

The New York City Department of Education

2023 Specialized High Schools Admissions Test**GENERAL DIRECTIONS**

Student Name: _____

Identifying Information

Turn to Side 1 of the answer sheet.

Notify the proctor immediately if you are ill or should not be taking this test. Do not sign the statement or begin the test. Return your answer sheet to the proctor.

Line 1: Read the statement and sign your name in the space following the word "signature." Do not print your name.

Line 2: Print today's date, using the numbers of the month, the day, and the year. For example, the date September 21, 2023, would be 9-21-23.

Line 3: Print your birth date, using the numbers of the month, the day, and the year. For example, a birth date of March 1, 2006, would be 3-1-06.

Grid 4: Print the letters of your first name, or as many as will fit, in the boxes. If you have a middle initial, print it in the box labeled "MI." Then print the letters of your last name, or as much as will fit, in the boxes provided. Below each box, fill in the circle that contains the same letter as the box. If there is a space or a hyphen in your name, fill in the circle under the appropriate blank or hyphen.

Make dark marks that completely fill the circles. If you change a mark, be sure to erase the first mark completely.

Grid 5:

1. Print the name of the school where you are now enrolled in the space at the top of the grid.
2. In the boxes marked "SCHOOL CODE," print the six-digit code that identifies your school. Below each box, fill in the circle that contains the same letter or number as the box. (You can find your school code on your Test Ticket. If it is not there, tell the proctor, and the proctor will get the school code for you.)
3. If you attend a private or parochial school, fill in the circle marked "P."

Grid 6: Complete the grid with your date of birth. Print the first three letters of the month in the first box, the number of the day in the next box, and the year in the last box. Then fill in the corresponding circles.

Grid 7: Print your student ID number in Grid 7. You can find your student ID number on your Test Ticket. In the boxes, print your nine-digit student ID number. Below each box, fill in the circle containing the same number as in the box.

Grid 8: In most cases, Grid 8 is already filled in for you. If it is not, copy the letter and numbers shown in the upper-right corner of your test booklet into the boxes. Below each box, fill in the circle containing the same letter or number as the box.

Now review Side 1 to make sure you have completed all lines and grids correctly. Review each column to see that the filled-in circles correspond to the letters or numbers in the boxes above them.

Turn your answer sheet to Side 2 and flip this booklet over to continue with General Directions.

PART 1 — ENGLISH LANGUAGE ARTS

57 QUESTIONS

REVISING/EDITING

QUESTIONS 1-9 (PART A AND PART B)

REVISING/EDITING PART A

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. You may write in your test booklet as needed to take notes. You should reread relevant parts of the sentences or paragraphs, while being mindful of time, before marking the **best** answer for each question.

1. Which revision should be made to correct the sentence?

To surprise her dad for his birthday on Friday, Yolanda ordered tempting savory sandwiches from a deli in her neighborhood, prepared his favorite chocolate cake, and invited his best friends over for the evening.

- A. Delete the comma after **Friday**.
- B. Insert a comma after **tempting**.
- C. Insert a comma after **deli**.
- D. Delete the comma after **neighborhood**.

2. Which sentence in the paragraph contains an error in its construction and should be revised?

(1) On the evening of July 13, 2019, a major power outage affected the Upper West Side of Manhattan in New York City. (2) Leaving approximately 73,000 residents without electricity for three long hours, lights did not function, refrigerators did not stay cold, and air conditioners did not work. (3) Longtime city residents were particularly confused because an eerily similar event had occurred years earlier—on the exact same day! (4) The famous New York City Blackout of 1977, which lasted for 25 hours, also happened on July 13, an odd coincidence to say the least.

- E. sentence 1
F. sentence 2
G. sentence 3
H. sentence 4
3. Which pair of revisions is needed to correct the errors in the paragraph?

(1) Yalina, Michael, and Malcolm love making pancakes with their granddad on Saturday mornings. (2) Yalina’s job is to open the box and pour the pancake mix into a bowl, slowly adding water, eggs, melted butter, and blueberries. (3) Michael uses a wooden spoon to vigorously stir the mixture until it is smooth, and Malcolm helps Granddad carefully pour the batter onto a griddle one-fourth cup at a time. (4) Granddad turns each pancake when they start to bubble, while all three siblings get the table ready for a sweet delicious breakfast.

- A. Sentence 1: Delete the comma after **Yalina**, AND change **their** to **her**.
B. Sentence 2: Change **is** to **are**, AND delete the comma after **bowl**.
C. Sentence 3: Change **it is** to **they are**, AND delete the comma after **smooth**.
D. Sentence 4: Change **they start** to **it starts**, AND insert a comma after **sweet**.

REVISING/EDITING PART B

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

The End of an Era

(1) In 2004, the National Aeronautics and Space Administration (NASA) landed a rover, or robotic vehicle, named *Opportunity* on the surface of Mars. (2) The rover's mission was to search for evidence of water and life on the planet. (3) The rover was designed to gather data on Mars for about 90 days, but *Opportunity's* assignment did not come to an end until nearly 15 years later in 2019.

(4) During the rover's mission, a high-resolution camera on the rover's robotic arm took magnified photographs of the surface of Mars. (5) The photographs revealed small round rocks scattered across the surface of the planet. (6) The scientists nicknamed these rocks "blueberries" based on the rocks' resemblance to the fruit. (7) These rocks were important because their spherical shape suggested that liquid water may have flowed over them for a substantial amount of time.

(8) *Opportunity* continued to provide valuable data about craters and other surface features.

(9) Throughout the mission, the rover traveled a total of 28.06 miles across Mars' surface.

(10) When *Opportunity* had traveled nearly the length of a marathon, scientists celebrated the accomplishment by naming the valley that the rover was in Marathon Valley. (11) However, in 2018, a dust storm spread all over the planet, putting the rover's progress on hold.

(12) Prior to this planet-wide dust storm, minor dust storms had periodically deposited a layer of dust onto the solar panels of the rover. (13) These prevented it from charging its batteries.

(14) Scientists then had to rely on the passing winds and dust devils to clean off the solar panels.

(15) After the massive 2018 dust storm subsided, scientists expected to be able to reestablish communication with *Opportunity*. (16) They made repeated attempts but to no avail. (17) In 2019, NASA finally declared *Opportunity's* mission complete.

(18) *Opportunity* was an important asset in scientists' study of Mars; it returned valuable data about our neighbor planet and survived powerful dust storms. (19) NASA described the mission of *Opportunity* as "one of the most successful and enduring feats of interplanetary exploration."

(20) Even though this rover's journey ended, other rovers still roam the surface of Mars.

4. Which sentence should follow sentence 3 to **best** introduce the topic of the passage?
- E. Despite the challenges of operating on the surface of another planet, the *Opportunity* rover made many valuable contributions to the field of space research.
 - F. The *Opportunity* rover mission was a success because it informed NASA scientists about how water might have existed on Mars.
 - G. Throughout the historic mission of the *Opportunity* rover, NASA scientists had to overcome challenges created by the flaws in the rover’s design.
 - H. The *Opportunity* rover mission surpassed the original timeline of the assignment and allowed scientists to collect additional data about the planet Mars.
5. Which word should be added to the beginning of sentence 8 to provide a better transition to the third paragraph (sentences 8–11)?
- A. Overall,
 - B. Furthermore,
 - C. Meanwhile,
 - D. Consequently,
6. Which revision of sentence 11 **best** maintains the formal style established in the passage?
- E. However, in 2018, a dust storm covered the planet, bringing the rover’s progress to a standstill.
 - F. However, in 2018, a dust storm shrouded the planet, impermanently halting the rover’s progress.
 - G. However, in 2018, a dust storm enveloped the whole of the planet, arresting the rover’s progress for a time.
 - H. However, in 2018, a dust storm covered up the whole planet, which quickly brought a stop to the progress of the rover.

7. What is the **best** way to combine sentences 12 and 13?
- A. Preventing the rover from charging its batteries, minor dust storms had periodically deposited a layer of dust onto the solar panels of the rover prior to this planet-wide dust storm.
 - B. Periodically depositing a layer of dust onto the solar panels of the rover prior to this planet-wide dust storm, minor dust storms had prevented it from charging its batteries.
 - C. Minor dust storms, prior to this planet-wide dust storm, prevented the rover from charging its batteries because they had periodically deposited a layer of dust onto the solar panels of the rover.
 - D. Prior to this planet-wide dust storm, minor dust storms had periodically deposited a layer of dust onto the solar panels of the rover, preventing it from charging its batteries.

8. Read this sentence.

One of *Opportunity's* major contributions was finding possible evidence of the presence of water on Mars.

Where should the sentence be added to the passage?

- E. between sentences 2 and 3
 - F. at the beginning of the second paragraph (before sentence 4)
 - G. at the end of the second paragraph (after sentence 7)
 - H. between sentences 8 and 9
9. Which concluding sentence should be added after sentence 20 to **best** support the information presented in the passage?
- A. These rovers, including one named *Curiosity*, will help scientists answer their lingering questions about the planet.
 - B. Today's rovers continue to add to *Opportunity's* discoveries and will help us learn even more about the planet.
 - C. And in conjunction with these rovers, NASA is using other resources, including an orbiting spacecraft known as *Mars Odyssey*, for the exploration of the planet.
 - D. With its red dust, rocky surface, and freezing temperatures, Mars will continue to be a challenging environment for today's rovers.

READING COMPREHENSION

QUESTIONS 10–57

DIRECTIONS: Read each of the following six texts and answer the related questions. You may write in your test booklet as needed to take notes. You should reread relevant parts of each text, while being mindful of time, before marking the **best** answer for each question. Base your answers only on the content within the text.

CONTINUE TO THE NEXT PAGE ►

Excerpt from “The Food Business Incubator”

by Mandalit Del Barco

- 1 “La Cocina” means “the kitchen” in Spanish. It’s also the name of a business incubator¹ based in San Francisco’s Mission District. Since it began in 2005, it’s been helping local food entrepreneurs, many of whom are low-income immigrant women, develop their small businesses.
- 2 Over the years, many of its alumni have found success: more than 50 chefs in its program have become self-sufficient business owners, and many of them have opened their own brick-and-mortar restaurants. Two alumnae of its culinary program . . . were even recognized as semi-finalists for prestigious James Beard awards.²
- 3 A new cookbook, *We Are La Cocina: Recipes in Pursuit of the American Dream*, tells some of their stories.
- 4 Executive director Caleb Zigas says the nonprofit La Cocina grew out of two grassroots economic development organizations³ who found many people cooking at their homes and selling food on the streets. The vendors needed an affordable commercial kitchen space and technical assistance in order for their businesses to be legally viable. La Cocina provided just such a space, in addition to helping them develop business plans, pull city permits and more.
- 5 Zigas says as many as eight businesses can work in the kitchen space at La Cocina at any one time. Some can prep for a farmers’ market sale, corporate catering gigs or weddings, while others might be making and packaging their food products.
- 6 “It’s just an incredible and exciting range of techniques, flavors, perspectives, age, language. And that’s a really beautiful thing,” he says. . . .
- 7 Twice a year, La Cocina hosts “F&B: Voices from the Kitchen,” a storytelling project where their chefs can tell their own stories, as they do in the new cookbook. Some of the chefs will be on tour to promote the book, whose proceeds will go to support La Cocina entrepreneurs.
- 8 NPR⁴ caught up with . . . La Cocina chefs, who shared their stories:

Mariko Grady, Aedan Fermented Foods

- 9 At La Cocina, you can often hear Mariko Grady singing or humming as she prepares miso, *koji*, and *amasake*. Her fermented products come in four different flavors, including mushroom and chicken, to be used in soups and sauces. She originally brought the fermenting rice and barley

¹**business incubator:** company that helps new and startup companies develop by providing services such as management training and office space

²**James Beard awards:** an award named after American cook and author James Beard, considered one of the highest honors in the culinary industry

³**economic development organizations:** organizations whose mission is to promote economic improvement within a specific geographical area

⁴**NPR:** National Public Radio, a nonprofit media organization that produces and distributes news and cultural programming

koji seeds from Japan, where she had a 30-year career as a singer and dancer with the prestigious modern theatrical dance group she founded, Pappa Tarahumara. They performed around the world, and 16 years ago, had a one-night show in San Francisco. The man who would become her husband was in the audience. She soon joined him in San Francisco, often returning to Tokyo to rehearse. But after the earthquake and tsunami hit Japan in 2011, her company disbanded. . . . Grady focused on nourishing her family and creating a line of fermented products that she sells online, at local Bay Area stores and at the Ferry Plaza Farmers Market. She began at La Cocina in 2012 and named her business after her son, Aedan. (Written in Kanji characters, the name means “wisdom” and “handed down from generation to generation.”) . . . Her fermented products are “also full of wisdom about how to relate to nature and how to create a healthy life,” she says. . . .

Shani Jones, Peaches Patties

- 10 Shani Jones is a native San Franciscan. Her father was born in New Orleans, her mother, in Jamaica. She says their home was always filled with a variety of spices and dishes like jerk chicken and Jamaican patties—savory pastries filled with beef or chicken. Jones says she learned to cook from her mother, whose nickname was Peaches. After returning from college in Atlanta, Jones worked on her doctorate in organizational leadership and management while driving a Lyft⁵ car. She often told passengers about her idea of opening a catering company with her mom’s recipes. They steered her to La Cocina, where she developed her own business, named after her mother. Five years later, she caters and runs a kiosk⁶ at a small food cooperative in Bernal Heights, where some of her handmade patties have an Ethiopian twist, “because my husband is Ethiopian.” Jones has big aspirations for Peaches Patties: “The ultimate goal,” she says, “is to be the patty kingpin⁷ of the West Coast.”

From “The Food Business Incubator That Helps Immigrant Women Pursue The American Dream” by Mandalit Del Barco from WEEKEND EDITION SUNDAY, June 19, 2019. Copyright © 2019 NPR.

⁵**Lyft:** ride-sharing company where people use their own cars to provide rides to customers

⁶**kiosk:** cart or small structure with one or more open sides that is used to vend merchandise or services

⁷**kingpin:** the leader in a group or undertaking

QUALIFICATIONS FOR LA COCINA APPLICANTS

| | |
|----------------------------|--|
| Level of Income | La Cocina considers assets and access to opportunity when screening applicants. La Cocina’s mission is to support entrepreneurs who face barriers to becoming successful in the food industry. Applicants must be classified as low- or very-low-income earners according to the Housing and Urban Development (HUD) Guidelines for San Francisco. |
| Business Plan | Applicants must have a business plan that is ready to be put into action. La Cocina will help applicants refine an existing business plan. Applicants without a business plan should contact one of La Cocina’s partner organizations for guidance in developing one. |
| Viable Product | The applicant’s food must not only be delicious but also stand out. For a business to make a profit, there also has to be a market for the food. |
| Entrepreneurial Work Ethic | La Cocina is excited to work with entrepreneurs who are motivated and passionate about growing their business. Succeeding in the food industry requires a lot of heart and hard work. |
| Community Spirit | The 30+ entrepreneurs who share La Cocina’s kitchen are from many different backgrounds. La Cocina values the community it has created and expects each entrepreneur to be active in bringing the spirit of La Cocina to the wider world. In order to succeed in the La Cocina kitchen, accepted applicants must be flexible and willing to work closely with others. |

Source: La Cocina

10. Read this sentence from paragraph 2.

Two alumnae of its culinary program . . . were even recognized as semi-finalists for prestigious James Beard awards.

The words “recognized” and “prestigious” in the sentence convey that La Cocina

- E.** makes an effort to identify chefs who have a strong entrepreneurial work ethic.
- F.** has the ability to mentor chefs to reach the highest levels of achievement in their craft.
- G.** is focused on establishing local food entrepreneurs as celebrated professionals in their industry.
- H.** is dedicated to assisting chefs in developing new and innovative products.

- 11.** Paragraph 4 contributes to the development of ideas about La Cocina in paragraph 1 by
- A.** specifying how La Cocina helps local food entrepreneurs become successful.
 - B.** explaining what kind of goals La Cocina tries to set for local food entrepreneurs.
 - C.** providing background information about local food entrepreneurs in San Francisco.
 - D.** describing how Caleb Zigas discovered the need to provide assistance to local food entrepreneurs.
- 12.** The quotation from Caleb Zigas in paragraph 6 conveys a central idea of the excerpt by
- E.** showing appreciation for the vibrant diversity of La Cocina.
 - F.** communicating La Cocina’s goal of helping people of varying abilities.
 - G.** describing a typical scenario at La Cocina.
 - H.** emphasizing La Cocina’s focus on creating products.
- 13.** The description of Mariko Grady’s background in paragraph 9 contributes to a central idea in the excerpt by
- A.** demonstrating what people are looking for when they come to La Cocina.
 - B.** explaining why La Cocina is the best option for people starting out in the food business.
 - C.** showing how La Cocina can help people find success in the food business even though they have a background in something different.
 - D.** confirming that La Cocina was originally established for small business owners who are looking to expand their services.
- 14.** Which statement would the author **most likely** agree with?
- E.** The publicity efforts La Cocina engages in will help its business design spread to other cities.
 - F.** The variety of exciting food available in San Francisco is due to the work of La Cocina.
 - G.** La Cocina offers a method that will guarantee business ownership for qualified entrepreneurs.
 - H.** La Cocina does admirable work in supporting the efforts of ambitious cooks who may have few resources.

- 15.** Which piece of evidence from the excerpt is **most** relevant to the author’s claim that La Cocina provides an opportunity to become more established as a business owner?
- A.** the description of how two alumni of the business incubator have won food awards
 - B.** the reference to a storytelling project where chefs relate their own backgrounds and business experiences
 - C.** the lists of necessities such as business plans and city permits that La Cocina assists with
 - D.** the notations of the criteria that applicants must meet to be endorsed by La Cocina in order to develop a small business
- 16.** Which detail would be **most** important to include in a summary of the excerpt?
- E.** La Cocina produced a cookbook that includes some members’ stories.
 - F.** La Cocina provides legal and technical assistance to its members.
 - G.** Potential vendors need a market for their food before considering La Cocina.
 - H.** There are different types of venues that food vendors from La Cocina use.
- 17.** The table provides additional support for a central idea of the excerpt by
- A.** showing how La Cocina works with partner organizations to further educate and advance successful applicants within the food industry.
 - B.** explaining how applicants are prepared to develop their own businesses once they leave La Cocina.
 - C.** establishing that La Cocina is dedicated to its mission to provide delicious food to different communities.
 - D.** emphasizing that applicants must be willing to dedicate time to promoting and developing their business with La Cocina.

