(A, B, D)

Each of the expressions must be considered:

$-m + k$, where m is a negative integer and k is a positive integer: **Correct**

The "$-$" in front of m acts like a -1 multiplier that flips the sign of m, so $-m + k$ is positive when m is negative and k is positive.

$-m \cdot k$, where m is a negative integer and k is a positive integer: **Correct**

The "$-$" in front of m acts like a -1 multiplier that flips the sign of m, so $-m \cdot k$ is positive when m is negative and k is positive.

$m - k$, where m is a negative integer and k is a positive integer:

A negative number minus a positive number gives a negative number.

$-k \cdot m$, where m is a negative integer and k is a positive integer: **Correct**

A positive times a negative is a negative. Then, taking the opposite of that makes it positive.

$\frac{m}{k}$, where *m* is a negative integer and *k* is a positive integer:

A negative divided by a positive remains negative.

Therefore, $-m + k$, $-m \cdot k$, and $-k \cdot m$ must all result in a positive number.

Math Item 10

$2x + 11 > 3x + 9$

For what values of x is the above inequality true?

- A. $x < 2$
- B. $x > 2$
- C. $x < 20$
- D. $x > 20$

(A) Use inverse operations to isolate the variable *x* by first getting the *x* variable on one side.

$2x + 11 > 3x + 9$
$2x - 3x + 11 > 3x - 3x + 9$
$-x + 11 > 9$
$-x + 11 - 11 > 9 - 11$
$-x > -2$

Now, when dividing by -1, the direction of the inequality sign changes.

$-x > -2$
$x < 2$

Another way to solve is to keep the coefficient of *x* positive and then recognizing that $2 > x$ is the same as $x < 2$.

$2x + 11 > 3x + 9$
$11 > x + 9$
$2 > x$
$x < 2$

Math Item 11

In a scale drawing of a triangular park, the sides measure 5 inches, 7 inches, and 8 inches. The perimeter of the actual park is 25 miles. What is the actual length of the shortest side of the park?

- A. 6.25 mi
- B. 8.75 mi
- C. 10 mi
- D. 15.625 mi

(A) To find the perimeter of a triangle, add the measures of the three sides. The perimeter of the scale drawing is $5 + 7 + 8 = 20$ inches.

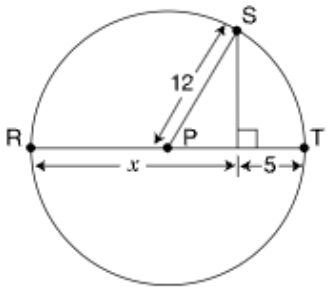
Now, use the perimeters to find the scale factor for the scale drawing to the actual perimeter.

The scale factor is 20 inches to 25 miles, which reduces to a scale factor of 4 inches to 5 miles. Note that the scale for the perimeter is the same as the scale for the side lengths.

Since the smallest side on the scale drawing is 5 inches, use the scale factor to find the actual side length of the smallest side:

$$5 \text{ inches} \left(\frac{5 \text{ miles}}{4 \text{ inches}} \right) = 6.25 \text{ miles}$$

Math Item 12



P is the center of the circle above, and R, S, and T are points on the circle. What is the value of x?

- A. 12
- B. 15
- C. 17
- D. 19

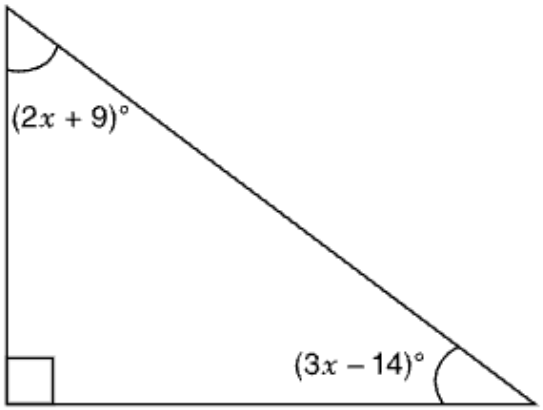
(D) $\overline{\mathrm{SP}}$ represents the radius of the circle and has length 12.

Both $\overline{\mathrm{RP}}$ and $\overline{\mathrm{PT}}$ are radii and also have length 12.

Therefore, the length of $\overline{\mathrm{RT}},$ which is a diameter, is 24 and is also represented by $x + 5$.

$x + 5 = 24$
$x = 19$

Math Item 13



In the right triangle shown above, what is the measure of the smallest angle?

A. 43°

B. 44°

C. 46°

D. 47°

(A) Since the three angles of a triangle have a sum of 180°, and since one angle is a right angle, the other two angles have a sum of 90°. By writing an equation and using inverse operations, the value of *x* can be found.

$(2x + 9) + (3x - 14) = 90$
$5x - 5 = 90$
$5x = 95$
$x = 19$

Now, use substitution to find the measure of the two angles to determine the smallest angle of the triangle.

$2x + 9 = 2(19) + 9 = 47$
$3x - 14 = 3(19) - 14 = 43$

The smallest angle is 43°.

