Part 1 — English Language Arts

57 Questions

Revising/Editing

QUESTIONS 1-10 (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. Read these sentences.

> (1) Flyby missions near Jupiter have been happening since 1973.
>
> (2) Flyby missions allow scientists to collect data about Jupiter and its moons.

What is the best way to combine the sentences to clarify the relationship between the ideas?

A. While flyby missions near Jupiter have been happening since 1973, scientists collect data about the planet and its moons.

B. Although there have been flyby missions near Jupiter since 1973, they have allowed scientists to collect data about the planet and its moons.

C. Flyby missions near Jupiter, which allow scientists to collect data about the planet and its moons, have been happening since 1973.

D. Flyby missions have been happening near Jupiter, but scientists have been collecting data about the planet and its moons since 1973.

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

> (1) In 1976, the National Basketball Association (NBA) absorbed several teams of the American Basketball Association (ABA), including the New York Nets, who played in the Long Island area at the time. (2) The owner of the Nets decided to take the team to New Jersey after the team had financial troubles, where the team played for thirty-five seasons. (3) The New Jersey Nets had sixteen playoff appearances, including two appearances in the NBA finals. (4) In 2012, the team changed ownership and returned to New York, where the team now plays under the name the Brooklyn Nets.

E. sentence 1

F. sentence 2

G. sentence 3

H. sentence 4

3. How should the paragraph be revised?

> (1) Danielle spent several hours preparing for an upcoming audition for a play at the community theater. (2) First she did vocal exercises to practice her diction and projection so that her words would carry clearly throughout the large auditorium. (3) Then she studies the text of the monologue to better understand the emotions, and motivations of the character she plans to portray. (4) Finally she recited her monologue in front of a mirror many times, making slight adjustments and improvements to her performance each time.

A. Sentence 1: Change ***spent*** to **had spent**, AND insert a comma after ***play***.

B. Sentence 2: Change ***did*** to **does**, AND insert a comma after ***projection***.

C. Sentence 3: Change ***studies*** to **studied**, AND delete the comma after ***emotions***.

D. Sentence 4: Change ***recited*** to **recites**, AND delete the comma after ***times***.

4. Which pair of revisions needs to be made in this paragraph?

> (1) Both Italian gelato and American ice cream are delightful treats to have on a hot summer day, but many people wonder: what is the difference between the two? (2) To start with, the butterfat content is much higher in ice cream than it is in gelato, making the Italian treat a wiser decision for people looking to make healthier choices. (3) Additionally, the mixing process, which adds less air to the frozen treat, makes gelato denser than ice cream. (4) Finally, gelato is served 10 to 15 degrees warmer than ice cream, which enhances the texture and flavor of the gelato, and allow it to melt more quickly.

E. Sentence 1: Delete the colon after ***wonder*** AND change ***is*** to **are**.

F. Sentence 2: Delete the comma after ***with*** AND change ***it is*** to **they are**.

G. Sentence 3: Delete the comma after ***process*** AND change ***makes*** to **make**.

H. Sentence 4: Delete the comma after ***gelato*** AND change ***allow*** to **allows**.

CONTINUE TO THE NEXT PAGE ►

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.

Martial Arts for the Mind and Body

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

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

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

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

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

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

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

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

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

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

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

E. to the beginning of the paragraph (before sentence 6)

F. between sentences 6 and 7

G. between sentences 7 and 8

H. between sentences 8 and 9

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

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

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

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

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

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

E. Over time

F. In fact

G. Even so

H. For instance

9. Which sentence would best follow and support sentence 18?

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

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

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

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

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

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

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

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

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

Reading Comprehension

Questions 11–57

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 ►

Wolves of the Sea

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

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

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

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

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

millennia and positioned him so that he could gather new scientific evidence about one of British Columbia's most elusive species, the sea wolf.

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

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

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

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

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

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

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

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

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

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

13. Read this sentence from paragraph 4.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

CONTINUE TO THE NEXT PAGE ►

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

Excerpt from "How We Made the First Flight"

by Orville Wright

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

Final Preparations

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

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

Audacity—and Calculation

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

---

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

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

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

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

Flight

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

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

17. 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

18. 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.

19. 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.

20. 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

21. 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.

22. 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.

23. 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.

24. 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)

25. 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 ►

In this excerpt, published in 1914, author and professor Dallas Lore Sharp describes a summer cattle roundup in Oregon. The heat and dust had been relentless for three days. The cowboys were exhausted, and the cattle were restless. The ranch boss, Wade, had led the drive to a watering place, only to find it empty.