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Excerpt from *In Search of the Unknown*

by Robert W. Chambers

- 1 It was at that time the policy of the trustees and officers of the Zoological Gardens neither to employ collectors nor to send out expeditions in search of specimens. The society decided to depend upon voluntary contributions, and I was always busy, part of the day, in dictating answers to correspondents who wrote offering their services as hunters of big game, collectors of all sorts of fauna, trappers, snarers, and also to those who offered specimens for sale, usually at exorbitant rates.
- 2 To the proprietors of . . . mangy lynxes, moth-eaten coyotes, and dancing bears I returned courteous but uncompromising refusals—of course, first submitting all such letters, together with my replies, to Professor Farrago.
- 3 One day towards the end of May, however, just as I was leaving Bronx Park to return to town, Professor Lesard, of the reptilian department, called out to me that Professor Farrago wanted to see me a moment; so I . . . retraced my steps to the temporary, wooden building occupied by Professor Farrago, general superintendent of the Zoological Gardens. The professor, who was sitting at his desk before a pile of letters and replies submitted for approval by me, pushed his glasses down and looked over them at me with a whimsical smile that suggested amusement, impatience, annoyance, and perhaps a faint trace of apology.
- 4 “Now, here’s a letter,” he said, with a deliberate gesture towards a sheet of paper impaled on a file—“a letter that I suppose you remember.” He disengaged the sheet of paper and handed it to me.
- 5 “Oh yes,” I replied, with a shrug; “of course the man is mistaken—or—”
- 6 “Or what?” demanded Professor Farrago, tranquilly, wiping his glasses.
- 7 “—Or a liar,” I replied.
- 8 After a silence he leaned back in his chair and bade me read the letter to him again, and I did so with a contemptuous tolerance for the writer, who must have been either a very innocent victim or a very stupid swindler. I said as much to Professor Farrago, but, to my surprise, he appeared to waver.
- 9 “I suppose,” he said, with his near-sighted, embarrassed smile, “that nine hundred and ninety-nine men in a thousand would throw that letter aside and condemn the writer as a liar or a fool?”
- 10 “In my opinion,” said I, “he’s one or the other.”
- 11 “He isn’t—in mine,” said the professor, placidly.
- 12 “What!” I exclaimed. “Here is a man living all alone on a strip of rock and sand between the wilderness and the sea, who wants you to send somebody to take charge of a bird that doesn’t exist!”

- 13 “How do you know,” asked Professor Farrago, “that the bird in question does not exist?”
- 14 “It is generally accepted,” I replied, sarcastically, “that the great auk has been extinct for years. Therefore I may be pardoned for doubting that our correspondent possesses a pair of them alive.”
- 15 “Oh, you young fellows,” said the professor, smiling wearily, “you embark on a theory for destinations that don’t exist.”
- 16 He leaned back in his chair, his amused eyes searching space for the imagery that made him smile.
- 17 “Like swimming squirrels, you navigate with the help of Heaven and a stiff breeze, but you never land where you hope to—do you?”
- 18 Rather red in the face, I said: “Don’t you believe the great auk to be extinct?”
- 19 “Audubon¹ saw the great auk.”
- 20 “Who has seen a single specimen since?”
- 21 “Nobody—except our correspondent here,” he replied, laughing.
- 22 I laughed, too, considering the interview at an end, but the professor went on, coolly:
- 23 “Whatever it is that our correspondent has—and I am daring to believe that it *is* the great auk itself—I want you to secure it for the society.”
- 24 When my astonishment subsided my first conscious sentiment was one of pity. Clearly, Professor Farrago was on the verge of dotage²—ah, what a loss to the world!
- 25 I believe now that Professor Farrago perfectly interpreted my thoughts, but he betrayed neither resentment nor impatience. I drew a chair up beside his desk—there was nothing to do but to obey, and this fool’s errand was none of my conceiving.
- 26 Together we made out a list of articles necessary for me and itemized the expenses I might incur, and I set a date for my return, allowing no margin for a successful termination to the expedition.
- 27 “Never mind that,” said the professor. “What I want you to do is to get those birds here safely. Now, how many men will you take?”
- 28 “None,” I replied, bluntly; “it’s a useless expense, unless there is something to bring back. If there is I’ll wire you, you may be sure.”
- 29 “Very well,” said Professor Farrago, good-humoredly, “you shall have all the assistance you may require. Can you leave to-night?”

¹**Audubon:** John James Audubon, an ornithologist and artist who created scientific illustrations of birds

²**dotage:** a loss of reasoning brought about by old age

- 30 The old gentleman was certainly prompt. I nodded, half-sulkily, aware of his amusement.
- 31 “So,” I said, picking up my hat, “I am to start north to find a place called Black Harbor, where there is a man named Halyard who possesses, among other household utensils, two extinct great auks—”
- 32 We were both laughing by this time. I asked him why on earth he credited the assertion of a man he had never before heard of.
- 33 “I suppose,” he replied, with the same half-apologetic, half-humorous smile, “it is instinct. I feel, somehow, that this man Halyard *has* got an auk—perhaps two. I can’t get away from the idea that we are on the eve of acquiring the rarest of living creatures. It’s odd for a scientist to talk as I do; doubtless you’re shocked—admit it, now!”
- 34 But I was not shocked; on the contrary, I was conscious that the same strange hope that Professor Farrago cherished was beginning, in spite of me, to stir my pulses, too.
- 35 “If he has—” I began, then stopped.
- 36 The professor and I looked hard at each other in silence.
- 37 “Go on,” he said, encouragingly.
- 38 But I had nothing more to say, for the prospect of beholding with my own eyes a living specimen of the great auk produced a series of conflicting emotions within me which rendered speech profanely superfluous.

From IN SEARCH OF THE UNKNOWN by Robert W. Chambers—Public Domain

18. Read paragraph 2 from the excerpt.

To the proprietors of . . . mangy lynxes, moth-eaten coyotes, and dancing bears I returned courteous but uncompromising refusals—of course, first submitting all such letters, together with my replies, to Professor Farrago.

This paragraph helps develop the plot by establishing that the narrator

- E. dislikes writing refusal letters for the animals offered to the zoological society.
- F. attempts to predict what the professor would say in the refusal letters.
- G. believes that many of the animals offered are not acceptable for the zoological society.
- H. resents the professor’s insistence on reviewing the refusal letters.

19. Read this sentence from paragraph 3.

The professor, who was sitting at his desk before a pile of letters and replies submitted for approval by me, pushed his glasses down and looked over them at me with a whimsical smile that suggested amusement, impatience, annoyance, and perhaps a faint trace of apology.

What does the phrase “a faint trace of apology” convey about the professor?

- A. It indicates that the professor feels bad that he has to call the narrator to his office after work.
 - B. It shows that the professor is hesitant to share his opinions with the narrator.
 - C. It implies that the professor is uncomfortable criticizing the narrator’s work.
 - D. It suggests that the professor knows that the conversation will be frustrating for the narrator.
20. How does the exchange between the professor and the narrator in paragraphs 8–11 contribute to the development of the characters?
- E. It establishes the conflict between the professor and the narrator concerning the validity of the letter.
 - F. It suggests a theme of collaboration because the narrator and the professor regularly work together.
 - G. It reveals the characters’ traits by contrasting the narrator’s distrust with how easily the professor is deceived by what he reads.
 - H. It hints that the resolution will involve the narrator accepting the professor’s opinion about the content of the letter.
21. The professor’s observations in paragraphs 15–17 create tension in the excerpt by causing the narrator to feel
- A. flustered by the professor’s criticism of his logic.
 - B. annoyed by the professor’s sarcasm about his inexperience.
 - C. confused by the professor’s lack of respect for his opinion.
 - D. frustrated by the professor’s lack of interest in his theory.

- 22.** How does the interaction between the narrator and the professor in paragraphs 26–28 contribute to the development of the theme?
- E.** It illustrates the professor’s patience as the narrator argues against making the expedition.
 - F.** It reveals the narrator’s frustration with his limited role in making decisions for the zoological society.
 - G.** It emphasizes the professor’s desire to acquire new specimens for the zoological society at any cost.
 - H.** It shows the narrator’s acceptance of his assignment despite his personal objections.
- 23.** Which sentence from the excerpt **best** explains why the professor is eager to send the narrator on an expedition?
- A.** “I believe now that Professor Farrago perfectly interpreted my thoughts, but he betrayed neither resentment nor impatience.” (paragraph 25)
 - B.** “Together we made out a list of articles necessary for me and itemized the expenses I might incur, and I set a date for my return, allowing no margin for a successful termination to the expedition.” (paragraph 26)
 - C.** “ ‘What I want you to do is to get those birds here safely.’ ” (paragraph 27)
 - D.** “ ‘I can’t get away from the idea that we are on the eve of acquiring the rarest of living creatures.’ ” (paragraph 33)
- 24.** How does paragraph 34 help develop the plot of the excerpt?
- E.** It shows that the narrator is beginning to consider the possibility of finding the great auks.
 - F.** It demonstrates that the narrator is struggling to understand why the professor thinks the great auks exist.
 - G.** It establishes that the narrator is willing to let the professor overrule him about the great auks.
 - H.** It emphasizes that the narrator feels a sense of urgency to complete the expedition to locate the great auks.

- 25.** Which sentence **best** demonstrates the professional relationship between the narrator and the professor?
- A.** “He disengaged the sheet of paper and handed it to me.” (paragraph 4)
 - B.** “Clearly, Professor Farrago was on the verge of dotage—ah, what a loss to the world!” (paragraph 24)
 - C.** “I drew a chair up beside his desk—there was nothing to do but to obey, and this fool’s errand was none of my conceiving.” (paragraph 25)
 - D.** “ ‘Very well,’ said Professor Farrago, good-humoredly, ‘you shall have all the assistance you may require.’ ” (paragraph 29)
- 26.** How does the author develop the contrast between the narrator’s point of view and the professor’s point of view?
- E.** by providing both the narrator’s and professor’s thoughts on how age and experience influence each other’s reasoning
 - F.** by using the conversation between the narrator and the professor to emphasize their reactions to the letter
 - G.** by describing the professor’s persistent efforts to change the narrator’s mind about the letter
 - H.** by including dialogue that explains why the professor is the supervisor and the narrator is his subordinate

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 carbide² can. By the time all was ready, J. T. Daniels, W. S. Dough and A. D. Etheridge, members of the Kill Devil³ 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 anemometer⁵ 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

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

⁵**“Richard” hand anemometer:** the type of anemometer produced by Jules Richard, a French manufacturer of scientific instruments

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.

Flight

5 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.

From “How We Made the First Flight” by Orville Wright—Public Domain/Federal Aviation Administration

27. 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

28. 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

- E. demonstrating the challenge of the extreme winter conditions during the flight.
 - F. revealing how many tries it took for Wilbur Wright to finally get the machine to take flight.
 - G. demonstrating that both Orville and Wilbur Wright were eager to pilot what could potentially be the first flight.
 - H. suggesting a sense that both brothers felt confident they would soon succeed in completing the first flight.
29. 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.
30. How do the details in paragraph 5 about the uneven nature of the flight convey a central idea of the excerpt?
- E. 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
 - F. by indicating that the difficulty in controlling the flight was caused by the rudimentary instruments of the machine and the inexperience of the pilot
 - G. by explaining how the pilot and the plane overcame adverse conditions in order to complete the first piloted flight
 - H. by indicating that the gradual change in wind velocity created an extreme environment in which to maneuver the plane and maintain its flight

31. 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.

32. Read this sentence from paragraph 5.

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.

How does the sentence contribute to the paragraph?

- E. It details the need for the pilot to have quick reflexes while flying the machine.
- F. It presents the idea that the difficulty of operating the machine shortened the flight.
- G. It describes the shift in wind speed that made flying nearly impossible.
- H. It provides an overview of the flight’s progression from takeoff to landing.

33. Read this sentence from paragraph 5.

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.

The words “only,” “nevertheless,” and “finally” **most** clearly convey the idea that

- A. even a flight of such minor duration had taken a long time to achieve.
- B. the short flight gave the Wright brothers hope for longer ones in the future.
- C. the flight proved that the machine was, at last, capable of becoming airborne.
- D. although it was brief, the flight was a remarkable accomplishment.

34. 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?

- E. “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)
- F. “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)
- G. “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)
- H. “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)

35. 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.

CONTINUE TO THE NEXT PAGE ►

Cross-Purposes

What I am is *built*: concrete and steel.
I defy gravity. I am what every athlete
wants: to remain at the apex of the leap,
up in the air. And yet I am useful, too:
5 cars, trucks, people, even trains
make their way across my broad back.
Swallows and ospreys¹ nest in my trusses.

10 *What I am is motion. I am water, and I am older
than anything else you know. No human
built me. I am gravity's best friend; I pool
and flow wherever gravity takes me.
I am the blood flowing in the runner's chest,
and I catch everything: from the hills,
the mountains. It all washes down through me.*

15 What you are is an *accident*,
what happens to rain when rain gives in
to Earth's gravitational pull.
You are some tears dribbling from a mountain's
eye, running down the pavements
20 of small towns, into the cities, to the sea.
You are the path of least resistance.

25 *What I am is power. You, of course,
have none: you are a static lump, an artifact
slowly decaying. But my regal flow
nourishes grasses, permits empires to rise.
Those who made you will break you,
in time, replacing you with yet another
clumsy structure. I have seen. I know.*

"Clumsy"? Being rebuilt makes me
30 a friend of time, does it not? And it means
that I have siblings—those "clumsy" structures,
my sisters and brothers.
We stitch across the rip you make.
We are steel thread to the human needle.
35 We bind you up. We sew you.

¹ospreys: large birds

40

*And I sow into you; in every cranny
of your superstructure my vapors cling.
They bring out your softness, your rust.
Boast your best, and boast better yet.
I am listening to the bright hum
of the wind in your wires. Because I am,
above all else, patient. I will wait for you.*

- 36.** How does the similar construction of line 1 and line 8 contribute to the meaning of the poem?
- E.** It introduces the intended permanence of the structure and the ever-changing fluidity of the water.
 - F.** It shows that the structure can bridge the gap caused by the water.
 - G.** It suggests that the inflexible structure has more limitations than the adaptable water does.
 - H.** It contrasts the stability of the structure with the instability of the water.
- 37.** Read lines 2–4 and lines 12–14 from the poem.

**I am what every athlete
wants: to remain at the apex of the leap,
up in the air.**

***I am the blood flowing in the runner's chest,
and I catch everything: from the hills,
the mountains.***

How do the lines contribute to the development of a central idea of the poem?

- A.** They establish that both the structure and the water have endurance and control.
- B.** They highlight that both the structure and the water are powerful and impressive.
- C.** They suggest that the structure and the water are unaware of how similar they are.
- D.** They reveal that the structure and the water are surprised that they are interrelated.

38. The use of the words “siblings” and “my sisters and brothers” in lines 31–32 conveys the idea that the
- E. forms water can take are less diverse than the types of structures that exist.
 - F. number of human-made structures is rapidly increasing.
 - G. water passes under many similar-looking structures as it flows.
 - H. structure is powerful because it is one of many.
39. The comparison to sewing in lines 33–35 helps show that the structure
- A. enhances the beauty of the natural landscape.
 - B. brings people together more effectively than nature does.
 - C. provides clear boundaries for natural environments.
 - D. serves as a means for people to overcome an obstacle created by nature.
40. The last stanza (lines 36–42) conveys a central idea of the poem by
- E. demonstrating that both the structure and the water depend on each other to fulfill their functions.
 - F. implying that a stronger structure would be able to resist the degradation caused by the water.
 - G. revealing that the passage of time will render both the structure and the water obsolete.
 - H. suggesting that the water will eventually weaken the structure and will continue to exist after the structure is gone.
41. Read lines 41–42 from the poem.

***Because I am,
above all else, patient. I will wait for you.***

Which of the following supports what is implied in these lines?

- A. “I am older / than anything else you know.” (lines 8–9)
- B. “No human / built me.” (lines 9–10)
- C. “It all washes down through me.” (line 14)
- D. “Those who made you will break you,” (line 26)

- 42.** How does the poet develop the points of view of the structure and the water?
- E.** by giving an account of a discussion between them about the future of human civilization
 - F.** by narrating a debate they have over their impact on the environment
 - G.** by illustrating the unique power they each possess over nature
 - H.** by using personification to allow them to debate who is more important
- 43.** How does the form of the poem contribute to its meaning?
- A.** The use of an equal number of lines in each stanza emphasizes that both speakers are equally important.
 - B.** The use of italics in some of the stanzas indicates the increasing tension between the structure and the water.
 - C.** The alternating positions of the stanzas highlights the opposing points of view of the speakers.
 - D.** The lack of a regular rhyme scheme or meter reflects the way the water changes the structure and the way the water itself changes.

Excerpt from “Scribe Like an Egyptian”

by Hilary Wilson

- 1 In ancient Egypt, literacy was the key to success. However, contrary to popular belief, not all Egyptian scribes understood hieroglyphs. Many relied instead on the simpler hieratic script for the multitude of everyday documents generated by the Egyptian bureaucracy.¹
- 2 Hieroglyphs—“the Words of God”—compose a writing system with more than 1,000 distinct characters, the meanings of which were lost for 1,500 years before they were deciphered by Jean-François Champollion in 1822. Including both ideograms (which convey a whole word or idea, either concrete or abstract, in a single sign) and phonograms (representing either an alphabetic sound or a group of consonants), [the writing system] was used in formal inscriptions on tomb and temple walls as well as on elaborate funerary papyri.² For everyday purposes, however, scribes used a shorthand version of the hieroglyphic script known as hieratic, which was quicker to write and more economical of space. The two writings existed side by side for at least 2,500 years.
- 3 Scraps of ancient hieratic writing, mostly penned by student scribes on limestone flakes called ostraca, suggest that no matter how humble his origins, an educated Egyptian could achieve almost anything. Horemheb (d.1292 B.C.) is a good example. Born of middle-ranking parents, his scribal training led to an army career. From Scribe of Recruits, during the reign of Akhenaten (1353–1336 B.C.), Horemheb rose through the military ranks and, by the rule of Tutankhamun (1332–1323 B.C.), he was commander in chief of the Egyptian forces. As a close adviser of the young Pharaoh, Horemheb was appointed “Deputy of the King throughout the Two Lands,” and might have expected to succeed to the throne should the king die childless. He had to wait a few years, but eventually Horemheb achieved the pinnacle of his career by becoming the last king of the 18th Dynasty, making his mark by instituting dramatic reforms to the organization of the army, the judiciary and administration in general. The lasting success of these changes owed much to his scribal background. . . .
- 4 But education was not available to all. Government departments and major temples supported schools, where boys commenced their training at six or seven, sometimes earlier. To these boarding establishments . . . family or household servants delivered the students’ food and drink rations daily for several years, during which time the student was not contributing to the family’s income. Boys from poorer families could only hope to be educated with support from a wealthier relative or patron, or through apprenticeship to an older scribe, perhaps the local clerk or land agent, who would teach them the basics of the scribe’s craft. This limited the scope for employment but such “on the job” training allowed apprentices to help out at home while learning. . . .
- 5 Scribal education began with the elementary principles of the hieratic script. The lowliest scribes, who trained for just five or six years, probably learned only the rudiments³ of the hieroglyphic

¹**bureaucracy:** an administrative staff of government officials

²**funerary papyri:** a sheet or scroll of papyrus containing religious images and hieroglyphs meant to help the deceased be reborn in the afterlife

³**rudiments:** basics

script. Students were set exemplar documents and extracts from popular texts to copy, to practice their hieratic handwriting on basic-format letters, reports and contracts, while absorbing the good advice contained in the texts. Surviving examples of copy-work sometimes include tutors' corrections added in red. Some significant Egyptian literary works survive almost exclusively from student copies.