Math Item 14

James must read 84 pages of a book for a class assignment. If he reads $\frac{1}{4}$ of the pages in the morning and $\frac{1}{3}$ of the **remaining** pages in the afternoon, how many pages will he still need to read?

- A. 35
- B. 42
- C. 45
- D. 56

(B) Pages read in the morning: $\left(\frac{1}{4}\right)(84) = 21$

Pages remaining after the morning: $84 - 21 = 63$

Pages read in the afternoon: $\left(\frac{1}{3}\right)(63) = 21$

Pages he still needs to read: $63 - 21 = 42$

Math Item 15

$$\frac{1}{11} + \frac{1}{22} + \frac{1}{33}$$

What is the value of the expression shown above?

- A. $\frac{1}{22}$
- B. $\frac{1}{11}$
- C. $\frac{1}{6}$
- D. $\frac{3}{22}$

(C) To add fractions, find a common denominator and rename the fractions using the common denominator. The least common denominator for 11, 22, and 33 is 66. After adding the fractions, the final fraction can be reduced to lowest terms.

$$\frac{1}{11} = \frac{1 \times 6}{11 \times 6} = \frac{6}{66}$$
$$\frac{1}{22} = \frac{1 \times 3}{22 \times 3} = \frac{3}{66}$$
$$\frac{1}{33} = \frac{1 \times 2}{33 \times 2} = \frac{2}{66}$$

$$\frac{6}{66} + \frac{3}{66} + \frac{2}{66} = \frac{11}{66} = \frac{1}{6}$$

Math Item 16

The table shows the proportional relationship between x cups of oatmeal and y ounces of raisins in a bread recipe.

BREAD RECIPE

Cups of Oatmeal (x)	Ounces of Raisins (y)
2	1.0
3	1.5
6	3.0

What is the constant of proportionality of the number of ounces of raisins to the number of cups of oatmeal?

Enter your answer in the space.

(0.5) To find *p*, the constant of proportionality of ounces of raisins, *y*, to cups of oatmeal, *x*, use the equation $y = px$.

The table shows that there is 1 ounce of raisins for 2 cups of oatmeal.

$1 = 2p$

$\frac{1}{2} = \frac{2p}{2}$

$0.5 = p$

The constant of proportionality is 0.5.

Math Item 17

At Midville High School, 64 students are members of either the orchestra or the choir, or both. Of these students, 38 are members of the orchestra, and 46 are members of the choir. What fraction of the total is the number of students who are members of **both** the orchestra and the choir?

- A. $\frac{16}{21}$
- B. $\frac{10}{19}$
- C. $\frac{10}{23}$
- D. $\frac{5}{16}$

(D) First, add the number of students that are members of both orchestra and choir.

$38 + 46 = 84$

Then, subtract to find the number of students that are members of both orchestra and choir.

$84 - 64 = 20$

Then, find the fraction of the 64 students that are members of both orchestra and choir.

$\frac{20}{64} = \frac{5}{16}$

Math Item 18

Which of the following decimals is equivalent to $1\frac{2}{3} + 2\frac{4}{9}$?

- A. $3.\overline{1}$
- B. $3.\overline{6}$
- C. $4.\overline{1}$
- D. $4.\overline{9}$

(C) First, add the mixed numbers. Then, convert the fraction $\frac{1}{9}$ to a decimal.

$1\frac{2}{3} + 2\frac{4}{9}$

$1\frac{6}{9} + 2\frac{4}{9}$

$3 + \frac{10}{9}$

$3 + 1\frac{1}{9}$

$4\frac{1}{9} = 4.111\ldots = 4.\bar{1}$

Math Item 19

A store manager purchases a piece of furniture for $456.00. To determine the selling price, the manager increases the purchase cost by 125%. A customer buys the furniture and pays an additional 8% sales tax. How much does the customer pay for the furniture?

- A. $615.60
- B. $627.48
- C. $1,108.08
- D. $1,846.80

(C) Given a purchase price of $456.00, the 125% increase in price is calculated as:

$$456 \times 1.25 = 570$$

The selling price equals the purchase price plus the increase, or:

$$456 + 570 = 1{,}026$$

The sales tax on the selling price is:

$$1{,}026(0.08) = 82.08$$

The customer pays the selling price plus the sales tax:

$$1{,}026 + 82.08 = 1{,}108.08$$

Math Item 20

What is the value of $\frac{-9(-4)^2+36(-4)+304}{-4}$?