- 6 A schoolboy⁴ "dictionary" of hieroglyphs with their hieratic equivalents shows that a knowledge of more than 450 signs was required for everyday writing purposes. Lessons in record-keeping and filing and labelling enabled any half-competent scribe to perform that most essential of all scribal functions: the making and updating of lists. For professions such as those of government official, priest or lawyer, a scribe would train for several more years, increasing his vocabulary to perhaps a thousand or more signs. Those with the best handwriting or drawing skills might follow the craft of creating beautifully illustrated copies of funerary texts, commonly called *Books of the Dead*. Others could become draughtsmen,⁵ artists or architects. Doctors compiled their own collections of medication recipes, treatments and associated incantations, many copied from texts found in the House of Life, the temple library. Lawyers had to be familiar with the corpus⁶ of civil and religious laws and precedents found in the official records, which were administered by archivists. Egypt's bureaucratic society depended on the skills of an army of scribes of all ranks from filing clerk to tax assessor. For young Egyptians, "be a scribe" was the best of career advice.

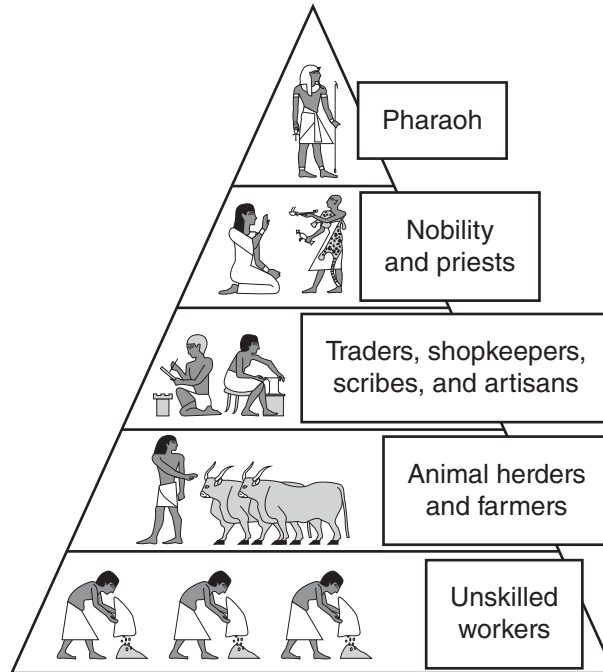
From "Scribe Like an Egyptian" by Hilary Wilson from HISTORY TODAY, August 8, 2019. Copyright © 2019 by History Today Ltd. Company.

⁴**schoolboy:** slang that refers to materials used during the course of receiving an education

⁵**draughtsmen:** people who draw plans of machinery or structures

⁶**corpus:** a collection of writings

ANCIENT EGYPTIAN
SOCIAL CLASS STRUCTURE



44. Which sentence from the excerpt **best** supports the idea that there were different levels of education for a scribe?
- E. "However, contrary to popular belief, not all Egyptian scribes understood hieroglyphs." (paragraph 1)
 - F. "For everyday purposes, however, scribes used a shorthand version of the hieroglyphic script known as hieratic, which was quicker to write and more economical of space." (paragraph 2)
 - G. "This limited the scope for employment but such 'on the job' training allowed apprentices to help out at home while learning." (paragraph 4)
 - H. "For professions such as those of government official, priest or lawyer, a scribe would train for several more years, increasing his vocabulary to perhaps a thousand or more signs." (paragraph 6)

45. Read this sentence from paragraph 2.

Including both ideograms (which convey a whole word or idea, either concrete or abstract, in a single sign) and phonograms (representing either an alphabetic sound or a group of consonants), [the writing system] was used in formal inscriptions on tomb and temple walls as well as on elaborate funerary papyri.

The author’s purpose for including the sentence is to

- A. explain that hieroglyphs were reserved for royal and religious purposes.
- B. demonstrate the methods experts use to interpret hieroglyphs.
- C. clarify the significance of hieroglyphs in language and literature.
- D. describe the basic features of hieroglyphs and how they were typically used.

46. Which statement summarizes the process that schools used to train scribes?

- E. Boys had to memorize around 450 hieratic signs. Once they had learned these, they were expected to copy literary texts that contained valuable lessons.
- F. Boys spent at least five years learning hieratic signs, which they practiced by copying texts. During this period, they were also introduced to basic hieroglyphs.
- G. Boys spent five or six years learning the basics of hieratic script. After this period, they could become apprentices and begin learning hieroglyphics.
- H. Boys were taught two different scripts. They practiced both types by copying lists and eventually progressed to writing letters, reports, and contracts.

47. Which claim is **best** supported by the information presented in paragraphs 3 and 4?

- A. Education was difficult for the common citizens of Egypt to obtain.
- B. Once students began studying to become scribes, their future held more possibilities.
- C. If someone wanted to become a scribe, support from outside sources such as the government or a temple was necessary.
- D. Becoming a successful scribe required a student’s family to sacrifice time and money in order to ensure the best education.

- 48.** Hieratic script was particularly valuable in a bureaucratic government because
- E.** using hieratic script was an efficient way for scribes to produce large amounts of documentation.
 - F.** many members of the general public could comprehend information that was written in hieratic script.
 - G.** knowledge of hieratic script prepared scribes to serve their society in increasingly challenging roles.
 - H.** people from different professional backgrounds could easily communicate with one another in hieratic script.
- 49.** The diagram after paragraph 6 **best** provides additional support for the topic of the excerpt by
- A.** demonstrating the place of scribes in ancient Egyptian social structure.
 - B.** depicting the types of tasks performed by each social class.
 - C.** indicating that scribes were able to easily improve their social ranking.
 - D.** comparing the social positions of each social class in ancient Egypt.
- 50.** Based on the excerpt, which statement would the author **most** strongly agree with?
- E.** Boys in Egypt were encouraged to enter the same profession as older male relatives.
 - F.** Knowledge of hieroglyphs was helpful to Egyptians who were interested in becoming scribes.
 - G.** Hieratic script was more practical to ancient Egyptians than hieroglyphs were.
 - H.** Boys in Egypt who studied for only a few years were unlikely to find employment as scribes.

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Excerpt from “Niagara Falls”

by Rupert Brooke

- 1 The real secret of the beauty and terror of the Falls is not their height or width, but the feeling of colossal power and of unintelligible disaster caused by the plunge of that vast body of water. If that were taken away, there would be little visible change, but the heart would be gone.
- 2 The American Falls do not inspire this feeling in the same way as the Canadian. It is because they are less in volume, and because the water does not fall so much into one place. By comparison their beauty is almost delicate and fragile. They are extraordinarily level, one long curtain of lacework and woven foam. Seen from opposite, when the sun is on them, they are blindingly white, and the clouds of spray show dark against them. With both Falls the colour of the water is the ever-altering wonder. Greens and blues, purples and whites, melt into one another, fade, and come again, and change with the changing sun. Sometimes they are as richly diaphanous¹ as a precious stone, and glow from within with a deep, inexplicable light. Sometimes the white intricacies of dropping foam become opaque and creamy. And always there are the rainbows. If you come suddenly upon the Falls from above, a great double rainbow, very vivid, spanning the extent of spray from top to bottom, is the first thing you see. If you wander along the cliff opposite, a bow springs into being in the American Falls, accompanies you courteously on your walk, dwindles and dies as the mist ends, and awakens again as you reach the Canadian tumult. And the bold traveller who attempts the trip under the American Falls sees, when he dare open his eyes to anything, tiny baby rainbows, some four or five yards in span, leaping from rock to rock among the foam, and gambolling beside him, barely out of hand’s reach, as he goes. One I saw in that place was a complete circle, such as I have never seen before, and so near that I could put my foot on it. It is a terrifying journey, beneath and behind the Falls. The senses are battered and bewildered by the thunder of the water and the assault of wind and spray; or rather, the sound is not of falling water, but merely of falling; a noise of unspecified ruin. So, if you are close behind the endless clamour, the sight cannot recognise liquid in the masses that hurl past. You are dimly and pitifully aware that sheets of light and darkness are falling in great curves in front of you. Dull omnipresent foam washes the face. Farther away, in the roar and hissing, clouds of spray seem literally to slide down some invisible plane of air.
- 3 Beyond the foot of the Falls the river is like a slipping floor of marble, green with veins of dirty white, made by the scum that was foam. It slides very quietly and slowly down for a mile or two, sullenly exhausted. Then it turns to a dull sage green, and hurries more swiftly, smooth and ominous. As the walls of the ravine close in, trouble stirs, and the waters boil and eddy. These are the lower rapids, a sight more terrifying than the Falls, because less intelligible. Close in its bands of rock the river surges tumultuously forward, writhing and leaping as if inspired by a demon. It is pressed by the straits into a visibly convex form. Great planes of water slide past. Sometimes it is thrown up into a pinnacle of foam higher than a house, or leaps with incredible speed from the crest of one vast wave to another, along the shining curve between, like the spring of a wild beast. Its motion continually suggests muscular action. The power manifest in these rapids moves one with a different sense of awe and terror from that of the Falls. Here the inhuman life and strength are spontaneous, active, almost resolute. . . . A place of fear.

¹**diaphanous:** sheer, translucent

4 One is drawn back, strangely, to a contemplation of the Falls, at every hour, and especially by night, when the cloud of spray becomes an immense visible ghost, straining and wavering high above the river, white and pathetic and translucent. The Victorian lies very close below the surface in every man. There one can sit and let great cloudy thoughts of destiny and the passage of empires drift through the mind; for such dreams are at home by Niagara. I could not get out of my mind the thought of a friend, who said that the rainbows over the Falls were like the arts and beauty and goodness, with regard to the stream of life—caused by it, thrown upon its spray, but unable to stay or direct or affect it, and ceasing when it ceased. In all comparisons that rise in the heart, the river, with its multitudinous waves and its single current, likens itself to a life, whether of an individual or of a community. A man’s life is of many flashing moments, and yet one stream; a nation’s flows through all its citizens, and yet is more than they. In such places, one is aware, with an almost insupportable and yet comforting certitude, that both men and nations are hurried onwards to their ruin or ending as inevitably as this dark flood. Some go down to it unreluctant, and meet it, like the river, not without nobility. And as incessant, as inevitable, and as unavailing as the spray that hangs over the Falls, is the white cloud of human crying. . . . With some such thoughts does the platitudinous² heart win from the confusion and thunder of a Niagara peace that the quietest plains or most stable hills can never give.

From LETTERS FROM AMERICA by Rupert Brooke—Public Domain

²**platitudinous:** clichéd, common

51. The central idea that the Falls communicate a feeling of “unintelligible disaster” (paragraph 1) is conveyed in paragraph 2 through a description of
- A. the glow of the precious stones visible within the water.
 - B. the dynamic flow of the colors that are visible in the water.
 - C. the sudden appearance and disappearance of rainbows.
 - D. the sounds associated with a sense of falling.

52. Read this sentence from paragraph 2.

They are extraordinarily level, one long curtain of lacework and woven foam.

What is the effect of comparing the American Falls to a “long curtain of lacework and woven foam”?

- E. It demonstrates the timelessness of the American Falls.
- F. It conveys the secretive nature of the American Falls.
- G. It illustrates the elegant uniformity of the American Falls.
- H. It communicates the intense strength of the American Falls.

53. Read this sentence from paragraph 3.

These are the lower rapids, a sight more terrifying than the Falls, because less intelligible.

Which statement **best** describes how the sentence fits into the overall structure of the excerpt?

- A. It signals a change from the positive aspects of the Falls to the negative aspects.
- B. It indicates a progression from the literal description of the water to a discussion of timeless truths.
- C. It reinforces a shift from the qualities of the Falls to the qualities of the river.
- D. It introduces a contrast between the obvious and the hidden features of the rapids.

54. Which sentence from the excerpt **best** supports the idea that the essence of the Falls lies in their emotional impact?

- E. "If that were taken away, there would be little visible change, but the heart would be gone." (paragraph 1)
- F. "By comparison their beauty is almost delicate and fragile." (paragraph 2)
- G. "One is drawn back, strangely, to a contemplation of the Falls, at every hour, and especially by night, when the cloud of spray becomes an immense visible ghost, straining and wavering high above the river, white and pathetic and translucent." (paragraph 4)
- H. "A man's life is of many flashing moments, and yet one stream; a nation's flows through all its citizens, and yet is more than they." (paragraph 4)

55. Read this sentence from paragraph 4.

There one can sit and let great cloudy thoughts of destiny and the passage of empires drift through the mind; for such dreams are at home by Niagara.

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

- A. suggesting that viewing the Falls can be a life-changing experience.
- B. showing that the cliffs of the Falls are a good place for self-examination.
- C. emphasizing that the grandeur of the Falls seems impossible to grasp.
- D. highlighting the type of reflection that is inspired by a visit to the Falls.

56. In paragraph 4, the idea that human life and history ultimately end in the same way is illustrated **mainly** through
- E. the discussion of how the rainbows visible in the Falls are like the art and beauty created by humankind.
 - F. the comparison between the movement of water in the Falls and the human experience.
 - G. the inclusion of details that show that every observer’s experience with the Falls is different.
 - H. the acknowledgment that contemplating the Falls at night sparks an awareness of humankind’s destiny.
57. With which statement would the author of this excerpt **most likely** agree?
- A. A sense of ease and assurance comes with accepting one’s fate.
 - B. No matter where one’s path goes in life, one will always have regrets.
 - C. The best way to overcome fear is to recognize it and then defy it.
 - D. Reason will die out with humanity, but art will remain immortal.

GRID-IN QUESTIONS

QUESTIONS 58–62

DIRECTIONS: Solve each problem. On the answer sheet, write your answer in the boxes at the top of the grid. Start on the left side of each grid. Print only one number or symbol in each box. Under each box, fill in the circle that matches the number or symbol you wrote above.

- Do not fill in a circle under an unused box.
 - Do not leave a box blank in the middle of an answer.
-

58.

LAST YEAR'S TOTAL SALES

| Vehicles | Number |
|----------------|--------------|
| Four-door cars | 5,850 |
| Two-door cars | 2,250 |
| Trucks | 900 |
| Total | 9,000 |

The table above shows the number of each type of vehicle sold at a dealership last year. If 1,000 vehicles will be sold next month, what is the best estimate (based on last year's sales) of the number of two-door cars that will be sold?

59. In a scale drawing of a rectangular garden, the length is 15 inches and the width is 9 inches. In the drawing, 2 inches represents 3 yards. What is the width of the actual garden, in yards?

60. A kindergarten teacher has 72 crayons, 60 pencils, and 84 sheets of paper to distribute to the children in her class. If each child receives an equal number of each item and there are no items remaining, what is the greatest possible number of children in the class?

61. Mr. Smith opened a retirement account with a deposit of \$900. This account earns 5% simple interest annually. How many years will it take for his \$900 deposit to earn \$360 interest?

62. Solve the equation for x :

$$\frac{(21)(14)x}{(49)(48)} = 0.875$$

MULTIPLE CHOICE QUESTIONS

QUESTIONS 63–114

DIRECTIONS: Solve each problem. Select the answer from the choices given. Mark the letter of your answer on the answer sheet. When you are solving problems, you can write in the test booklet or on the scrap paper given to you.

- 63.** What is the value of

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

A. $-3\frac{1}{12}$

B. $-2\frac{11}{12}$

C. $6\frac{1}{12}$

D. $9\frac{5}{12}$

-
- 64.** On Fran’s map, 2 centimeters represents 3 kilometers. The points on this map that represent Fran’s home and Bryant State Park are 4.5 centimeters apart. How many kilometers apart are Fran’s home and Bryant State Park, to the nearest kilometer?

E. 3

F. 5

G. 7

H. 9

- 65.** Solve for x in terms of y if $2x + 4 = y$.

A. $x = \frac{y - 4}{2}$

B. $x = 2(y + 4)$

C. $x = \frac{y + 4}{2}$

D. $x = 2(4 - y)$

-
- 66.** Bryan completed a 100-meter race in 11.74 seconds. Luis completed the same race in 11.69 seconds. What was the difference between their times, expressed as a fraction of a second?

E. $\frac{1}{20}$

F. $\frac{1}{10}$

G. $\frac{3}{20}$

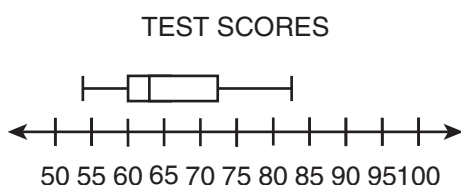
H. $\frac{1}{5}$

67. A total of 24 students in a math class took a 100-point test:

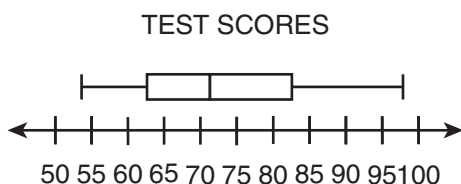
- None of the students scored 100 points.
- 75% of the students scored less than 82 points.
- The lowest score in the class was 54 points.

Which box plot best represents the test scores from this math class?

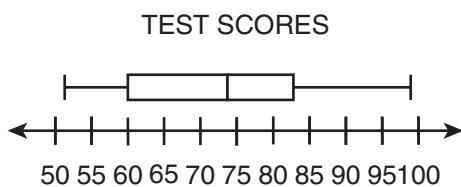
A.