- A. -76
- B. -4
- C. 4
- D. 148

(B) Use the order of operations to evaluate the expression. It is important to recognize that the fraction bar is a grouping symbol and so the entire numerator should be evaluated first. Exponents are evaluated first.

$$\frac{-9(-4)^2+36\Big(-4\Big)+304}{-4}$$

$$\frac{-9(16)+36(-4)+304}{-4}$$

Then multiplication, recognizing that the product of a negative factor and a positive factor is negative.

$$\frac{-9(16)+36(-4)+304}{-4}$$

$$\frac{-144-144+304}{-4}$$

Then addition and subtraction in order from left to right, recognizing the rules for adding and subtracting signed numbers.

$$\frac{-144-144+304}{-4}$$

$$\frac{-288+304}{-4} = \frac{16}{-4}$$

And finally the fraction can be evaluated by division, recognizing that the quotient of a positive and a negative number is negative.

$$\frac{16}{-4} = -4$$

Math Item 21

Maxie borrowed $7.75 from her mother, $11.00 from her father, and $4.50 from her brother to purchase a video game. Her grandmother gave her $25.00 as a gift. How much money will Maxie have left or still owe if she uses the money her grandmother gave her to pay back the money she borrowed?

- A. Maxie will still owe $2.25.
- B. Maxie will still owe $1.75.
- C. Maxie will have $1.75 left.
- D. Maxie will have $2.25 left.

(C) First, determine the total amount Maxie borrowed, in dollars:

$$7.75 + 11.00 + 4.50 = 23.25$$

Then use subtraction to determine the difference between the amount her grandmother gave her and the amount she borrowed:

$$25.00 - 23.25 = 1.75$$

The difference is positive, which means that Maxie will still have $1.75 left from the amount her grandmother gave her.

Math Item 22

Seth grows strawberries in his garden.

- He picked $2\frac{1}{2}$ cups of strawberries on Monday.
- He picked 4 cups of strawberries on Tuesday.
- He ate $\frac{3}{4}$ cup of strawberries for breakfast each day on Wednesday, Thursday, and Friday.

How many cups of strawberries did Seth have left?

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

B. $4\frac{1}{4}$

C. 6

D. 9

(B) When Seth picks strawberries, the value represents a positive number, and when he eats the strawberries, the value represents a negative number. Write an expression and then evaluate the expression, where the negative value is multiplied by 3 because he ate the same amount on 3 different days.

$2\frac{1}{2} + 4 + \left(3\right)\left(-\frac{3}{4}\right)$

$2\frac{1}{2} + 4 - 2\frac{1}{4}$

$6\frac{1}{2} - 2\frac{1}{4}$

$6\frac{2}{4} - 2\frac{1}{4}$

$4\frac{1}{4}$

If the multiplication is confusing, evaluate the expression below which represents the sum for the 5 days with each day listed separately.

$2\frac{1}{2} + 4 + \left(-\frac{3}{4}\right) + \left(-\frac{3}{4}\right) + \left(-\frac{3}{4}\right)$

$4\frac{1}{4}$

Math Item 23

Which situation involves quantities that combine to equal zero?

A. receiving $5 as a gift and then giving $5 to a friend

B. buying a book for $10 and then buying lunch for $10

C. getting on an elevator at the ground floor, rising 3 floors, and then rising 3 more floors

D. starting in a cave 20 feet below the ground, climbing up 20 feet, and then climbing up 20 feet more

(A) When looking for a situation where quantities combine to make zero, find two values with the same absolute value where one value is positive and one value is negative.

In the situation in option A, receiving a gift of \$5 is represented by $+5$, and giving a friend \$5 is represented by -5. These values combine to equal zero because $+5 - 5 = 0$.

Math Item 24

An athlete runs $\frac{1}{8}$ kilometer in $\frac{3}{4}$ minute. At this rate, how many kilometers would the athlete run in 1 minute?

A. $\frac{3}{32}$

B. $\frac{1}{6}$

C. $1\frac{1}{2}$

D. 6

(B) To determine the number of kilometers in 1 minute, find the unit rate in kilometers per minute: $\frac{\frac{1}{8}\text{ kilometer}}{\frac{3}{4}\text{ minute}}$.

To evaluate the fraction, use the reciprocal when dividing to get $\frac{1}{6}$ kilometer per 1 minute.

$\frac{1}{8} \div \frac{3}{4} = \frac{1}{8} \times \frac{4}{3} = \frac{4}{24} = \frac{1}{6}$

Math Item 25

A bus trip takes 9 hours if the mean speed is 50 miles per hour. How many hours would this trip take if the mean speed was 45 miles per hour?

- A. 8
- B. 10
- C. 12
- D. 14

(B) First, find the length of the bus trip in miles by multiplying the time, 9 hours, by the average (mean) speed, 50 miles per hour, to get 450 miles.