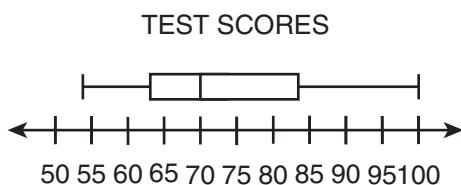
B.



C.



D.



68.

$$n = 0.13 + \frac{207}{100}$$

What is the value of n expressed as a fraction?

E. $\frac{1}{3}$

F. $\frac{11}{5}$

G. $\frac{9}{4}$

H. $\frac{23}{10}$

69.

The perimeter of a 12-sided polygon is 100 centimeters. The length of one side is 25 centimeters. The length of another side is 35 centimeters. The remaining sides are equal in length to one another. What is the length of each of the remaining sides, in centimeters?

A. 4

B. 5

C. 20

D. 40

70. Shioh-Chen has a box that contains 4 green cards, 7 yellow cards, and 6 red cards. She randomly draws one card at a time from the box and does not return the cards to the box after they have been drawn. The first card she draws is yellow. The second card she draws is green. What is the probability that the third card she draws will also be green?

E. $\frac{1}{5}$

F. $\frac{4}{17}$

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

H. $\frac{1}{3}$

71. Each number in a sequence is 3 more than twice the number that comes just before it. If 93 is a number in the sequence, what number comes just before it?

A. 92

B. 90

C. 48

D. 45

72. On a map, the distance between Deshawn's house and Xin's house is 5.4 inches. If 2 inches on the map represents 3 miles, what is the distance between these two houses, in miles?

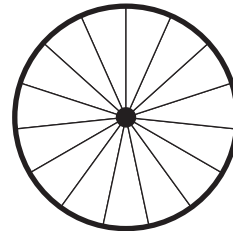
E. 2.6

F. 3.6

G. 7.5

H. 8.1

73.



This wheel has 15 spokes, equally spaced. What is the measure of the angle between adjacent spokes?

A. 30°

B. 24°

C. 15°

D. 12°

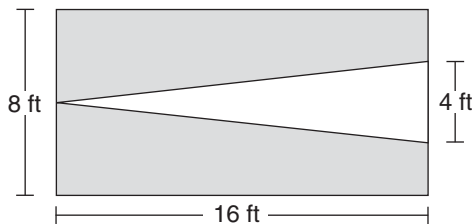
74.

$$m \cdot t = 72$$

For the equation above, what is the sum of the values of m when $t = 1$, when $t = 2$, and when $t = 3$?

- E. 12
- F. 72
- G. 132
- H. 135

75.



The diagram above shows a rectangle with an inscribed triangle. The triangle's vertex and base touch the sides of the rectangle as shown. What is the total area of the shaded portion?

- A. 32 sq ft
- B. 64 sq ft
- C. 96 sq ft
- D. 128 sq ft

76. Orange juice costs \$2 per gallon, and grapefruit juice costs \$3 per gallon. A recent shipment of equal amounts of the two types of juice costs a total of \$250. How many gallons of orange juice are in the shipment?

- E. 50
- F. 62.5
- G. 100
- H. 125

77. Five consecutive numbers have a sum of 110. What is the **least** of these consecutive numbers?

- A. 11
- B. 18
- C. 20
- D. 22

78.

$$\begin{array}{c} -mn \\ (-m)(-n) \\ |mn| \\ |-mn| \\ |(-m)(-n)| \end{array}$$

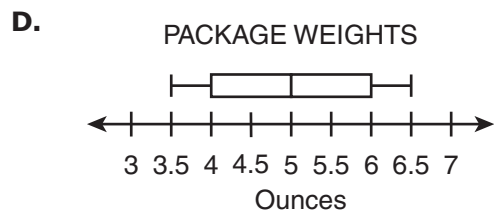
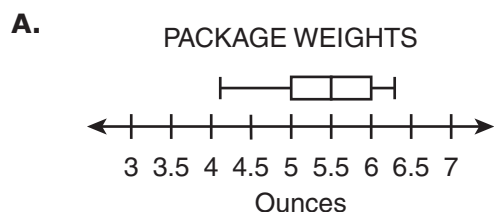
If m and n are positive integers, how many of the five expressions above are equivalent to mn ?

- E. 1
- F. 2
- G. 3
- H. 4

79. A vendor is selling 10 packages of homemade fudge at a bake sale. The vendor weighed and labeled each package. The package weights are given in ounces:

4.6 6.0 3.8 3.5 4.5
5.4 3.9 6.5 4.8 6.2

The vendor created a box plot of the package weights. Which box plot best represents the data?



80.

FRUIT SOLD
AT STORE XYZ

| Fruit | Number Sold |
|--------------|-------------|
| Apples | 8 |
| Bananas | 6 |
| Cherries | 12 |
| Oranges | 6 |
| Peaches | ? |
| Total | 50 |

Peaches made up what percentage of the total number of pieces of fruit sold at Store XYZ, according to the table above?

- E. 18%
- F. 28%
- G. 36%
- H. 64%

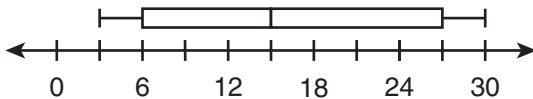
81. A prism is made up of 9 congruent cubes. Each of the cubes has side lengths measuring 4 units. What is the volume, in cubic units, of the prism?

- A. 108
- B. 144
- C. 480
- D. 576

82. The town of Waterville covers an area of 50 square miles. In 2005, its population was 84,000. In 2006, its population had decreased so that the average population per square mile was equal to 1,500. What was the total decrease in population from 2005 to 2006?

- E.** 7,500
- F.** 8,400
- G.** 9,000
- H.** 9,200

83. The box plot below represents a set of data.



What is the interquartile range of the set of data?

- A.** 9
- B.** 12
- C.** 21
- D.** 27

84. $N = \{6, 7, \dots, 21, 22\}$

Set L (not shown) is a list of 25 consecutive integers. The median of the integers in set N above is equal to the least integer in set L. What is the median of the integers in set L?

- E.** 25
- F.** 26
- G.** 27
- H.** 28

85. The sum of the numbers x , y , and z is 40. The ratio of x to y is 1:2, and the ratio of y to z is 2:5. What is the value of y ?

- A.** 2
- B.** 4
- C.** 8
- D.** 10

86. Which number could be the sum of 4 consecutive integers?

- E. -12
- F. -10
- G. -8
- H. -4

87.

PRICE OF A USED VIDEO GAME AT VARIOUS STORES

| Price of Used Video Game | Number of Stores |
|--------------------------|------------------|
| \$10.99 | 5 |
| \$11.99 | 2 |
| \$12.99 | 1 |
| \$13.99 | 4 |

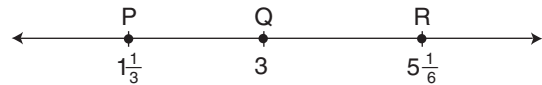
The table above shows the price of a certain used video game at 12 different stores. What is the median price of this video game?

- A. \$10.99
- B. \$11.49
- C. \$11.99
- D. \$12.32

88. If $xy = 30$, what is the value of $10 \div x$ in terms of y ?

- E. $\frac{1}{10}y$
- F. $\frac{1}{3}y$
- G. $3y$
- H. $10y$

89.



On the number line above, how many units longer is \overline{QR} than \overline{PQ} ?

- A. $\frac{1}{6}$
- B. $\frac{1}{2}$
- C. $\frac{2}{3}$
- D. 3

90.



The distance from W to X is 70% of the distance from W to Y. If the distance from X to Y is 15 miles, what is the distance, in miles, from W to X?

- E. 10.5
- F. 35
- G. 45
- H. 50

91. There are 3 different highways from City W to City X, 4 different highways from City X to City Y, and 3 different highways from City Y to City Z. How many different routes are there for a trip from City W to City X to City Y to City Z?

- A. 10
- B. 12
- C. 24
- D. 36

92. In Center City, the ratio of people to dogs is 4:1, and the ratio of dogs to cats is 3:2. What is the ratio of people to cats?

- E. 2:1
- F. 7:3
- G. 6:1
- H. 12:1

93. The side length of square S is shorter than the side length of square T by 1 centimeter. The area of square S is 9 square centimeters. What is the difference, in square centimeters, between the area of square T and the area of square S?

- A. 3
- B. 7
- C. 8
- D. 10

94. Which expression is equivalent

$$\text{to } \frac{1}{2}x + 7 - \left(x - \frac{9}{2}\right)?$$

E. $\frac{1}{2}(x - 5)$

F. $\frac{1}{2}(x + 5)$

G. $-\frac{1}{2}(x + 23)$

H. $-\frac{1}{2}(x - 23)$

95. How is $\frac{1}{x} - \frac{1}{2x}$ written as a single fraction? (Assume $x \neq 0$.)

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

B. $\frac{1}{3x}$

C. $-\frac{1}{x}$

D. $-\frac{1}{2x}$

96. In a certain competition, 1 person finished in first place, 5 people tied for second place, 10 people tied for third place, and the other 4,984 people did not place. What percentage of the people in the competition placed first, second, or third altogether?

E. 0.0032%

F. 0.032%

G. 0.32%

H. 3.2%

97. Angle A and angle B are complementary. If the measure of angle B is three times as great as the measure of angle A, what is the measure of angle B?

A. 45°

B. 67.5°

C. 75°

D. 135°

98. The height of a tree in 2013 is 300% of the height it was in 2003. By what percentage did its height increase over this ten-year period?

E. $33\frac{1}{3}\%$

F. 100%

G. 200%

H. 300%

99.

1 gallon = 16 cups
1 cup = 8 fluid ounces

If 1 gallon = 2^x fluid ounces, what is the value of x ?

A. 4

B. 7

C. 8

D. 64

100. A certain square puzzle has an area of 64 square inches, and a cubic block has a volume of 64 cubic inches. What is the ratio of the length of a side of the puzzle to the length of a side of the block?

E. 1:3

F. 1:2

G. 2:3

H. 2:1

101. In a certain class, Rosa will take a total of 4 tests. She has already taken 2 of the tests and earned scores of 81 and 83. What is the **least** possible score Rosa can earn on the third test and still be able to finish the class with an average score of 85 on all 4 tests? (Assume that test scores can range from 0 to 100.)

A. 76

B. 82

C. 88

D. 90

102. The Barnes family and the Ramirez family each have a pizza of equal size. The first pizza is cut into 18 equal slices, and the second pizza is cut into 15 equal slices. If the Barnes family eats 11 slices from the first pizza, what is the greatest number of whole slices from the second pizza that the Ramirez family can eat without eating a greater percentage of a pizza than the Barnes family ate?

- E.** 6
- F.** 7
- G.** 8
- H.** 9

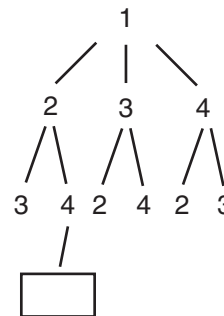
103. $0^3 + 4^0 + 2^{-1} + (-1)^2$

What is the value of the expression above, in decimal form?

- A.** 0
- B.** 0.5
- C.** 1.5
- D.** 2.5

104. Four slips of paper numbered 1, 2, 3, and 4 were placed in a bag:

- One slip was selected from the bag, and the number recorded.
- Without replacement, a second slip was chosen.
- This process continued until no more slips remained in the bag.
- One part of a tree diagram representing the sample space is shown.



Which number should be placed in the box to complete this part of the tree diagram?

- E.** 1
- F.** 2
- G.** 3
- H.** 4

105. The outdoor temperature was 4.2° F at 10 p.m. After $3\frac{1}{2}$ hours, the outdoor temperature was -0.7° F. Which value best represents the average change in temperature per hour?

- A. -1.4° F
- B. -1.0° F
- C. 1.0° F
- D. 1.4° F

106. A rectangular swimming pool of uniform depth is 20 yards long and 14 yards wide. If the water is 6 **feet** deep, what is the volume of water in the pool, in cubic yards?

- E. 40
- F. 286
- G. 560
- H. 1,680

107. $\{3, 4, 5, 6, 7\}$

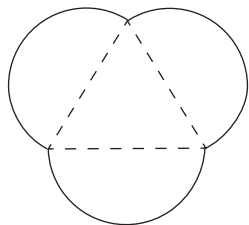
A student made a list of all possible products of 2 **different** numbers in the set above. What fraction of the products are odd?

- A. $\frac{3}{20}$
- B. $\frac{3}{10}$
- C. $\frac{1}{2}$
- D. $\frac{3}{5}$

108. A number, n , is divided by 25. If the quotient is 10 with a remainder of 5, what is the quotient expressed as a decimal?

- E. 10.20
- F. 10.25
- G. 10.50
- H. 10.75

109.



The garden design shown above is created in the shape of three semicircles whose diameters lie on the sides of an equilateral triangle. If each diameter is 2 meters long, what is the perimeter of the garden, in meters?

- A. 6
- B. 12
- C. 3π
- D. 6π

110. Micha is playing a game with five cards numbered 1 through 5. He will place the cards in a bag and draw one card at random three times, replacing the card each time. To win a prize, he must draw the number 5 all three times. What is the probability he will draw the number 5 all three times?

- E. $\frac{1}{125}$
- F. $\frac{3}{125}$
- G. $\frac{1}{15}$
- H. $\frac{3}{5}$

111. The speed 10 meters per second is equivalent to how many feet per hour?
(Use the approximation
1 foot = 0.3 meter.)

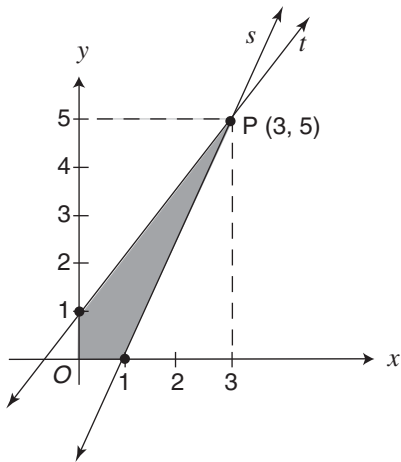
- A.** 10,800
- B.** 12,000
- C.** 36,000
- D.** 120,000

112. $6.\overline{34} - 4.\overline{12}$

What is the value of the expression above,
written as an improper fraction?

- E.** $\frac{24}{11}$
- F.** $\frac{224}{101}$
- G.** $\frac{111}{50}$
- H.** $\frac{20}{9}$

113.



Lines s and t intersect at point $P(3, 5)$. What is the area, in square units, of the shaded region in the graph above?

- A. 2
- B. 3
- C. 4
- D. 7

114. A box contains 14 red marbles, 10 black marbles, and 16 white marbles. How many more white marbles need to be added to the box so that the probability of randomly drawing a white marble is $\frac{3}{5}$?

- E. 8
- F. 10
- G. 14
- H. 20

THIS IS THE END OF THE TEST.
IF TIME REMAINS, YOU SHOULD CHECK
YOUR ANSWERS. BE SURE THAT THERE
ARE NO STRAY MARKS, PARTIALLY
FILLED ANSWER CIRCLES, OR
INCOMPLETE ERASURES ON YOUR
ANSWER SHEET. ■

Form B

Sample Test – English Language Arts Explanations of Correct Answers

REVISING/EDITING PART A

1. The question asks which edit should be made to correct the sentence.
 - A. Incorrect. A comma is needed to separate the introductory infinitive phrase “to surprise her dad for his birthday on Friday,” which modifies Yolanda’s action, from the remainder of the sentence.
 - B. **CORRECT.** A comma is needed between two adjectives of equal importance preceding a noun. In this case, the adjectives “tempting” and “savory” are of equal importance, modifying the noun “sandwiches.” Their equal importance can be determined by inserting the word “and” between them (“tempting and savory sandwiches”).
 - C. Incorrect. This edit would introduce an error into the sentence by needlessly breaking up the two prepositional phrases “from a deli” and “in her neighborhood” with a comma. No comma is needed when prepositional phrases are joined together in this way to indicate a singular idea. In this sentence, these two phrases work together to show where the sandwiches are from.
 - D. Incorrect. Deleting this comma would introduce an error into the sentence. A comma is needed to separate the first and second items in the series of three actions Yolanda undertook: “ordered tempting savory sandwiches from a deli in her neighborhood,” “prepared his favorite chocolate cake,” and “invited his best friends over for the evening.”

2. The question asks for the identification of the sentence in the paragraph that contains an error.
 - E. Incorrect. This sentence has an appropriate construction. An introductory prepositional phrase is correctly punctuated and describes when the power outage occurred. Similarly, the direct object, “the Upper West Side of Manhattan in New York City,” is presented clearly in terms of what area was “affected” by the power outage.
 - F. **CORRECT.** “Leaving approximately 73,000 residents without electricity for three long hours” is a dangling modifier because it is not clearly modifying any word or words in this sentence. It actually further describes the “power outage” in sentence 1. In clear and correct construction, all modifiers should be near the words they describe in order to avoid confusion.
 - G. Incorrect. Sentence 3 has a correct construction. A dash is used appropriately to show a break in thought and to introduce the phrase “on the exact same day.”
 - H. Incorrect. Correct construction is used in this sentence. Two commas are used correctly to set off the nonessential clause “which lasted for 25 hours” from the rest of the sentence. Similarly, one comma is used to set off the nonessential appositive “an odd coincidence to say the least.” Both of these elements are nonessential to the sentence’s overall meaning and are thus correctly separated from the sentence by the use of commas.

3. The question asks which two revisions are needed to correct the paragraph.
- A. Incorrect. The comma is needed after “Yalina” to separate the first and second names in the series of three names (Yalina, Michael, and Malcolm). The possessive determiner “their” is also correct as written because it refers back to “Yalina, Michael, and Malcolm,” a plural group of people.
 - B. Incorrect. Changing “is” to “are” would introduce an error in subject-verb agreement into the sentence; the singular subject “Yalina’s job” requires the singular verb “is.” The comma after “bowl” is required because it separates the phrase “slowly adding water, eggs, melted butter, and blueberries,” which modifies how Yalina prepares the batter, from the remainder of the sentence.
 - C. Incorrect. “It is” refers to the singular noun “mixture,” so this singular pronoun and verb form is correct. The comma after “smooth” is necessary because this is a compound sentence where two independent clauses (“Michael uses a wooden spoon to vigorously stir the mixture until it is smooth” and “Malcolm helps Granddad carefully pour the batter onto a griddle one-fourth cup at a time”) are joined using a coordinating conjunction, which requires a comma.
 - D. **CORRECT.** The plural pronoun “they” refers incorrectly to a singular antecedent, “each pancake.” The pronoun should be changed to a singular one to match its antecedent. A comma is needed between two adjectives of equal importance that modify the noun “breakfast.” Because “sweet” and “delicious” could be written as “sweet and delicious,” they are of equal importance, and a comma is needed.