Then, divide the total distance, 450 miles, by the average (mean) speed, 45 miles per hour, to get the total time:

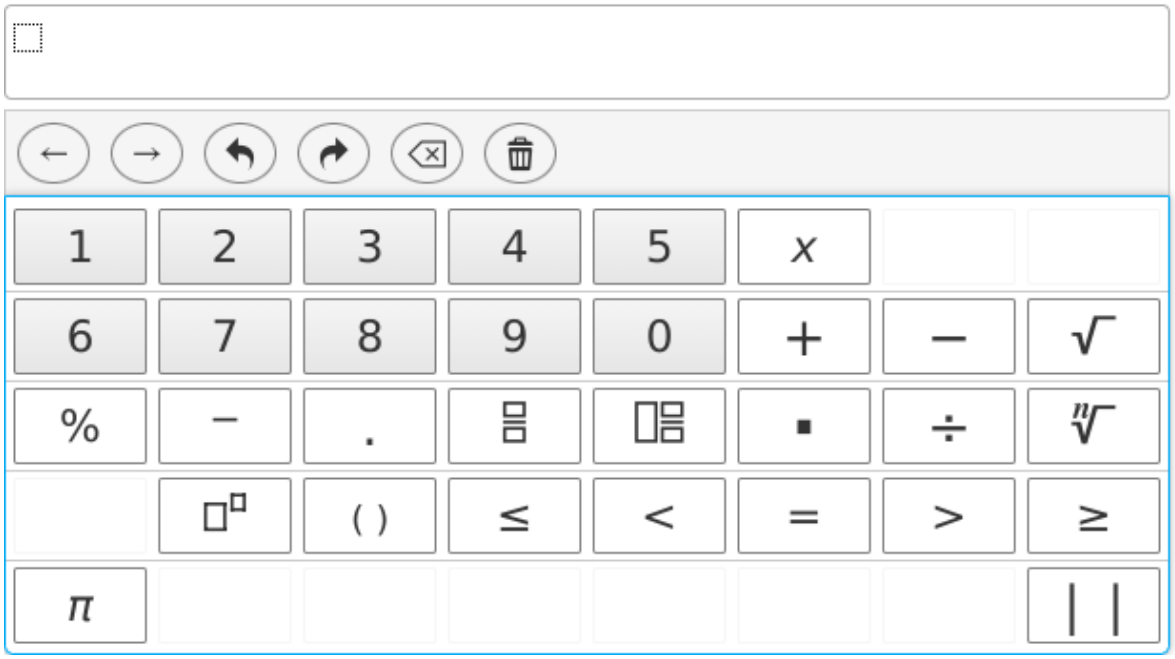
$$450 \div 45 = 10 \text{ hours}$$

Math Item 26

Jordan has a budget of $120 to rent a food truck. The rental company charges $18 per hour to rent the truck, plus a one-time cleaning fee of $30.

Write an inequality that represents this situation, in which x is the number of hours Jordan can rent the truck.

Enter your answer in the space provided. Enter only your answer.



($30 + 18x \leq 120$)

Let *x* represent the number of hours Jordan can rent the truck.

The hourly rental cost can be represented as $\$18 \cdot x$, written as $18x$.

The onetime cleaning fee of $30 is added to the hourly cost to obtain the total cost.

The sum of the cleaning fee and the hourly rental cost is represented as $30 + 18x$.

As Jordan has $120 to spend, the total cost must be less than or equal to $120.

This is represented as $30 + 18x \leq 120$ or $120 \geq 30 + 18x$.

Math Item 27

A birdseed mixture is $\frac{2}{5}$ sunflower seeds. The cost of the sunflower seeds is $0.10 per ounce. At this rate, what is the cost of the sunflower seeds in 25 pounds of this birdseed? (Note: 1 lb = 16 oz.)

- A. $10.00
- B. $16.00
- C. $40.00
- D. $160.00

(B) First, calculate the amount of sunflower seeds in 25 pounds of this birdseed by using ratio reasoning to find that there are 10 pounds of sunflower seeds in the birdseed.

$$\frac{2}{5} = \frac{10}{25}$$

Then, use ratio reasoning to find the cost of the sunflower seeds per pound.

$$\left(\frac{\$0.10}{1 \text{ ounce}}\right)\left(\frac{16 \text{ ounces}}{1 \text{ pound}}\right) = \$1.60$$

The cost of the sunflower seeds is $1.60 per pound.

Finally, find the total cost using ratios by multiplying the unit cost per pound by 10 pounds.

$$\frac{\$1.60}{1 \text{ pound}} \times \frac{10 \text{ pounds}}{1} = \$16.00$$

The first two steps above could be done in the other order; that is, find $1.60 per pound first and 10 pounds of sunflower seeds second.

Math Item 28

A graph shows the relationship between the number of gallons of water, y, that has been added to a tank and the number of hours, x, that water has been added to the tank at a constant rate. What does the ordered pair (3, 24) represent?

A. Three gallons of water was added in 24 hours.

B. Three gallons of water was added per hour.

C. Twenty-four gallons of water was added in 3 hours.

D. Twenty-four gallons of water was added per hour.

(C) It is given that x-values on the graph represent the numbers of hours for which water was added to the tank, and the y-values represent the numbers of gallons of water added in x hours. In the ordered pair (3, 24), 3 represents an x-value and 24 represents a y-value.

Therefore, (3, 24) represents a data point for 24 gallons of water being added to the tank in a 3-hour period.

Math Item 29

Karl has one red spinner and one blue spinner. Each spinner is divided into 4 equal sections, numbered 1 through 4. He spins each spinner once and writes down the number that each lands on. What is the probability that the two numbers, when multiplied together, will have 4 as a product?

- A. $\frac{1}{16}$
- B. $\frac{3}{16}$
- C. $\frac{4}{7}$
- D. $\frac{7}{16}$

(B) There are four possible outcomes for each spin of the spinner:

1, 2, 3, 4

The possible outcomes of two spins are:

11	12	13	$\boxed{14}$
21	$\boxed{22}$	23	24
31	32	33	34
$\boxed{41}$	42	43	44

Of the 16 possible outcomes, **only** 3 pairings have a product of 4: 14, 22, and 41.

Therefore, the probability that the two numbers resulting from two consecutive spins have a product of 4 is $\frac{3}{16}$.

Math Item 30

A recipe uses $\frac{2}{3}$ cup of sugar for every $1\frac{1}{4}$ cups of flour. A cook wants to increase the recipe. How many cups of sugar are needed for each cup of flour?

- A. $\frac{8}{15}$
- B. $\frac{5}{6}$
- C. $1\frac{7}{8}$
- D. $3\frac{2}{3}$

(A) To find the cups of sugar for each cup of flour, find the unit rate using this ratio:

$$\frac{\frac{2}{3} \text{ cup of sugar}}{1\frac{1}{4} \text{ cups of flour}}$$

Then, convert the denominator to an improper fraction and divide to find the cups of sugar per cup of flour.

$$\frac{\frac{2}{3}}{\frac{5}{4}} = \frac{2}{3} \div \frac{5}{4} = \frac{2}{3} \times \frac{4}{5} = \frac{8}{15}$$

Math Item 31

A box contains an unknown number of green marbles. An experimenter adds 100 red marbles to the box, mixes the marbles thoroughly, and then draws out 10 marbles at random. Assume that this sample is representative of the proportion in the box. If there are 2 red marbles and 8 green marbles in this sample, approximately how many green marbles are in the box?

- A. 80
- B. 300
- C. 400
- D. 500

(C) In this context, the phrase “this sample is representative” means that the ratio of 2 red marbles to 8 green marbles is the same as the ratio of red to green marbles in the entire box. Use this ratio of 2 to 8 to set up a proportion and solve, where x represents the number of green marbles in the box.

$$\frac{2}{8} = \frac{100}{x}$$

$$2x = 800$$

$$x = 400$$

Math Item 32

There were 36 people at Emily's party. If each person at the party drank 2 cups of juice, how many **gallons** of juice did they drink altogether?

Note: 1 gallon = 4 quarts; 1 quart = 4 cups.

- A. $2\frac{1}{4}$
- B. $4\frac{1}{2}$
- C. 9
- D. 72

(B) Since 36 people each drank 2 cups of juice, the total amount of juice they drank was $36 \times 2 = 72$ cups.

Convert 72 cups to gallons:

$$72 \text{ cups} \times \frac{1 \text{ quart}}{4 \text{ cups}} \times \frac{1 \text{ gallon}}{4 \text{ quarts}} =$$

$$\frac{72}{16} \text{ gallons} =$$

$$\frac{9}{2} \text{ gallons} =$$

$$4\frac{1}{2} \text{ gallons}$$

lineExtend

Math Item 33

A car costing $24,000 is subject to a sales tax of 8%. If Bindu made a $10,000 down payment on this car, what is the total amount she has left to pay?

- A. $14,000
- B. $15,620
- C. $15,920
- D. $25,920

(C) First, find the sales tax. Then, add the sales tax to the cost of the car. Finally, subtract the down payment to find out how much she has left to pay.

$(0.08)(24{,}000) = 1{,}920$

$\$24{,}000 + \$1{,}920 = \$25{,}920$

$\$25{,}920 - \$10{,}000 = \$15{,}920$

Math Item 34

Last week, Emily rode the bus to school on 3 of the 5 mornings and rode the bus home on 4 of the 5 afternoons. Based on last week's events, what is the probability that Emily will ride the bus in the morning and the afternoon next Monday?

A. $\frac{1}{5}$

B. $\frac{7}{25}$

C. $\frac{12}{25}$

D. $\frac{7}{10}$

(C) Using the joint probability formula, find the product of the two independent events. The probability that Emily will ride the bus to school on any given morning is $\frac{3}{5}$. The probability that Emily will ride the bus to school on any given afternoon is $\frac{4}{5}$. Therefore, the probability that Emily will ride the bus in the morning and the afternoon is $\frac{3}{5} \times \frac{4}{5} = \frac{12}{25}$.

Math Item 35

XYZ Corporation hired 6 people as summer workers. Of these 6 people, 3 will be hired as permanent employees in the fall. If 2 of the 6 people are male, how many of the possible groups of 3 people hired in the fall will include **only** 1 male?

- A. 4
- B. 6
- C. 12
- D. 24

(C) An organized list can be used to determine the number of groups of 3 people that include **only** 1 male.

Let the letters A, B, C, and D represent the females, and let the numbers 1 and 2 represent the males.

Then, create a list of all possible combinations of 3 people with **only** 1 male.