REVISING/EDITING PART B

The End of an Era

4. The question asks for the sentence that should follow sentence 3 to **best** introduce the topic of the passage.
- E. CORRECT.** This sentence best introduces the passage’s topic: the *Opportunity* rover had many accomplishments on its mission, despite numerous challenges. Some of those accomplishments include providing high-resolution photographs (paragraph 2), traveling long distances (paragraph 3), and providing data about craters and other surface features (paragraph 3).
 - F.** Incorrect. Although paragraph 2 discusses how photographs taken by the rover showed rocks that may have been shaped by water, this idea alone is not the topic of the entire passage.
 - G.** Incorrect. While this sentence incorporates ideas about difficulties the scientists encountered because of the *Opportunity* rover’s design (paragraph 4), the main topic of the passage is not the design flaws and obstacles scientists encountered throughout the mission. The passage primarily focuses on the achievements of the mission.
 - H.** Incorrect. While it is true that the *Opportunity* rover mission lasted much longer than planned (sentence 3), this fact is a supporting detail of the passage, not the main topic of the passage; surpassing the original timeline is only one of the rover’s many achievements mentioned in the passage.
-
5. The question asks for the word that should be added to the beginning of sentence 8 to provide a better transition to the third paragraph.
- A.** Incorrect. While sentence 8 is a more general statement than sentence 7, the word “Overall” would imply that all of the third paragraph features general information about the *Opportunity* rover. Instead, paragraphs 2 and 3 both describe specific accomplishments of the *Opportunity* rover (the discovery of possible water on Mars and the distance the rover traveled), so these paragraphs require a word between them that does not transition from the specific to the general.
 - B.** Incorrect. The word “Furthermore” would suggest that the author is making an argument in paragraph 2 that is further developed by the statement in sentence 8 and the rest of paragraph 3. Because this is not the case, the word “Furthermore” is not a suitable transition from one paragraph to the next.
 - C. CORRECT.** The word “Meanwhile” is an appropriate transition to add before sentence 8, since the actions of the *Opportunity* rover in paragraph 2 (taking photographs) and in paragraph 3 (traveling long distances) happened at the same time and both served critical functions to the overall mission.
 - D.** Incorrect. The word “Consequently” would create a cause-and-effect relationship that does not exist between the paragraphs. The passage gives no indication that the rover’s actions in the third paragraph (traveling a far distance) resulted from the actions in the second paragraph (taking photographs).

6. The question asks for the revision of sentence 11 that **best** maintains the formal style established in the passage.
- E. **CORRECT.** This sentence uses clear and formal writing throughout. The phrase “covered the planet” is accurate and formal without being overly poetic, and “standstill” is a precise word for putting something “on hold,” as expressed by the original sentence, while maintaining the formal style of the passage.
 - F. Incorrect. Although the sentence is formal in style, the word “shrouded” is overly poetic, and the phrase “impermanently halting” is too stilted and formal for the style and tone of the passage.
 - G. Incorrect. Although the sentence is formal in style, the words “enveloped” and “arresting” are overly poetic, especially when used in the same sentence, and the phrases “the whole of the planet” and “for a time” are needlessly wordy and imprecise, compared with the formal scientific language of the passage.
 - H. Incorrect. The phrases “covered up the whole planet” and “quickly brought a stop to the progress of the rover” are less formal and unnecessarily wordy, compared with the formal style established by the rest of the passage.
-

7. The question asks for the **best** way to combine sentences 12 and 13.
- A. Incorrect. The phrase “this planet-wide dust storm” in the original sentence 12 makes a direct reference to sentence 11 and therefore acts as a transition that should be kept at the beginning. In this sentence, the transition phrase is placed at the end of the sentence, making the phrase confusing. In addition, the sentence is unnecessarily repetitive and wordy.
 - B. Incorrect. This combination unnecessarily turns sentence 12 into an overly long dependent clause, making the connection between “it” and its antecedent, “the rover,” unclear and distracting from the subject of the sentence, “minor dust storms.”
 - C. Incorrect. Not only does this combination move the reference to “this planet-wide dust storm” farther from sentence 11, but it is also unnecessarily wordy, adding “because” and repeating “the rover.”
 - D. **CORRECT.** This sentence efficiently and accurately adds sentence 13 to sentence 12 as a dependent clause by changing “These prevented” to “preventing,” while also retaining the meanings of the original sentences 12 and 13.

8. The question asks where the sentence should be added to the passage.
- E. Incorrect. While sentence 2 refers to *Opportunity's* mission to search for evidence of water, sentence 3 mentions the rover lasting much longer than anticipated. Placing the sentence between these two ideas, rather than at the start of the second paragraph, where it introduces the topic of the paragraph, would create a disjointed and confusing experience for the reader.
 - F. **CORRECT.** The sentence introduces the idea of finding possible evidence of water on Mars, which is the main topic of the second paragraph.
 - G. Incorrect. The sentence sets up the main idea of paragraph 2, which is the possibility of water on Mars. As a concluding sentence, it would be repetitive and confusing.
 - H. Incorrect. The sentence introduces the possibility of water on Mars, while sentences 8 and 9 discuss other surface features and the distance traveled by the rover. Adding the sentence here would create a disorganized paragraph.
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9. The question asks for the concluding sentence that should be added after sentence 20 to **best** support the information presented in the passage.
- A. Incorrect. The sentence does not summarize or make reference to the focus of the passage, which is the *Opportunity* rover.
 - B. **CORRECT.** This sentence summarizes the ideas about the *Opportunity* rover while also extending those ideas to future research, an effective combination for a sentence that concludes a piece about a scientific topic.
 - C. Incorrect. This sentence not only begins with the phrase "And in conjunction," which is repetitive, but also introduces an entirely new idea (*Mars Odyssey*) instead of concluding on the main topic of the passage (the *Opportunity* rover).
 - D. Incorrect. This sentence puts emphasis on Mars's characteristics and makes a conclusion about "today's rovers," instead of referring back to the *Opportunity* rover, the main focus of the passage.

READING COMPREHENSION

Excerpt from "The Food Business Incubator"

- 10.** The question asks what the words “recognized” and “prestigious” convey about La Cocina.
- E.** Incorrect. While later information indicates that La Cocina bases its choices on the work ethic of entrepreneurs as well as their financial needs, the use of the words “recognized” and “prestigious” in the context of the sentence is not related to the work ethic of the chefs.
 - F. CORRECT.** The fact that alumni of the La Cocina program have received recognition as semi-finalists for prestigious awards shows that La Cocina has helped members of its program achieve at the highest level.
 - G.** Incorrect. As paragraph 1 indicates, La Cocina focuses on helping local food entrepreneurs develop their small businesses. While some participants in the program have earned official recognition, La Cocina is not primarily focused on establishing entrepreneurs as celebrated professionals.
 - H.** Incorrect. La Cocina assists chefs with the development of their small businesses, not necessarily with their development of specific products.
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- 11.** The question asks how paragraph 4 contributes to the development of ideas about La Cocina in paragraph 1.
- A. CORRECT.** Paragraph 4 lists ways that La Cocina provides support to local food entrepreneurs. This supports the statement in paragraph 1 that La Cocina has been “helping local food entrepreneurs, many of whom are low-income immigrant women, develop their small businesses.”
 - B.** Incorrect. Paragraph 1 simply states that La Cocina tries to help local food entrepreneurs develop their businesses, but neither paragraph describes or mentions any goals that La Cocina sets for local food entrepreneurs.
 - C.** Incorrect. While paragraph 4 mentions some background information on where local food entrepreneurs were found, these details do not directly support any ideas in paragraph 1.
 - D.** Incorrect. The description of the process by which Caleb Zigas realized there was a need for La Cocina provides background for the organization, but it does not directly support any ideas in paragraph 1.

- 12.** The question asks how the quotation from Caleb Zigas in paragraph 6 conveys a central idea of the excerpt.
- E. CORRECT.** A central idea of the excerpt is that La Cocina’s entrepreneurs are a group of people cooking a diverse range of cuisines. This quotation from the executive director of La Cocina conveys this idea by emphasizing the diversity of both the cooking methods and the chefs themselves.
 - F.** Incorrect. While La Cocina’s goal is “helping local food entrepreneurs, many of whom are low-income immigrant women” (paragraph 1), the organization does not necessarily have a goal of helping people without solid cooking skills. Per the table that describes the “Qualifications for La Cocina Applicants,” the applicant’s food must be delicious, which speaks to the skill required for all participants.
 - G.** Incorrect. The quotation describes the diversity of people and cooking techniques found at La Cocina, but it does not reference “a typical scenario.” Paragraphs 9 and 10 more closely describe examples of typical La Cocina chef entrepreneurs.
 - H.** Incorrect. Applicants to La Cocina must have a food that is a “viable product,” but this quotation emphasizes the diversity of chefs and cuisines, not the requirements chefs must meet to enter the program.
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- 13.** The question asks how the description of Mariko Grady’s background in paragraph 9 contributes to a central idea in the excerpt.
- A.** Incorrect. The paragraph about Mariko Grady describes her earlier success in the field of theatrical dance and how she later started her own small cooking business. It does not describe what she was looking for when she came to La Cocina.
 - B.** Incorrect. The excerpt does not argue that La Cocina is the best option for people starting out in the food business, and the description in paragraph 9 does not support that idea.
 - C. CORRECT.** The detailed background story of Mariko Grady describes that Grady started a small food business after working as “a singer and dancer with the prestigious modern theatrical dance group she founded” and then, after that ended, created a fermented food product line. This information contributes to a central idea in the excerpt that many of the people working with La Cocina, like Grady, “needed an affordable commercial kitchen space and technical assistance in order for their businesses to be legally viable. La Cocina provided just such a space, in addition to helping them develop business plans, pull city permits and more” (paragraph 4).
 - D.** Incorrect. While Mariko Grady is now a food business owner that La Cocina has helped since 2012, Grady’s story does more to illustrate how people from non-business backgrounds can receive special support from La Cocina in order to do more with their business.

14. The question asks with which statement the author would **most likely** agree.
- E. Incorrect. The author does not suggest at any point that La Cocina would like to expand its work and mission to other cities.
 - F. Incorrect. While the author describes some of the work of talented chefs from La Cocina, at no point does the author imply that the many food choices that exist in San Francisco are because of La Cocina.
 - G. Incorrect. While the author does describe how La Cocina can help entrepreneurs find success, at no point does the author suggest that La Cocina can guarantee success.
 - H. **CORRECT.** The descriptions of the income requirements as well as the information that some of the chefs are James Beard award recipients and others have achieved success with their businesses all help show that the author admires the work of La Cocina in helping chefs who have few resources.
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15. The question asks for the piece of evidence **most** relevant to the author's claim that La Cocina provides an opportunity to become more established as a business owner.
- A. Incorrect. This evidence reveals that two former members of La Cocina have been recognized for their culinary skills and thus likely gained some business success, but it is not directly relevant to how La Cocina provides specific services and training to help prospective business owners in achieving their goals.
 - B. Incorrect. Paragraph 7 briefly describes this project, but the fact that chefs share their stories with others does not directly reveal that La Cocina provides resources to help current members become established in a business. It merely suggests that La Cocina wants to publicize its participants and its efforts.
 - C. **CORRECT.** This evidence reveals a direct connection between what La Cocina offers and the chefs' ability to operate a successful business. Having a viable business plan and obtaining the correct operating permits are necessary for the chefs to move out of the La Cocina space and into their own facilities—thus becoming more established business owners.
 - D. Incorrect. Though the list of criteria that applicants to La Cocina must meet helps ensure that the chefs have a good chance of success in the program, these criteria reveal La Cocina's selectivity and not necessarily its ability to aid chefs in becoming more established business owners.

16. The question asks which detail would be **most** important to include in a summary of the excerpt.
- E. Incorrect. The detail about the cookbook that includes members' stories is mentioned briefly but not developed. It should not be included in a summary, because it does not most help support the central idea that La Cocina helps food entrepreneurs expand their businesses.
 - F. **CORRECT.** The fact that La Cocina provides legal and technical assistance is a key factor in the success of the chefs who participate. Paragraph 4 explains that La Cocina provides technical and legal assistance by helping businesses navigate city permits and meet other challenges. This detail supports the central idea by sharing how La Cocina helps food entrepreneurs expand their businesses.
 - G. Incorrect. The specific requirements for chefs to be accepted at La Cocina are lesser details and should not be included in a summary, because they do not strongly support the central idea that La Cocina helps its members expand their food businesses.
 - H. Incorrect. Paragraph 5 indicates that vendors from La Cocina sell their food at various venues, including farmers' markets and corporate events. However, this is a detail that is not developed and should not be included in a summary since it does not support the central idea as clearly as does the detail that La Cocina provides members with legal and technical support for their businesses.
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17. The question asks how the table provides additional support for a central idea of the excerpt.
- A. Incorrect. The table describes the requirements that allow food entrepreneurs to qualify to participate in La Cocina. While the table does mention that applicants without a business plan must contact one of La Cocina's partner organizations, it does not specifically explain how La Cocina works with these partner organizations to help educate successful applicants.
 - B. Incorrect. The table describes the ways entrepreneur chefs must qualify in order to be accepted into La Cocina, not how their businesses can be successful after they leave.
 - C. Incorrect. While the table mentions community spirit, this is in reference to the type of energy La Cocina wishes to establish within its group kitchen space. The excerpt and table do not discuss providing food to different communities within or outside San Francisco as specific goals of La Cocina.
 - D. **CORRECT.** A central idea of the excerpt is that La Cocina helps local food entrepreneurs develop their businesses. The table lists requirements for people who want to participate in La Cocina. They must be willing to work hard to promote their own businesses as they use the resources that La Cocina provides.

Excerpt from *In Search of the Unknown*

- 18.** The question asks how paragraph 2 helps develop the plot.
- E.** Incorrect. As paragraph 1 indicates, writing such letters is one of the main parts of the narrator’s job (“and I was always busy, part of the day, in dictating answers to correspondents”), and he shows no indication of disliking this work. The letters are to inform people whether the zoo will accept their animals.
 - F.** Incorrect. Paragraph 2 indicates that the narrator offers his letters to the professor merely for official approval. At the start of the excerpt, the narrator is confident in his reply and does not anticipate that his response will differ from that of the professor, so he has no need to “predict what the professor would say.”
 - G. CORRECT.** The phrase “uncompromising refusals” in paragraph 2 indicates the confidence that the narrator initially has in his belief that the animals described in the letters are not of value to the society. This confidence is badly shaken as the plot unfolds, as when Professor Farrago states that “ ‘I am daring to believe that it *is* the great auk itself’ ” (paragraph 23). The narrator’s transition from an attitude of dismissive doubt to one of budding hopefulness is a major part of the plot (“But I was not shocked; on the contrary, I was conscious that the same strange hope that Professor Farrago cherished was beginning, in spite of me, to stir my pulses, too” [paragraph 34]).
 - H.** Incorrect. The narrator does not resent the professor’s review of the letters; instead, the phrase “of course” in paragraph 2 shows that he expects to submit the letters to the professor as part of his job.
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- 19.** The question asks what the phrase “a faint trace of apology” in paragraph 3 conveys about the professor.
- A.** Incorrect. The fact that the narrator had intended to leave the office for the day is not the source of the professor’s faintly apologetic manner, which is instead caused by the professor’s understanding that their conversation about the letter and the expedition is likely to cause an argument (“with a whimsical smile that suggested amusement, impatience, annoyance” [paragraph 3]). In paragraph 29, the professor asks the narrator if he can leave on an expedition that same evening, which indicates that the professor does not feel bad about taking up the narrator’s time after work.
 - B.** Incorrect. The paragraphs that follow the sentence from paragraph 3 show the professor sharing his opinions without pause, even when his opinion of the narrator is unflattering (“ ‘Like swimming squirrels, you navigate with the help of Heaven and a stiff breeze, but you never land where you hope to—do you?’ ” [paragraph 17]).
 - C.** Incorrect. The professor knows that the narrator will push back regarding the letter, but the professor is not uncomfortable challenging the narrator. Professor Farrago seems perfectly at ease and comfortable as he begins the discussion with the narrator.
 - D. CORRECT.** The professor is both amused and annoyed by the narrator’s dismissal of the possibility that great auks still exist, and the professor knows that the narrator is likely to react negatively to being sent on what the narrator considers a “fool’s errand” (paragraph 25).

20. The question asks how the exchange between the professor and the narrator in paragraphs 8–11 contributes to the development of the characters.

- E. CORRECT.** Paragraphs 8–11 help develop the characters by revealing the difference between the opinions of the narrator and the professor. The narrator believes without any doubts that Halyard, the man who wrote the letter about the auks, is either “ ‘a liar or a fool’ ” (paragraph 9), while the professor believes in the possibility that the writer of the letter could actually be telling the truth (“I said as much to Professor Farrago, but, to my surprise, he appeared to waver” [paragraph 8]).
- F.** Incorrect. In paragraph 8, the narrator reacts to the letter writer with “a contemptuous tolerance,” and he is shocked to learn that the professor actually agrees with the man (paragraph 11) whom the narrator has bluntly condemned as a liar or a fool (“ ‘In my opinion,’ said I, ‘he’s one or the other.’ ” [paragraph 10]). The exchange presents an emphatic disagreement between the narrator and the professor, and it does not show them working together in a collaborative manner.
- G.** Incorrect. Although the narrator initially distrusts the contents of the letter and shows “contemptuous tolerance for the writer” (paragraph 8), the excerpt portrays the professor as experienced and intelligent, not as one who is easily deceived.
- H.** Incorrect. While the narrator does begin to consider the professor’s perspective at the end of the excerpt, paragraphs 8–11 primarily serve to establish the difference of opinion between the narrator and the professor about the writer of the letter.