AB1, AB2, AC1, AC2, AD1, AD2

BC1, BC2, BD1, BD2

CD1, CD2

There are 12 possible groups with **only** 1 male.

Math Item 36

Leah has set a goal to read a total of 500 pages of a textbook. The table shows the book page numbers for the reading she did during three days.

DAILY READING LOG

Day	Pages Read
1	pages 45–90, inclusive
2	pages 100–135, inclusive
3	pages 145–190, inclusive

What percentage of her 500-page goal did Leah read on these three days? Round your answer to the nearest tenth.

Enter your answer in the space.

(25.6%) First, determine the number of pages read each day. Since the pages per assignment are inclusive, subtract the first page from the last page assigned and then add 1 to determine the pages read for each day.

Day 1: $(90 - 45) + 1 = 46 \text{ pages}$

Day 2: $(135 - 100) + 1 = 36 \text{ pages}$

Day 3: $(190 - 145) + 1 = 46 \text{ pages}$

Leah read a total of 128 pages, since $46 + 36 + 46 = 128$.

To determine the percent, express 128 pages out of 500 pages as a fraction.

$\frac{128}{500} = \frac{128 \div 4}{500 \div 4} = \frac{32}{125}$

$32 \div 125 = 0.256 = 25.6\%$

Math Item 37

What 3-digit number between 630 and 650 is divisible by both 5 and 8?

Enter your answer in the space.

(640)

The final digit of the three-digit number is 0. Each of the digits 0 through 9, inclusive, must be considered.

To narrow the choices, first consider that the number between 630 and 650 must be divisible by both 5 and 8.

A number divisible by 5 must end in 0 or 5. Therefore, the only possibilities are 0 and 5.

- If the number ended in 0, the whole number 640 must also be divisible by 8:

  $640 \div 8 = 80 \text{ and } \ 640 \div 5 = 128$

  Both result in a remainder of 0.

- If the number ended in 5, the whole numbers 635 and 645 must also be divisible by 8:

  $635 \div 8 = 79R3 \ \text{ and } \ 635 \div 5 = 127$

  $645 \div 8 = 80R5 \text{ and } 645 \div 5 = 129$

  Dividing 635 by 5 results in a remainder of 0, but dividing 635 by 8 results in a remainder of 3.

  Dividing 645 by 5 results in a remainder of 0, but dividing 645 by 8 results in a remainder of 5.

Therefore, 640 is the only whole number between 630 and 650 that is divisible by both 5 and 8.

Math Item 38

Melissa has a bag of marbles that are all the same size. The bag contains three red (R) marbles, three green (G) marbles, and two white (W) marbles. For an experiment, she will take two marbles out of the bag without looking. Which list shows the sample space for Melissa's experiment?

A. R, G, W

B. RG, RW, GW

C. R, R, R, G, G, G, W, W

D. RR, RG, RW, GG, GW, WW

(D) The sample space of a random experiment is the collection of all possible outcomes. For this experiment, R represents a red marble, G represents a green marble, and W represents a white marble.

Since two marbles are being drawn, the possible outcomes for the first marble drawn are R, G, W.

List the possible results for each initial outcome combined with the second choice of marble. For example, if the first marble and second marble are both red, the sample space will include RR (red, red).

RR, RG, RW

GR, GG, GW

WR, WG, WW

Since order does not matter in this selection, remove any pairing that presents a duplicate choice, such as RG and GR—**only** one of the two pairings will be included in the sample space. Those are removed and leave a sample space of:

RR, RG, RW, GG, GW, WW

Math Item 39

The table shows the probabilities of a hockey team scoring different numbers of goals in a game.

HOCKEY GOAL PROBABILITIES

Number of Goals	Probability
0	0.16
1	0.21
2	0.29
3	0.21
4	0.09
5	0.04

What is the probability that the team will score three or more goals in the next game?

- A. 0.13
- B. 0.21
- C. 0.34
- D. 0.50

(C) To find the probability that any one of several mutually exclusive events occurs, use the addition rule, and add the probabilities of each event:

$$\mathrm{P(A\ or\ B)\ =\ P(A) + P(B)}$$

Using the data in the table, the probability that the team will score 3 or more goals in the next game is represented by
$\mathrm{P}(3) + \mathrm{P}(4) + \mathrm{P}(5) =$
$0.21 + 0.09 + 0.04 = 0.34.$

Math Item 40

A team is participating in a contest to collect canned goods for a food drive. The team has 53 points and must have a total of at least 100 points to win a prize. The team earns 5 points for each can of food a member collects. Which inequality can be used to find x, the number of cans of food the team needs to collect to win a prize?

- A. $5 + 53x \leq 100$
- B. $5 + 53x \geq 100$
- C. $53 + 5x \leq 100$
- D. $53 + 5x \geq 100$

(D) Since each can is worth 5 points, the total number of points earned from all the cans, x, is $5x$. The team started with 53 points. That is a constant value and doesn't change. So the total number of points the team will earn is $53 + 5x$. The team wants to earn at least (≥) 100 points, so they need $53 + 5x \geq 100$ total points.