21. The question asks how the professor's observations in paragraphs 15–17 create tension in the excerpt.
- A. **CORRECT.** The professor criticizes “ ‘you young fellows’ ” (paragraph 15), suggesting that the ideas of young scientists like the narrator are unsupported (“ ‘like swimming squirrels’ ” [paragraph 17]) and inaccurate (“ ‘but you never land where you hope to—do you?’ ” [paragraph 17] and “ ‘you embark on a theory for destinations that don’t exist’ ” [paragraph 15]). The narrator then becomes “red in the face” (paragraph 18), indicating that the narrator is upset by the professor’s criticism, and asks the professor about the great auk in an attempt to defend himself.
 - B. Incorrect. While the narrator does experience a negative reaction to the professor’s words, the professor is being genuine, not sarcastic. In fact, the sarcasm comes from the narrator in paragraph 14 (“ ‘It is generally accepted,’ I replied, sarcastically, ‘that the great auk has been extinct for years. Therefore I may be pardoned for doubting that our correspondent possesses a pair of them alive’ ”), not from the professor.
 - C. Incorrect. The professor’s observations cause the narrator to blush with embarrassment (“rather red in the face” [paragraph 18]), but the narrator understands the point that the professor is making about the narrator’s acceptance of the idea that great auks do not exist. The narrator recognizes that the professor is criticizing his youthful ideas, not his opinion.
 - D. Incorrect. The professor shows amusement with the narrator’s perspective. The narrator is embarrassed and upset by the professor’s words, but the narrator does not display frustration with the professor’s lack of interest in a commonly held view of the existence of a certain species of bird.

22. The question asks how the interaction between the narrator and the professor in paragraphs 26–28 contributes to the development of the theme.
- E. Incorrect. Paragraphs 26–28 do not show the narrator arguing against making the expedition. He instead argues that it is unnecessary for the professor to pay to send extra men on the expedition. The narrator points out that he can ask for assistance if he does, in fact, find great auks (“ ‘None,’ I replied, bluntly; ‘it’s a useless expense, unless there is something to bring back. If there is I’ll wire you, you may be sure’ ” [paragraph 28]).
 - F. Incorrect. When the professor criticizes the narrator’s blind acceptance of the theory about the existence of the auks, the narrator is frustrated and embarrassed. This frustration does not stem from his inability to make decisions for the zoological society.
 - G. Incorrect. The professor states that “ ‘what I want you to do is to get those birds here safely’ ” (paragraph 27), which indicates that his main priority is the birds’ safety rather than acquiring specimens regardless of the consequences (i.e., at any cost).
 - H. **CORRECT.** Paragraph 26 describes the professor and the narrator making practical plans for the expedition (“we made out a list of articles necessary for me and itemized the expenses I might incur”), indicating the narrator’s acceptance of his assignment while also revealing that he does not anticipate a “successful termination to the expedition.” Paragraph 28 further describes the personal objections of the narrator, who believes that adding extra men to the expedition is pointless (“ ‘a useless expense’ ”), since he does not expect to find any great auks to bring back.
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23. The question asks which sentence from the excerpt **best** explains why the professor is eager to send the narrator on an expedition.
- A. Incorrect. In the sentence from paragraph 25, the narrator suspects the professor is losing his ability to reason because his request (to secure the great auk for the society) seems impossible. The professor is excited about the discovery, but the narrator doubts whether the discovery is real. The sentence does not explain why the professor is excited, however.
 - B. Incorrect. Paragraph 26 shows the professor and the narrator planning the logistics of the trip, but it does not explain why the professor is eager to send the narrator on the expedition.
 - C. Incorrect. Although the sentence from paragraph 27 expresses the professor’s interest in having the narrator bring the birds back safely, it does not show the underlying reason why the safety of the birds is so crucial, which is that the great auk is extremely rare.
 - D. **CORRECT.** The sentence from paragraph 33 reveals the professor’s excitement to get “ ‘the rarest of living creatures,’ ” the great auk. In paragraph 14, the narrator states that “it is generally accepted . . . that the great auk has been extinct for years,” which would make a living auk incredibly rare and explains the professor’s eagerness for the narrator to go on the expedition.

24. The question asks how paragraph 34 helps develop the plot of the excerpt.
- E. **CORRECT.** Despite his initial disbelief, the narrator admits in paragraph 34 that he is starting to feel the “same strange hope” the professor feels, which is to find the great auks (paragraph 33).
 - F. Incorrect. While the narrator does make an effort in paragraphs 11–22 to understand the professor’s thinking, paragraph 34 reveals that the narrator has been affected by the professor’s “strange hope” for the auks and is beginning to share this hope “in spite of” himself.
 - G. Incorrect. The narrator describes a feeling of hope in paragraph 34 that would not be present if he had simply been overruled by the professor and did not share any of the professor’s belief in the possibility that the auks exist. In addition, it was established before paragraph 34 that the narrator was willing to be overruled (“I drew a chair up beside his desk—there was nothing to do but to obey, and this fool’s errand was none of my conceiving” [paragraph 25]).
 - H. Incorrect. The narrator does not express a sense of urgency in paragraph 34 to complete the expedition. Instead, he expresses hope that the great auks might really exist.
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25. The question asks which sentence **best** demonstrates the professional relationship between the narrator and the professor.
- A. Incorrect. Although the professor’s handing of the paper to the narrator indicates that they are beginning to discuss the letter about the great auk, the sentence from paragraph 4 does not convey the relationship between a subordinate employee (the narrator) and a superior (the professor).
 - B. Incorrect. The sentence from paragraph 24 presents the narrator’s immediate internal reaction to the professor’s words. The sentence emphasizes that the professor’s belief in the great auk’s existence is so outrageous that the narrator initially thinks the professor is starting to lose touch with reality. This is a momentary reaction to the professor’s words, not a demonstration of the professional relationship between the two.
 - C. **CORRECT.** The sentence from paragraph 25 reveals that while the narrator disagrees with the professor (“this fool’s errand was none of my conceiving”), he obeys because he works for the professor (“there was nothing to do but to obey”).
 - D. Incorrect. The professor’s good-humored offer of assistance in the sentence from paragraph 29 does not best demonstrate the underlying employer-employee relationship between the professor and the narrator. The narrator has to go on the expedition because the professor, his boss, told him to.

- 26.** The question asks how the author develops the contrast between the narrator's point of view and the professor's point of view.
- E.** Incorrect. The excerpt does not describe the narrator's thoughts about how age and experience influence the professor's reasoning in enough detail to fully contrast them against the thoughts about the narrator that the professor expresses in paragraphs 15–17. The narrator's idea that the professor might be "on the verge of dotage" (paragraph 24) is meant in a humorous way.
- F. CORRECT.** The primary conflict of the excerpt revolves around the narrator's disagreement with the professor about whether the letter about the great auks could be true. As the two men converse, their contrasting attitudes toward the letter become clear: the narrator dismisses the possibility of great auks out of hand (" 'of course the man is mistaken' " [paragraph 5]; " 'here is a man . . . who wants you to send somebody to take charge of a bird that doesn't exist!' " [paragraph 12]), while the professor calmly admits that although " 'nine hundred and ninety-nine men in a thousand would throw that letter aside and condemn the writer' " (paragraph 9), he himself believes that the writer could be telling the truth (" 'How do you know,' asked Professor Farrago, 'that the bird in question does not exist?' " [paragraph 13]).
- G.** Incorrect. The professor explains why he disagrees with the narrator (paragraphs 19–21), but he does not make persistent efforts to convince the narrator to change his mind about the letter. Instead he states that the narrator will go on an expedition to retrieve " 'whatever it is that our correspondent has' " (paragraph 23), thereby requiring the narrator to go collect the great auks whether the narrator believes in them or not.
- H.** Incorrect. The point of the dialogue is not to explain the subordinate-supervisor relationship between the narrator and the professor but rather to contrast what each character believes about the contents of the letter.

Excerpt from "How We Made the First Flight"

- 27.** 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).
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- 28.** The question asks how the sentence from paragraph 4 contributes to the development of ideas in the excerpt.
- E.** Incorrect. The sentence from paragraph 4 does not refer to the challenge of the winter conditions during the flight attempt.
 - F.** 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.
 - G. 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.
 - H.** 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.

29. 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.
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30. The question asks how the details in paragraph 5 about the uneven nature of the flight convey a central idea of the excerpt.
- E. 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.
 - F. 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.
 - G. **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.
 - H. 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.

- 31.** 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.
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- 32.** The question asks how the sentence contributes to paragraph 5.
- E.** Incorrect. The sentence focuses on the “sudden dart” of the plane, which ended the flight. According to the paragraph, this sudden dart was caused by the difficulty of controlling the front rudder “on account of its being balanced too near the center.” The sentence does not detail the need for the pilot to have quick reflexes.
 - F. CORRECT.** The sentence presents the idea that the difficulty of operating the machine brought the flight to a quicker end than it might otherwise have had. According to paragraph 5, “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.” These sentences show that one such “dart” shortened the flight.
 - G.** Incorrect. Although it describes the abrupt end of the flight, the sentence does not describe the shift in wind speed. The word “dart” refers instead to a change in the height, or altitude, of the machine.
 - H.** Incorrect. Although it includes the detail that the flight ended “a little over 120 feet from the point at which it rose into the air,” the sentence does not provide an overview of the entire flight’s progression. The sentence from paragraph 5 omits the flight’s takeoff and only describes its rather abrupt ending.

- 33.** The question asks what idea is **most** clearly conveyed by the words “only,” “nevertheless,” and “finally” in the sentence from paragraph 5.
- A.** Incorrect. Although the duration of the flight was short and a successful flight had taken a long time to achieve, the words in the sentence from paragraph 5 are used to emphasize the remarkable nature of the flight, not the length of time it had taken the Wright brothers to be successful.
 - B.** Incorrect. While it is easy to imagine that the Wright brothers had hope for longer flights, the words in the sentence from paragraph 5 do not relate directly to this sentiment; instead, they describe the groundbreaking success of their flight.
 - C.** Incorrect. While the capabilities of the aircraft were demonstrated during the flight, the words in the sentence from paragraph 5 apply not only to the machine but also to the efforts of the people who designed it, built it, and actually made it fly.
 - D. CORRECT.** The words in the sentence from paragraph 5 suggest that, though the first flight may not have lasted very long or taken the pilot very far, the Wright brothers accomplished something no one had been able to do before: successfully pilot an airplane in flight.
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- 34.** 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.
- E.** 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.
 - F. 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.
 - G.** 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.
 - H.** 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.

- 35.** 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]).

Cross-Purposes

- 36.** The question asks how the similarity in the construction of lines 1 and 8 contributes to the meaning of the poem.
- E. CORRECT.** In line 1, the first speaker asserts, “What I am is *built*: concrete and steel,” and in line 8 the second speaker states, “*What I am is motion. I am water, and I am older.*” The similarity in the construction of these lines contributes to the meaning of the poem by establishing each speaker’s defining feature.
 - F.** Incorrect. The focus of the lines is defining the speakers’ individuality, not how one speaker resolves a problem created by the other.
 - G.** Incorrect. The structure is not stating in line 1 that it is limited because it was built to stand in place; on the contrary, the structure is stating that this sense of purpose and permanence is its strength.
 - H.** Incorrect. Although in these lines the first speaker asserts “I am . . . *built*: concrete and steel” (line 1) and the second speaker asserts “*I am . . . motion*” (line 8), the construction of these lines does not contrast the stability and instability of the speakers. Rather, each speaker highlights its own features.
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- 37.** The question asks how lines 2–4 and 12–14 contribute to the development of a central idea in the poem.
- A.** Incorrect. Although the phrases “remain[ing] at the apex of the leap” in line 3 and “*I catch everything*” in line 13 suggest the idea of endurance and control, the lines do not establish that both the structure and the water have endurance and control, because the water also states, “*I pool / and flow wherever gravity takes me*” (lines 10–11).
 - B. CORRECT.** The lines “I am what every athlete / wants” (lines 2–3) and “*I am the blood flowing in the runner’s chest*” (line 12) communicate that each speaker is an object of admiration and a powerful force.
 - C.** Incorrect. The lines describe opposing characteristics: the structure’s description conveys stillness—remaining “up in the air” (line 4)—while the water’s description conveys movement—“*flowing in the runner’s chest*” (line 12).
 - D.** Incorrect. The first speaker states, “I am what every athlete / wants” in lines 2–3, and the second speaker states, “*I am the blood flowing in the runner’s chest*” in line 12. The similarity of these metaphors may seem to suggest interrelationship, but the structures do not reveal surprise that they are interrelated.

- 38.** The question asks which idea the use of the words “siblings” and “my sisters and brothers” in lines 31–32 conveys in the poem.
- E.** Incorrect. Although in line 29 the structure refers to itself as “being rebuilt” or taking on new forms, this idea is expressed to reinforce the idea that the structure’s presence is eternal (“a friend of time,” line 30). The use of the words “siblings” and “my sisters and brothers” in lines 31–32 does suggest that a variety of structures exist, but no comparison is drawn to suggest that the varieties of structures are more diverse than the forms of water.
 - F.** Incorrect. While the use of the words “siblings” and “my sisters and brothers” in lines 31–32 conveys the idea that structures can be replicated by being built, it does not convey the idea that the number of human-made structures is rapidly increasing.
 - G.** Incorrect. Although in line 33 the structure states, “We stitch across the rip you make,” suggesting that water passes under structures, the use of the words “siblings” and “my sisters and brothers” in lines 31–32 does not convey the idea that the structures that the water passes under are similar-looking.
 - H. CORRECT.** The use of the words “siblings” and “my sisters and brothers” in lines 31–32 conveys the idea that the structure is powerful because it is one of many and because these structures “stitch across the rip” (line 33) that water makes.
-

- 39.** The question asks what the comparison in lines 33–35 shows about the structure.
- A.** Incorrect. Although the structure states in line 33 that structures like itself “stitch across the rip” water makes, which may seem to suggest that the structures restore beauty to a ruined landscape, the language in the lines is used only to suggest that the structure is a tool used to unify the physical landscapes that humans inhabit.
 - B.** Incorrect. While the water states that it enables “*empires to rise*” (line 25), implying that it is needed for society to thrive, the structure never expresses the idea that it serves the purpose of bringing people together through its existence.
 - C.** Incorrect. Although the phrases “We stitch across” (line 33) and “We bind you up” (line 35) suggest the existence of boundaries, the comparisons made in lines 33–35 do not help show that the structure provides clear boundaries for natural environments.
 - D. CORRECT.** The speaker states, “We are steel thread to the human needle” (line 34), which illustrates that the structure and others like it are tools used by humans to “bind . . . up” (line 35) or overcome “the rip” (line 33) that the water creates in the earth.

40. The question asks how the last stanza conveys a central idea in the poem.
- E. Incorrect. Although in the last stanza the water states, *"my vapors cling. / They bring out your softness, your rust,"* the water does not depend on the structure; instead, the water destroys it over time. The structure depends on the power of water for its ability to fulfill its function.
 - F. Incorrect. The last stanza refers to the opposing speaker (the structure) and not to any other structure.
 - G. Incorrect. While in the last two lines of the poem the water states, *"Because I am, / above all else, patient. I will wait for you,"* implying that the water can withstand the ravages of time, the phrase *"your softness, your rust"* (line 38) indicates that the structure cannot. Therefore, the last stanza does not reveal that the passage of time will render both the structure and the water obsolete.
 - H. **CORRECT.** In lines 36–38, the water describes how its *"vapors cling"* to the structure, bringing out the structure's *"softness"* and *"rust,"* destroying the structure over time. Also, in line 42, the water says it is *"patient"* and *"will wait for"* the structure, suggesting that the speaker will be around long after the structure is gone.
-

41. The question asks how the implication in lines 41–42 is supported by other lines in the poem.
- A. **CORRECT.** The words *"patient"* and *"wait"* in line 42 suggest that the water has the ability to outlast the structure, because the water doesn't weaken as it ages.
 - B. Incorrect. Although the statement *"No human / built me"* in lines 9–10 suggests that the speaker existed prior to humans, which may seem to support the idea of endurance in line 42, this answer is incorrect because in lines 41–42 the speaker is referring to outlasting the structure, not humans.
 - C. Incorrect. While the statement *"It all washes down through me"* in line 14 suggests that everything in the natural world is interrelated, the water sets itself apart from the human-made structure because it asserts that it will outlast the other structure and is *"above all else, patient"* (line 42).
 - D. Incorrect. In line 26, the water's knowledge does not make its ability to wait any stronger—rather, its seemingly unending lifespan does.

42. The question asks how the poet develops the two points of view.
- E. Incorrect. While the poem relates how the water views the structure as “*an artifact / slowly decaying*” (lines 23–24) and the structure refers to itself as “a friend of time” (line 30), the poet does not give an account of a discussion about the future of human civilization.
 - F. Incorrect. While the speakers do discuss their impact on the environment, there is no narrator speaking for them.
 - G. Incorrect. Although the structure states it is made of “concrete and steel” (line 1) and is a “steel thread to the human needle” (line 34), only the water claims to possess power over nature, stating that “*all washes down through me*” (line 14) and “*what I am is power*” (line 22).
 - H. **CORRECT.** The poet develops the speakers’ points of view by personifying (giving human characteristics to something nonhuman such as an object or animal) the structure and the water, allowing them to debate by criticizing each other and declaring their own importance.
-

43. The question asks how the form of the poem contributes to its meaning.
- A. Incorrect. The equal number of lines in each stanza may give the two speakers an equal voice, but that balance does not contribute to the meaning of the poem: the debate over their importance. The poem does not suggest that they are equals, just that they are opposing forces.
 - B. Incorrect. Italics are used mainly to designate the voice of the second speaker (the water). Although the structure and the water portray themselves as rivals in the poem, the use of italics does not indicate an increase in tension between the two but rather shows which is speaking.
 - C. **CORRECT.** The alternating positions of the stanzas create the appearance of a conversation in which the speakers share their opposing points of view.
 - D. Incorrect. The lack of rhyme scheme or meter is intended to create a conversational tone rather than reflect the changes the water causes or experiences.

Excerpt from “Scribe Like an Egyptian”

- 44.** The question asks for a sentence from the excerpt that supports the idea that different levels of education were available to scribes.
- E.** Incorrect. The sentence from paragraph 1 provides evidence that Egyptian scribes used two different forms of writing, but it does not address the topic of education or the different levels of education that were available to scribes.
 - F.** Incorrect. The advantages and purposes of hieratic script are described in this sentence from paragraph 2, but this explanation of the advantages and purposes does not suggest that there were different levels of education for scribes.
 - G.** Incorrect. The fact that scribes could learn their trade through apprenticeships as discussed in this sentence from paragraph 4 does provide evidence that another method of learning to be a scribe was possible, but this process was for a limited entry into becoming a scribe, not the continued education scribes would need in order to work in specific areas.
 - H. CORRECT.** By explaining that certain professions required additional years of training, this sentence from paragraph 6 supports the idea that different levels of education existed for scribes.
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- 45.** The question asks for an explanation of the author’s purpose for including a sentence in paragraph 2 that describes the two types of hieroglyphs and the main uses of this particular writing system.
- A.** Incorrect. The sentence explains that hieroglyphs were used for formal inscriptions, but it does not suggest that these inscriptions were limited to royal and religious contexts.
 - B.** Incorrect. The sentence describes the two basic types of hieroglyphs, ideograms and phonograms, but it does not address how experts interpret the ancient writing system. A sentence earlier in the paragraph explains that the hieroglyphs were deciphered by Champollion, but it does not explain how he deciphered them.
 - C.** Incorrect. Although the sentence explains that the hieroglyphs were typically used for formal inscriptions, it does not provide an explanation of the significance or importance of hieroglyphs in the Egyptian language.
 - D. CORRECT.** The sentence explains that hieroglyphs included both phonograms and ideograms that were used in formal inscriptions and funeral papyri; therefore, this sentence achieves the purpose of describing the basic features of hieroglyphs as conveying either words and ideas or sounds, in addition to explaining the common uses for the writing system.

46. The question asks for the **best** summary of the process that schools used to train scribes.
- E. Incorrect. This summary incorrectly explains that scribes were expected to learn 450 hieratic signs instead of 450 hieroglyphs along with their hieratic versions as explained in paragraph 6. In paragraph 5, the author explains that scribes copied texts as part of the process of learning the scripts rather than as practice after the signs had already been memorized.
 - F. **CORRECT.** Paragraph 5 explains that students began by learning hieratic script and studied for about five or six years by using “exemplar documents and extracts from popular texts to copy, to practice their hieratic handwriting.” The paragraph also explains that during this time, they learned only the basics of hieroglyphic script.
 - G. Incorrect. Although paragraph 5 does explain that the scribes spent five or six years learning hieratic script, it does not suggest that hieroglyphs were learned only during apprenticeships.
 - H. Incorrect. This summary correctly explains that scribes learned two types of scripts, but the second sentence of the summary is incorrect. In paragraph 5, the author explains that the students copied from exemplar texts, but the author clearly states that the purpose of this copy work was “to practice their hieratic handwriting” and does not suggest that the copy work was used to practice hieroglyphs. Paragraph 6 explains that scribes could make lists and write letters as part of their professional skills but does not suggest that copy work was used to help them learn these tasks.
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47. The question asks for the claim that is **best** supported by the details in paragraphs 3 and 4.
- A. Incorrect. While paragraph 4 does explain that boys from poorer families had more challenges in receiving an education, the paragraph also provides examples of obtaining a patron or getting an apprenticeship as ways that these aspiring scribes could attain an education. Furthermore, the details in paragraph 3 do not provide any support for the claim that “common citizens” had difficulty getting an education because that paragraph focuses on the example of one person who was able to become a king as a result of his background as a scribe.
 - B. **CORRECT.** In paragraph 3, the author provides an example of a person who used his skills as a scribe to rise through the ranks of society by describing the achievements of Horemheb to support the idea that “no matter how humble his origins, an educated Egyptian could achieve almost anything.” The author continues in paragraph 4 to explain that with the proper support, some young Egyptians could become educated, thereby opening more opportunities for themselves.
 - C. Incorrect. Paragraph 4 explains that schools were supported by the government and religious institutions, but it also explains that apprenticeships were a method of learning the craft of the scribe. As the paragraph indicates, boys could also be helped in their education by support from “a wealthier relative or patron.”
 - D. Incorrect. In paragraph 4, the author details the kinds of sacrifices that were necessary for some poorer families to ensure education for their sons. However, as paragraph 3 reveals in its example of Horemheb, who was born of middle-ranking parents, the sacrifice of time and money was not required for all families.

- 48.** The question asks why hieratic script was especially valuable in a bureaucratic government.
- E. CORRECT.** Hieratic script is described in paragraph 1 as being simpler for the “multitude of everyday documents” generated by the government and as “quicker to write and more economical of space” in paragraph 2. The logical conclusion based on these details is that hieratic script was more efficient for the large amounts of documentation produced by the government.
 - F.** Incorrect. In paragraph 4, the author explains that “education was not available to all,” suggesting that only people who were educated could read and write. The excerpt as a whole does not provide sufficient information to indicate what portion of the general public would be able to comprehend material written in hieratic script.
 - G.** Incorrect. The idea that becoming a scribe could lead to taking different positions in society is addressed in paragraphs 3, 4, and 6. However, the use of hieratic script in the fields of medicine, law, or religion does not necessarily explain the value of the script for the bureaucratic government referenced in the question.
 - H.** Incorrect. Although different professions such as doctors and lawyers used hieratic script, the author uses these professions as examples of different job opportunities for scribes in paragraph 6. There is no discussion in the excerpt about different professions communicating with each other, and these professions were not necessarily part of the bureaucratic government.
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- 49.** The question asks how the diagram of ancient Egyptian class structure supports the topic of the excerpt.
- A. CORRECT.** The focus of the excerpt is the opportunities available to scribes in different professions and how people became scribes and therefore improved their position. By illustrating the position of the scribes in the class structure of ancient Egypt, the diagram supports the idea that scribes were valuable members of society.
 - B.** Incorrect. The professions of the different social classes are shown in the diagram, but it does not address specific tasks. Furthermore, the main topic of the excerpt is the role of the scribes in society rather than the tasks performed by the different social classes.
 - C.** Incorrect. While the diagram does show the position of scribes in the social hierarchy, it does not provide an illustration of movement between the different classes or rankings, so the diagram does not support the idea that scribes were able to improve their social standing.
 - D.** Incorrect. The diagram shows the class structure as hierarchical and can support readers’ efforts to compare the different social positions. However, the role of scribes in society, rather than a general comparison of different classes, is the main focus of the excerpt.

50. The question asks for a statement with which the author would **most** strongly agree.
- E. Incorrect. The author only addresses boys who entered the profession of scribes. While the author does address the role of the family in supporting a boy's education or securing an apprenticeship, the author does not provide any discussion to support the idea that boys were only encouraged to follow the professions of their male relatives.
 - F. Incorrect. The author explains that communication using hieroglyphs was not widely practiced in everyday correspondence and that hieratic script was the more popular form of writing. While being able to read and use hieroglyphs would have been helpful, it was not common for citizens to use this formal form of communication. In addition, scribes were trained to learn hieroglyphs and hieratic script as part of their education, so prior ability to read or compose hieroglyphs was not a requirement.
 - G. **CORRECT.** As described in paragraph 2, hieratic script was more efficient and economical than hieroglyphs. Because this script was used for "everyday purposes," it was the more practical of the scripts as hieroglyphs were reserved for "formal inscriptions."
 - H. Incorrect. In paragraph 6, the author indicates that "any half-competent scribe" could become employed in making and updating lists. While the paragraph later indicates that scribes would need to study several more years to be employed in a wider range of professions, there is no indication that employment as a scribe would be unavailable to a boy who studied for only a few years.

Excerpt from “Niagara Falls”

- 51.** The question asks for a specific detail from paragraph 2 that conveys the central idea that the Falls communicate a feeling of “unintelligible disaster” (paragraph 1).
- A.** Incorrect. Although the author describes the water as “richly diaphanous as a precious stone” and states that it “glow[s] from within with a deep, inexplicable light” in paragraph 2, the comparison does not convey the central idea that the Falls communicate a feeling of “unintelligible disaster” (paragraph 1); rather, the description communicates a feeling of awe.
 - B.** Incorrect. The details in paragraph 2 about the flow of colors in the water are described as an “ever-altering wonder,” which conveys a sense of beauty, not a sense of disaster.
 - C.** Incorrect. The rainbows in paragraph 2 are described as “vivid” and accompanying someone “courteously” while he or she walks, which contributes to the idea that the appearance and disappearance of the rainbows are a pleasant experience and not disastrous.
 - D. CORRECT.** The sound of falling is described in paragraph 2 as “a noise of unspecified ruin,” so this option is correct because it best connects with the idea of “unintelligible disaster” mentioned in paragraph 1.
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- 52.** The question asks for the effect of the comparison being made in the sentence in paragraph 2.
- E.** Incorrect. Neither “lacework and woven foam” (paragraph 2) nor the quality of being extremely level are related to timelessness.
 - F.** Incorrect. Although curtains are sometimes used to create privacy, the purpose of comparing the Falls to a “long curtain of lacework and woven foam” (paragraph 2) is not to convey the secretive nature of the Falls but rather to illustrate their beauty and uniformity.
 - G. CORRECT.** The word “lacework” in the sentence from paragraph 2 suggests an elegant piece of craftsmanship, and the “one long curtain” and “extraordinarily level” aspects of the Falls mean that the Falls are uniform or consistent.
 - H.** Incorrect. Although the author states in paragraph 1 that the Falls inspire a “feeling of colossal power,” in paragraph 2 the author describes the American Falls as “delicate and fragile.” Therefore, the purpose of the comparison in paragraph 2 is not to communicate the intense strength of the Falls.

53. The question asks for the statement that **best** describes how the sentence from paragraph 3 fits into the overall structure of the excerpt.
- A. Incorrect. Although in paragraph 2 the author describes the beauty of the Falls as both an “ever-altering wonder” and an “assault of wind and spray,” in paragraph 3 the author does not signal a change from the positive aspects of the Falls to the negative aspects. Instead, the author provides a description of the river and the rapids below the Falls.
 - B. Incorrect. While the author compares the water of the river to “a slipping floor of marble, green with veins of dirty white, made by the scum that was foam” in paragraph 3, the statement that the lower rapids are “more terrifying than the Falls, because less intelligible” does not indicate a progression from the literal description of the water to a discussion of timeless truths. Instead, the author is merely describing all aspects of the rapids, both literally and figuratively.
 - C. **CORRECT.** The first sentence of paragraph 3 moves the description “beyond the foot of the Falls” to “the river” and then the paragraph begins to describe this location in further detail (“a dull sage green,” “hurries more swiftly,” “smooth and ominous,” “waters boil and eddy”) before reinforcing this shift by confirming it again with the words “These are the lower rapids, a sight more terrifying than the Falls.”
 - D. Incorrect. Although the author states that the waters of the rapids “boil and eddy” and suggests that the rapids are “less intelligible,” these statements do not introduce a contrast between the obvious and the hidden features of the rapids. They merely describe a feature and the sight of the lower rapids.
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54. The question asks for the sentence from the excerpt that **best** supports the idea that the essence of the Falls lies in their emotional impact.
- E. **CORRECT.** The first sentence in the excerpt establishes that “the real secret of the beauty and terror of the Falls” lies in “the feeling of colossal power and of unintelligible disaster.” This option states that “if that [feeling] were taken away, . . . the heart would be gone,” meaning that the emotional impact of the Falls is essential.
 - F. Incorrect. While “delicate” and “fragile” are words that can be connected with certain kinds of emotions, in the sentence in the option they are connected with physical beauty.
 - G. Incorrect. While the sentence in the option describes the power of the Falls to engage one in thought, it does not best support the idea that the essence of the Falls lies in their emotional impact.
 - H. Incorrect. The sentence in the option describes thoughts one may have while watching the Falls and is not focused on the Falls’ emotional impact.

55. The question asks how the sentence from paragraph 4 contributes to the development of ideas in the excerpt.
- A. Incorrect. The sentence focuses on the idea that the Falls are a great place for contemplation but does not clarify that these thoughts are life-changing.
 - B. Incorrect. The sentence does not describe focused thoughts of a personal nature; the grand, sweeping nature of the Falls inspires thoughts of the same caliber as “the passage of empires.”
 - C. Incorrect. The sentence is about how the Falls inspire great thoughts but is not about how difficult it is to grasp the grandeur of the Falls.
 - D. **CORRECT.** The description of “cloudy thoughts of destiny and the passage of empires” in the sentence refers to the types of thoughts a person might have while observing the Falls.
-
56. The question asks how paragraph 4 of the excerpt **mainly** illustrates the idea that human life and history ultimately end in the same way.
- E. Incorrect. In paragraph 4, the author compares the rainbows visible in the Falls to “the arts and beauty,” which share the rainbows’ dependence on “the stream of life”—that is, they are “caused by it, thrown upon its spray, but unable to stay or direct or affect it, and ceasing when it ceased.” This comparison does not illustrate the idea that human life and history ultimately end in the same way but rather that art and beauty, like human beings, are unable to “stay or direct or affect” their ultimate fate.
 - F. **CORRECT.** The author concludes in paragraph 4 that the movement of the Falls can be compared to people and history when he writes, “both men and nations are hurried onwards to their ruin or ending as inevitably as this dark flood.” This comparison illustrates the idea that human life and history ultimately end in the same way.
 - G. Incorrect. Although in paragraph 4 the author states that “One is drawn back, strangely, to a contemplation of the Falls” and provides an account of “a friend, who said that the rainbows over the Falls were like the arts and beauty and goodness, with regard to the stream of life,” the author does not provide details to show that every observer’s experience with the Falls is different. Rather, the author explains that “the Victorian lies very close below the surface in every man” (paragraph 4).
 - H. Incorrect. While the setting at night does provide a place of contemplation, the author notes the “dark flood” as the overall illustration of the human experience.

57. The question asks for the statement the author would **most likely** agree with.
- A. **CORRECT.** In paragraph 4, the author states that the Falls make a person feel “with an almost insupportable and yet comforting certitude, that both men and nations are hurried onwards to their ruin or ending.” Later, the final sentence says, “With some such thoughts does the platitudinous heart win from the confusion and thunder of a Niagara peace.”
 - B. Incorrect. Although in paragraph 4 the author states that “one can sit and let great cloudy thoughts of destiny and the passage of empires drift through the mind; for such dreams are at home by Niagara” and that “a man’s life is of many flashing moments,” the author does not suggest that one will always have regrets no matter where one’s path goes in life.
 - C. Incorrect. While the excerpt discusses fear when experiencing the power of the Falls, the excerpt does not support the idea that one should defy fear.
 - D. Incorrect. The excerpt states in paragraph 4 that art is “unable to stay.”

Form B

Sample Test – Mathematics Explanations of Correct Answers

- 58. (250)** Let x represent the number of two-door cars that will be sold next month. Use the information in the table to set up a proportion:

$$\frac{x}{1,000} = \frac{2,250}{9,000}$$
$$x = \frac{(2,250)(1,000)}{9,000} = \frac{2,250}{9} = 250$$

- 59. (13.5)** Let w represent the width of the actual garden. Set up a proportion based on the information given:

$$\frac{w}{9} = \frac{3}{2}$$
$$w = \frac{3(9)}{2} = \frac{27}{2} = 13.5$$

- 60. (12)** The greatest possible number of children in the class is the greatest common factor of 72, 60, and 84. Write the prime factorization of each number:

$$72 = 2^3 \times 3^2$$
$$60 = 2^2 \times 3 \times 5$$
$$84 = 2^2 \times 3 \times 7$$

Then, find the factors that all three have in common, which is $2^2 \times 3 = 12$.

- 61. (8)** Calculate simple interest (y) by multiplying the initial deposit (p) by the interest rate (r) by the number of years (t):

$$prt = y$$
$$900(0.05)t = 360$$
$$45t = 360$$
$$t = 8$$

62. (7)

$$\frac{(21)(14)x}{(49)(48)} = 0.875$$

$$\left(\frac{21}{49}\right)\left(\frac{14}{48}\right)x = 0.875$$

$$\left(\frac{3}{7}\right)\left(\frac{7}{24}\right)x = 0.875$$

$$\left(\frac{1}{8}\right)x = 0.875$$

$$x = (0.875)(8) = 7$$

63. (C) The first step is to rewrite the problem replacing all subtraction with adding the opposite:

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

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

Then, rewrite all the fractions using a common denominator of 12, which is the least common multiple of the fractions' denominators, 4, 3, and 2:

$$3\frac{3}{12} + \left(-1\frac{8}{12}\right) + 4\frac{6}{12}$$

Next, combine the positive numbers and, finally, add the negative number to the sum by subtracting the number with the least absolute value from the number with the greatest absolute value and using the sign of the number with the greatest absolute value:

$$7\frac{9}{12} + \left(-1\frac{8}{12}\right)$$

$$6\frac{1}{12}$$

- 64. (G)** Let x represent the distance, in kilometers, between Fran's house and Bryant State Park. Set up a proportion to solve for x :

$$\frac{x}{4.5} = \frac{3}{2} \quad \text{Cross multiply.}$$

$$2x = 3(4.5) \quad \text{Apply the multiplicative inverse property; divide both sides of the equation by 2.}$$

$$x = \frac{13.5}{2} = 6\frac{3}{4} \approx 7$$

- 65. (A)**

$$2x + 4 = y \quad \text{Apply the additive inverse property; subtract 4 from both sides of the equation.}$$

$$2x = y - 4 \quad \text{Apply the multiplicative inverse property; divide both sides of the equation by 2.}$$

$$x = \frac{y - 4}{2}$$

- 66. (E)** First, subtract Luis's time from Bryan's time: $11.74 - 11.69 = 0.05$.

Then, convert to a fraction:

$$0.05 = \frac{5}{100} = \frac{1}{20}$$

- 67. (B)** Use the information in the bullet points to reason which box plot could represent the data set of test scores.

Since none of the students scored 100, the maximum value on the box plot must be less than 100.

If 75% of the students scored less than 82, then 25% scored 82 points or more.

Since the third quartile (Q3) indicates $\frac{3}{4}$ (75%) of the data is to the left and $\frac{1}{4}$ (25%) of the data is to the right, it is reasonable that Q3 would be at or about 82.

Given that the lowest score in the class was 54, the minimum point on the box plot must be 54.

The box plot graph in option B is the only one that meets all three criteria.

- 68. (F)**

$$n = 0.13 + \frac{207}{100} =$$

$$\frac{13}{100} + \frac{207}{100} =$$

$$\frac{220}{100} = \frac{11}{5}$$

- 69. (A)** Let x represent the length of one of the 10 remaining sides:

$$25 + 35 + 10x = 100$$

$$60 + 10x = 100$$

$$10x = 40$$

$$x = 4$$

- 70. (E)** After Shio-Chen draws a yellow card and a green card, the remaining cards are 3 green, 6 yellow, and 6 red. The probability of drawing a green card from that group is:

$$\frac{3}{3 + 6 + 6} = \frac{3}{15} = \frac{1}{5}$$

- 71. (D)** Let n represent a number in the sequence, and let x represent the number that comes just before n :

$$n = 3 + 2x$$

$$93 = 3 + 2x$$

$$90 = 2x$$

$$45 = x$$

- 72. (H)** Let d represent the distance between the two houses, in miles. Write a proportion to solve for d :

$$\frac{d}{5.4} = \frac{3}{2}$$

$$d = \frac{3(5.4)}{2} = \frac{16.2}{2} = 8.1$$

- 73. (B)** The total number of degrees in a circle is 360. The measure of the angle between adjacent spokes is $\frac{360}{15} = 24^\circ$.