Math Item 41

The distance an eagle flies is proportional to the time the eagle spends flying. An eagle flies 90 miles in 3 hours. What is the constant of proportionality for this relationship?

- A. 3
- B. 30
- C. 60
- D. 90

(B) The constant of proportionality is the ratio of y (90) to x (3). $90 \div 3 = 30$. So the constant of proportionality is 30.

Math Item 42

A student reads $\frac{1}{12}$ of a book in $\frac{1}{3}$ hour. What fraction of the book can the student read in 1 hour?

- A. $\frac{1}{36}$
- B. $\frac{1}{4}$
- C. $\frac{5}{12}$
- D. $\frac{12}{3}$

(B) To find the fraction of the book the student can read in 1 hour, find the unit rate per hour. First, set up the ratio.

$$\frac{\frac{1}{12}\text{ book}}{\frac{1}{3}\text{ hour}}$$

Then use division to find the unit rate.

$$\frac{\frac{1}{12}}{\frac{1}{3}} = \frac{1}{12} \div \frac{1}{3} = \frac{1}{12} \times \frac{3}{1} = \frac{3}{12} = \frac{1}{4}$$

Another way to solve the problem is to set up the ratio and then multiply both the numerator and denominator by 3, since $\frac{1}{3}$ hour times 3 equals 1 hour.

$$\frac{3 \times \frac{1}{12}\text{ book}}{3 \times \frac{1}{3}\text{ hour}} = \frac{\frac{1}{4}\text{ book}}{1\text{ hour}}$$

Math Item 43

Two student clubs are selling snacks as part of a fundraiser. The Art Club sells a 24-pack of granola bars for $12.00. The Science Club sells a 10-pack of granola bars for $6.50. To the nearest cent, what is the difference in cost per bar between the two clubs?

Select the correct answer from each drop-down to complete the sentences.

The cost for the Art Club's bar is Choose... per bar.

The cost for the Science Club's bar is Choose... per bar.

The difference between the cost of the bars is Choose... .

RESPONSE_A1	RESPONSE_A2	RESPONSE_A3
$0.40	$0.55	$0.05
$0.50	$0.65	$0.10
$0.60	$0.75	$0.15
$0.75	$0.85	$0.25

($0.65; $0.50; $0.15)

To determine the cost per bar from the Art Club, divide the total cost by the total number of bars:

$$\frac{\$12.00}{24} = \$0.50 \text{ per bar}$$

To determine the cost per bar from the Science Club, divide the total cost by the total number of bars:

$$\frac{\$6.50}{10} = \$0.65 \text{ per bar}$$

To find the difference in price per bar, subtract the cost per bar for the Art Club from the cost per bar for the Science Club:

$$\$0.65 \text{ per bar} - \$0.50 \text{ per bar} = \$0.15 \text{ per bar}$$

Math Item 44

A bakery charges $1.25 for each cupcake and $2.50 for a serving tray. The equation describes *p*, the price of *c* cupcakes and a serving tray, **not** including tax.

$$p = 2.50 + 1.25c$$

If Samantha bought some cupcakes and a serving tray for a total of $22.50, **not** including tax, how many cupcakes did she buy?

- A. 4
- B. 9
- C. 16
- D. 18

(C) Using the specified equation $p = 2.50 + 1.25c$, determine the number of cupcakes Samantha bought by substituting the total paid ($22.50) for *p*, and solve the equation for the value of *c*, the number of cupcakes bought.

$22.50 = 2.50 + 1.25c$
$22.50 - 2.50 = 1.25c$
$20.00 \div 1.25 = c$
$16 = c$

Math Item 45

Marcus and Isla are saving money to buy concert tickets.

- They decide to save the same amount each week.
- They already have $8 saved.
- After 3 weeks, the two have $26 saved in total.

How much money, in dollars, is being saved by Marcus and Isla each week?

Enter your answer in the space.

(6)

Define the variable:

Let w represent the amount of money Marcus and Isla save per week.

Construct an equation:

Start with $\$8$.

Marcus and Isla save *w* each week for 3 weeks, which can be expressed as $3 \cdot w$ or $3w$.

The total amount saved can be represented by the expression $8 + 3w$.

After 3 weeks, Marcus and Isla have $26. This can be represented by the equation $8 + 3w = 26$.

Solve the equation:

$8 + 3w = 26$

$3w = 18$ (subtracting 8 from both sides)

$w = 6$ (dividing both sides by 3)

Marcus and Isla are saving $\$6$ per week.

Math Item 46

A company charges $3.00 to ship a 4-pound package. The cost includes a base fee of $1.50 plus $0.50 for each pound over the first pound. The table below illustrates how the cost depends on the total weight of the package. Complete the table by matching each total weight to its correct total shipping cost.

Move the correct answer to each box. Not all answers will be used.