- 74. (G)** First, find the value of m for each value of t :

$$\text{For } t = 1:$$

$$1m = 72$$

$$m = 72$$

$$\text{For } t = 2:$$

$$2m = 72$$

$$m = 36$$

$$\text{For } t = 3:$$

$$3m = 72$$

$$m = 24$$

Then, add those three values together:

$$72 + 36 + 24 = 132$$

-
- 75. (C)** First, find the area of the rectangle, in square feet:

$$16 \times 8 = 128$$

Then, find the area of the triangle:

$$\frac{1}{2} \times 4 \times 16 = 32$$

To find the area of the shaded region, subtract the area of the triangle from the area of the rectangle:

$$128 - 32 = 96 \text{ sq ft}$$

- 76. (E)** Let x represent the number of gallons of orange juice. Since the shipment contains equal amounts of the two types of juice, x also represents the number of gallons of grapefruit juice. Write an equation to solve for x :

$$\begin{aligned} 2x + 3x &= 250 \\ 5x &= 250 \\ x &= 50 \end{aligned}$$

- 77. (C)** Let n represent the least of the five numbers. Then the next four consecutive numbers are $(n + 1)$, $(n + 2)$, $(n + 3)$, $(n + 4)$. Write an equation to solve for n :

$$n + (n + 1) + (n + 2) + (n + 3) + (n + 4) = 110$$

$$5n + 10 = 110$$

$$5n = 100$$

$$n = 20$$

- 78. (H)** Since m and n are positive, the value of mn is also positive. Of the five options given:

$-mn$ is negative.

$(-m)(-n)$ is positive.

$|mn|$ is positive.

$| -mn |$ is positive.

$|(-m)(-n)|$ is positive.

There are 4 expressions that are positive, and each one is equal to mn .

79. (C) A set of 10 data points is given. The first step for determining the quartiles and minimum and maximum values of the box plot is to order the data from smallest to greatest value. For this data set the order is:

3.5 3.8 3.9 4.5 4.6
4.8 5.4 6.0 6.2 6.5

The minimum value is the smallest decimal, 3.5, and the maximum value is the greatest decimal, 6.5.

To determine the **median** in a set with an even number of values, locate the two middle values (5th and 6th in this case): 4.6 and 4.8. Determine the mean, or average, of the two middle numbers by adding them together and dividing

the sum by 2:

$$\frac{4.6 + 4.8}{2} = \frac{9.4}{2} = 4.7$$

To determine the value of the **first quartile** (Q1), locate the middle value of the 5 terms to the left of the median:

3.5 3.8 **3.9** 4.5 4.6

To determine the value of the **third quartile** (Q3), locate the middle value of

the 5 terms to the right of the median:

4.8 5.4 **6.0** 6.2 6.5

Box plot C identifies the correct minimum, maximum, median, and quartiles of the data set.

- 80. (G)** First, find the number of peaches sold:

$$50 - (8 + 6 + 12 + 6) =$$
$$50 - 32 = 18$$

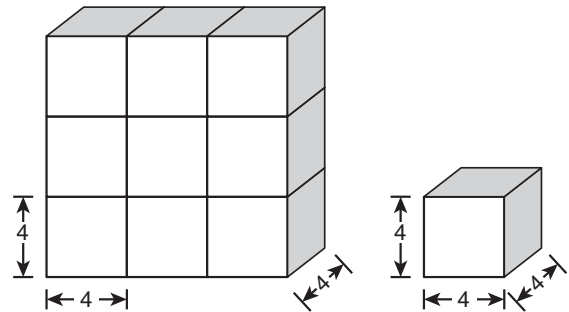
Then, find the percentage:

$$\frac{18}{50} = 0.36 = 36\%$$

- 81. (D)** First, determine the volume of each congruent cube. All the side lengths of the cubes are equal, so the length, width, and height of each cube is 4 units. To determine the volume of each cube, multiply length \times width \times height:

$$4 \times 4 \times 4 = 64$$

So, the volume of each cube is 64 cubic units.



The prism is comprised of 9 of these cubes, so multiply the volume of each cube (64) by the total number of cubes (9) to determine the volume, in cubic units, of the prism:

$$64 \times 9 = 576$$

- 82. (G)** Let p represent the population of Waterville in 2006. The population per square mile is:

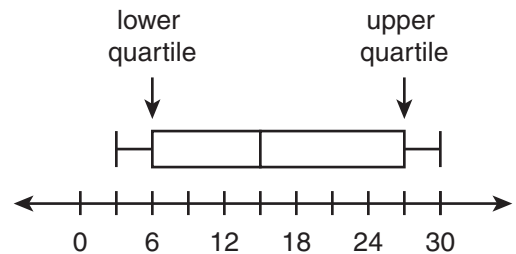
$$\frac{p}{50} = 1,500$$

Solve for p :

$$p = 1,500(50) = 75,000$$

The population decrease from 2005 to 2006 is $84,000 - 75,000 = 9,000$.

- 83. (C)** First, determine the values of the upper and lower quartiles of the set of data:



- The upper quartile value is indicated by the vertical line segment at the far right edge of the box plot above the hash mark representing 27.
- The lower quartile value is indicated by the vertical line segment at the far left edge of the box plot above the hash mark representing 6.

To determine the interquartile range, subtract the lower quartile value (6) from the upper quartile value (27):

$$27 - 6 = 21$$

- 84. (F)** First, find the median of set N. There are 17 integers in set N, so the 9th integer is the median. The 9th integer is 14.

The least integer in set L is equal to the median of set N, so the least integer in set L is 14.

There are 25 integers in set L, so the median is the 13th integer. That integer is 26.

- 85. (D)** The ratio of x to y is 1:2, so $\frac{x}{y} = \frac{1}{2}$ or $x = \frac{1}{2}y$. Similarly, the ratio of y to z is 2:5, so $\frac{y}{z} = \frac{2}{5}$. Solve for z in terms of y :

$$5y = 2z$$

$$\frac{5}{2}y = z$$

Use the given sum of x , y , and z to find the value of y :

$$x + y + z = 40$$

$$\frac{1}{2}y + y + \frac{5}{2}y = 40$$

$$4y = 40$$

$$y = 10$$

- 86. (F)** The sum of 4 consecutive integers can be expressed as:

$$\begin{aligned}n + (n + 1) + (n + 2) + (n + 3) \\= 4n + 6\end{aligned}$$

Set that expression equal to each of the options and solve for n :

Option E:

$$4n + 6 = -12$$

$$4n = -18$$

$$n = -\frac{18}{4} \text{ is not an integer.}$$

Option F:

$$4n + 6 = -10$$

$$4n = -16$$

$$n = -4 \text{ is an integer.}$$

Option G:

$$4n + 6 = -8$$

$$4n = -14$$

$$n = -\frac{14}{4} \text{ is not an integer.}$$

Option H:

$$4n + 6 = -4$$

$$4n = -10$$

$$n = -\frac{10}{4} \text{ is not an integer.}$$

The only option for which n is an integer answer is -10 .

-
- 87. (C)** There are 5 stores where the video game is priced at \$10.99 and a total of 5 stores where it is priced at either \$12.99 or \$13.99, so the median price must be \$11.99.
-

- 88. (F)** Solve $xy = 30$, the given equation, for x :

$$xy = 30$$

$$x = \frac{30}{y}$$

Then:

$$10 \div x = 10 \div \frac{30}{y} = 10 \times \frac{y}{30} = \frac{1}{3}y$$

- 89. (B)** First, find the lengths of the given segments:

$$QR = 5\frac{1}{6} - 3 = 2\frac{1}{6}$$

$$PQ = 3 - 1\frac{1}{3} = 1\frac{2}{3}$$

Then, find the difference:

$$2\frac{1}{6} - 1\frac{2}{3} =$$

$$\frac{13}{6} - \frac{5}{3} =$$

$$\frac{13}{6} - \frac{10}{6} =$$

$$\frac{3}{6} = \frac{1}{2}$$

- 90. (F)** Since the distance from W to X is 70% of the distance from W to Y, the distance from X to Y is 30% of the distance from W to Y. Let d represent the distance from W to Y. Then 15 miles is 30% of d .

$$0.30d = 15$$

$$d = \frac{15}{0.30} = 50$$

So, the distance from W to X, in miles, is $50 - 15 = 35$.

- 91. (D)** Multiply the numbers of highways between each pair of cities:

$$3 \times 4 \times 3 = 36$$

92. (G) Take each ratio and solve for dogs:

$$\frac{p}{d} = \frac{4}{1}$$

$$4d = p$$

$$d = \frac{1}{4}p$$

And

$$\frac{d}{c} = \frac{3}{2}$$

$$d = \frac{3}{2}c$$

Set the two expressions for d equal to each other and solve for $\frac{p}{c}$:

$$\frac{1}{4}p = \frac{3}{2}c$$

$$p = 6c$$

$$\frac{p}{c} = \frac{6}{1}$$

So, the ratio of people to cats is 6:1.

93. (B) Let x represent the side length of square T, in centimeters. Then the side length of square S is $(x - 1)$.

The area of square S is:

$$(x - 1)(x - 1) = 9$$

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

$$x - 1 = 3$$

$$x = 4$$

So the side length of square T is 4 cm, and the area of square T is 16 sq cm.

The difference between the areas, in square centimeters, is $16 - 9 = 7$.

- 94. (H)** First, distribute the negative sign, which is the same as multiplying both terms in the parentheses by -1 .

Next, combine like terms:

$$\frac{1}{2}x + 7 - \left(x - \frac{9}{2}\right)$$

$$\frac{1}{2}x + 7 - x + \frac{9}{2}$$

$$-\frac{1}{2}x + \frac{23}{2}$$

Then, factor the common factor of $-\frac{1}{2}$ from both terms, paying careful attention to the signs:

$$-\frac{1}{2}x + \frac{23}{2} = -\frac{1}{2}(x - 23)$$

95. (A) $\frac{1}{x} - \frac{1}{2x} = \frac{2}{2x} - \frac{1}{2x} = \frac{1}{2x}$

- 96. (G)** The total number of people who participated in the competition was $1 + 5 + 10 + 4,984 = 5,000$. The total number who placed first, second, or third was $1 + 5 + 10 = 16$.

$$\frac{16}{5,000} = \frac{32}{10,000} = 0.0032 = 0.32\%$$

- 97. (B)** Let A represent the measure of angle A , and let B represent the measure of angle B , in degrees. Since the angles are complementary, $A + B = 90$. The question states that $B = 3A$, or $A = \frac{B}{3}$. Substitute that expression for A in the first equation and solve for B :

$$A + B = 90$$

$$\frac{B}{3} + B = 90$$

$$\frac{4B}{3} = 90$$

$$4B = 270$$

$$B = 67.5$$

-
- 98. (G)** Let h represent the height of the tree in 2003. Then the height of the tree in 2013 is $3h$. Calculate the percent increase:

$$\frac{3h - h}{h} = \frac{2h}{h} = 2 = 200\%$$

- 99. (B)** If 1 gallon is equal to 16 cups, and 1 cup is equal to 8 fluid ounces, then

$$\begin{aligned}1 \text{ gallon} &= \\(16)(8 \text{ fluid ounces}) &= \\128 \text{ fluid ounces} & \\128 &= 2^7\end{aligned}$$

$$1 \text{ gallon} = 2^7 \text{ fluid ounces}$$

$$\text{So, } x = 7.$$

- 100. (H)** The length of one side of the puzzle is $\sqrt{64} = 8$ inches. The length of one side of the block is $\sqrt[3]{64} = 4$ inches.

The ratio of the side of the puzzle to the side of the block is 8:4, which reduces to 2:1.

- 101. (A)** Let x represent Rosa's score on the third test, and let y represent her score on the fourth test.

$$\frac{81 + 83 + x + y}{4} = 85$$

$$164 + x + y = 340$$

$$x + y = 176$$

If Rosa scores 100 on the fourth test, then the least score she can earn on the third test is 76.

- 102. (H)** The fraction of the pizza that the Barnes family eats is $\frac{11}{18}$. Let x represent the number of slices of pizza that the Ramirez family eats. Then the fraction of the pizza that the Ramirez family eats is $\frac{x}{15}$. Write an inequality and solve for x :

$$\frac{x}{15} \leq \frac{11}{18}$$

$$x \leq \frac{11 \times 15}{18}$$

$$x \leq \frac{165}{18}$$

$$x \leq 9\frac{1}{6}$$

So, the greatest number of whole slices of pizza the Ramirez family can eat is 9.

- 103. (D)**

$$0^3 + 4^0 + 2^{-1} + (-1)^2$$

$$= 0 + 1 + \frac{1}{2} + 1$$

$$= 2\frac{1}{2} = 2.5$$

104. (G) The “without replacement” statement means that the bag contained four slips for the first draw, three slips for the second draw, two slips for the third draw, and one slip for the last draw. Following the branch from the top and navigating down to the box, the 1 was chosen first, the 2 was chosen second, and the 4 was chosen third. The only remaining number is 3. The element would be 1243.

105. (A) First, recognize that the temperature decreased. This means that the order of subtraction matters and that the result is a negative number:

$$^{-}0.7 - 4.2 = ^{-}4.9$$

The temperature decreased 4.9 degrees. Divide by 3.5 to get the average change per hour:

$$^{-}4.9 \div 3.5 = ^{-}1.4$$

106. (G) First, change 6 feet to yards:

$$6 \text{ feet} \times \frac{1 \text{ yard}}{3 \text{ feet}} = 2 \text{ yards}$$

Then, multiply the dimensions of the pool to find the volume, in cubic yards:

$$20 \times 14 \times 2 = 560$$

107. (B) First, list the products:

$$\begin{aligned} 3 \times 4 &= 12 \\ 3 \times 5 &= 15 \\ 3 \times 6 &= 18 \\ 3 \times 7 &= 21 \\ 4 \times 5 &= 20 \\ 4 \times 6 &= 24 \\ 4 \times 7 &= 28 \\ 5 \times 6 &= 30 \\ 5 \times 7 &= 35 \\ 6 \times 7 &= 42 \end{aligned}$$

Of the 10 products, 3 are odd. The fraction is $\frac{3}{10}$.

108. (E) A quotient of 10 with a remainder of 5 means the quotient is

$$10 + \frac{5}{25} = 10\frac{1}{5} = 10.20$$

109. (C) The perimeter (or circumference) of one of the three semicircles is $\frac{1}{2}(\text{diameter})\pi = \frac{1}{2}(2\pi) = \pi$. Since there are 3 semicircles that make up the perimeter, the perimeter is 3π .

110. (E) Each time Micha draws a card, the probability of drawing the number 5 is $\frac{1}{5}$. To find the probability of drawing the number 5 three times, multiply:

$$\frac{1}{5} \times \frac{1}{5} \times \frac{1}{5} = \frac{1}{125}$$

111. (D)

$$\frac{10 \text{ m}}{1 \text{ sec}} \times \frac{3,600 \text{ sec}}{1 \text{ h}} \times \frac{1 \text{ ft}}{0.3 \text{ m}} = \frac{36,000 \text{ ft}}{0.3 \text{ h}} = 120,000 \frac{\text{ft}}{\text{hr}}$$

112. (H) $6.\overline{34} - 4.\overline{12} = 2.\overline{22} = 2.\overline{2}$

$x = 2.2222\dots$ Set x equal to the repeating decimal.

$10x = 22.2222\dots$ Multiply both sides by 10.

$-x = -2.2222\dots$ Subtract $10x$ and x .

$9x = 20$ Apply the multiplicative inverse property; divide both sides by 9.

$$x = \frac{20}{9}$$

113. (C) First, find the area of the rectangle in the graph:

$$3 \times 5 = 15$$

Then, find the areas of the two right triangles that are not shaded:

Upper triangle:

$$\frac{1}{2} \times 4 \times 3 = 6$$

Lower triangle:

$$\frac{1}{2} \times 2 \times 5 = 5$$

The area of the shaded region, in square units, is calculated by subtracting the total area of the two right triangles from the area of the rectangle:

$$15 - (6 + 5) = 15 - 11 = 4$$

114. (H) Let w represent the number of additional white marbles.

Set the probability of drawing a white marble equal to $\frac{3}{5}$ and solve the equation for w :

$$\begin{aligned} \frac{16 + w}{14 + 10 + 16 + w} &= \frac{3}{5} \\ \frac{16 + w}{40 + w} &= \frac{3}{5} \\ 5(16 + w) &= 3(40 + w) \\ 80 + 5w &= 120 + 3w \\ 2w &= 40 \\ w &= 20 \end{aligned}$$

Form B

Sample Test – Answer Key

You can read explanations for each answer online here. If you are in 9th grade, you can find examples of additional types of math topics you might see on your test, here.

Answer Key for Sample Form B

| | | | | | | | | |
|-------|-------|-------|-------|----------|-------|-------|--------|--------|
| 1. B | 14. H | 27. A | 40. H | 53. C | 66. E | 79. C | 92. G | 105. A |
| 2. F | 15. C | 28. G | 41. A | 54. E | 67. B | 80. G | 93. B | 106. G |
| 3. D | 16. F | 29. B | 42. H | 55. D | 68. F | 81. D | 94. H | 107. B |
| 4. E | 17. D | 30. G | 43. C | 56. F | 69. A | 82. G | 95. A | 108. E |
| 5. C | 18. G | 31. B | 44. H | 57. A | 70. E | 83. C | 96. G | 109. C |
| 6. E | 19. D | 32. F | 45. D | 58. 250 | 71. D | 84. F | 97. B | 110. E |
| 7. D | 20. E | 33. D | 46. F | 59. 13.5 | 72. H | 85. D | 98. G | 111. D |
| 8. F | 21. A | 34. F | 47. B | 60. 12 | 73. B | 86. F | 99. B | 112. H |
| 9. B | 22. H | 35. A | 48. E | 61. 8 | 74. G | 87. C | 100. H | 113. C |
| 10. F | 23. D | 36. E | 49. A | 62. 7 | 75. C | 88. F | 101. A | 114. H |
| 11. A | 24. E | 37. B | 50. G | 63. C | 76. E | 89. B | 102. H | |
| 12. E | 25. C | 38. H | 51. D | 64. G | 77. C | 90. F | 103. D | |
| 13. C | 26. F | 39. D | 52. G | 65. A | 78. H | 91. D | 104. G | |