2 | 2.5 | 3 | 3.5 | 4 | 6 | 7 | 9

SHIPPING COSTS

Total Weight (pounds)	Total Cost to Ship (dollars)
2	
	2.50
6	
	5.50

Total Weight (pounds)	Total Cost to Ship (dollars)
2	**2**
3	2.50
6	**4**
9	5.50

Let *x* represent the weight of the package in pounds. The first pound is included in the base fee of $1.50, so $(x-1)$ represents the number of pounds that cost $0.50 each.

The cost equation can be written as $\text{Cost} = \$1.50 + \$0.50\,(x-1)$

- The cost for a 2-pound package is $\$1.50 + \$0.50(2-1) = \$1.50 + \$0.50(1) = \$2.00$
- The cost for a 6-pound package is $\$1.50 + \$0.50(6-1) = \$1.50 + \$0.50(5) = \$1.50 + \$2.50 = \$4.00$
- The weight of a package that costs $2.50 to ship can be found by solving

  $\$2.50 = \$1.50 + \$0.50(x-1)$

  $\$1.00 = \$0.50(x-1)$

  $2 = x-1$

  $x = 3 \text{ pounds}$
- The weight of a package that costs $5.50 to ship can be found by solving

  $\$5.50 = \$1.50 + \$0.50(x-1)$

  $\$4.00 = \$0.50(x-1)$

  $8 = x-1$

  $x = 9 \text{ pounds}$

To check:

Given that the total cost is $3.00 for the initial package

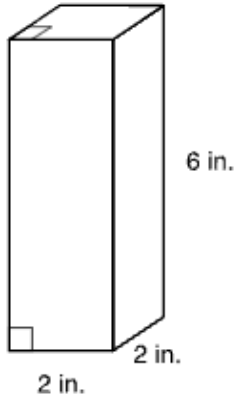
$\$3.00 = \$1.50 + \$0.50(x-1)$

$\$1.50 = \$0.50(x-1)$

$3 = x-1$

$x = 4 \text{ pounds fits the linear pattern of the table}$

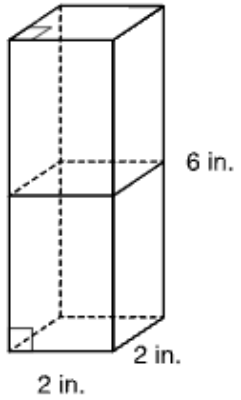
Math Item 47



What shape will result from a horizontal slice of the figure above?

- A. a square that has 2-inch sides
- B. a triangle that has 2-inch sides
- C. a rectangle that has a 2-inch side and a 6-inch side
- D. a triangle that has one 2-inch side and two 6-inch sides

(A) Based on the diagram, the figure shown is a right rectangular prism with a square base. A horizontal slice of the figure will be a plane parallel to the square base, as in this example.



Since the horizontal slice is parallel to the base, it will be congruent to the base, which is a square with 2-inch sides.

Math Item 48

The perimeter of square W is twice the perimeter of equilateral triangle X. What is the ratio of the length of one side of square W to the length of one side of equilateral triangle X?

- A. 3:8
- B. 2:3
- C. 3:2
- D. 2:1

(C) First, set up the ratio of the perimeter of the square to the triangle as 2:1 because the question states that the perimeter of the square is twice the perimeter of the triangle.

Recognizing that the square has 4 equal sides and that an equilateral triangle has 3 sides, use division to find the ratio of the sides.

Perimeter: $2 : 1 = \frac{2}{1}$

Sides: $\frac{\frac{2}{4}}{\frac{1}{3}} = \frac{2}{4} \div \frac{1}{3} = \frac{2}{4} \times \frac{3}{1} = \frac{6}{4} = \frac{3}{2} = 3 : 2$

Math Item 49

Anise has a piece of cloth measuring 45 inches by 75 inches. She wants to cut it into squares of equal size, without any cloth left over. What is the **greatest** possible side length, in inches, of one of those squares?

- A. 3
- B. 5
- C. 15
- D. 45

(C) Given that each piece will be a square, the length and width will be the same. The greatest possible length can be determined by finding the greatest common factor of the length and width of the original piece of cloth.

Begin by finding the prime factorization of the length (75 in.) and width (45 in.).

$45 = 3 \times 3 \times 5$
$75 = 3 \times 5 \times 5$

The common factors can be seen as 3×5.

The greatest possible side length, in inches, will be $3 \times 5 = 15$.

Math Item 50

This table shows the number of birds that came to a bird feeder on Monday and Tuesday.

BIRDS AT BIRD FEEDER

Day	Number of Birds
Monday	30
Tuesday	24

What was the percent decrease in the number of birds from Monday to Tuesday?

- A. 6%
- B. 20%
- C. 24%
- D. 25%

(B) To determine the percent decrease from Monday to Tuesday, first calculate the decrease in the number of birds at the feeder.

$30 - 24 = 6$

The difference in the number of birds at the feeder divided by the number of birds on Monday will yield the percent decrease from Monday to Tuesday.

$\frac{6}{30} = 0.20$

0.20 represents 20%.

There was a 20% decrease from Monday to Tuesday.