Excerpt from "The Spirit of the Herd"

by Dallas Lore Sharp

1 Along with the wagon had come the fresh horses—one of them being Peroxide Jim, a supple, powerful, clean-limbed buckskin, a horse, I think, that had as fine and intelligent an animal-face as any creature I ever saw. Wade had been saving this horse for emergency work. And why should he not have been saved fresh for just such a need as this? Are there not superior horses as well as superior men—a Peroxide Jim to complement a Wade?

2 The horse knew the cattle business and knew his rider perfectly; and though there was nothing like sentiment about the boss of the P Ranch riders, his faith in Peroxide Jim was complete. . . .

3 The desert, where the herd was camped, was one of the highest of a series of tablelands,[1] or benches; it lay as level as a floor, rimmed by sheer rock, from which there was a drop to the bench of sage below. The herd when overtaken by the dusk had been headed for a pass descending to the next lower bench, but was now halted within a mile of the rim rock on the east, where there was a perpendicular fall of about three hundred feet. . . .

4 In the taut silence of the stirless desert night, with the tension of the herd at the snapping-point, any quick, unwonted sight or sound would stampede them. The sneezing of a horse, the flare of a match, would be enough to send the whole four thousand headlong—blind, frenzied, trampling—till spent and scattered over the plain.

5 And so, as he rode, Wade began to sing. The rider ahead of him took up the air and passed it on until, above the stepping stir of the hoofs rose the faint voices of the men, and all the herd was bound about by the slow plaintive measures of some old song. It was not to soothe their savage breasts that the riders sang to the cattle, but rather to preempt the dreaded silence, to relieve the tension, and so to prevent the shock of any sudden startling noise.

6 So they sang and rode and the night wore on to one o'clock, when Wade, coming up on the rim-rock side, felt a cool breeze fan his face, and caught a breath of fresh, moist wind with the taste of water in it.

7 He checked his horse instantly, listening as the wind swept past him over the cattle. But they must already have smelled it, for they had ceased their milling, the whole herd standing motionless, the indistinct forms close to him in the dark showing their bald faces lifted to drink the sweet wet breath that came over the rim. Then they started on again, but faster, and with a rumbling now from their hoarse throats that tightened Wade's grip on the reins.

8 The sound seemed to come out of the earth, a low, rumbling mumble, as dark as the night and as wide as the plain, a thick, inarticulate bellow that stood every rider stiff in his stirrups. . . .

[1] **tablelands:** plateaus, flat areas of land sharply elevated from the surrounding area

9 Then the breeze caught the dust and carried it back from the gray-coated, ghostly shapes, and Wade saw that the animals were still moving in a circle. He must keep them going. He touched his horse to ride on with them, when across the black sky flashed a vivid streak of lightning.

10 There was a snort from the steers, a quick clap of horns and hoofs from far within the herd, a tremor of the plain, a roar, a surging mass—and Wade was riding the flank of a wild stampede. Before him, behind him, beside him, pressing hard upon his horse, galloped the frenzied steers, and beyond them a multitude borne on, and bearing him on, by the heave of the galloping herd.

11 Wade was riding for his life. He knew it. His horse knew it. He was riding to turn the herd, too, back from the rim, as the horse also knew. The cattle were after water—water-mad—ready to go over the precipice to get it, carrying horse and rider with them. Wade was the only rider between the herd and the rim. It was black as death. He could see nothing in the sage, could scarcely discern the pounding, panting shadows at his side. He knew that he was being borne toward the rim, how fast he could not tell, but he knew by the swish of the brush against his tapaderos[2] and the plunging of the horse that the ground was growing stonier, that they were nearing the rocks.

12 To outrun the herd was his only chance for life. If he could come up with the leaders he might not only escape, but even stand a chance of heading them off upon the plain and saving the herd. There were cattle still ahead of him; how many, what part of them all, he could not make out in the dark. But the horse knew. The reins hung on his straight neck, where his rider had dropped them, as, yelling and firing over the wild herd, he had given this horse the race to win, to lose.

13 They were riding the rim. Close on their left bore down the flank of the herd, and on their right, under their very feet, was a precipice, so close that they felt its blackness—its three hundred feet of fall! . . .

14 . . . Then Wade found himself racing neck and neck with a big white steer, which the horse, with marvelous instinct, seemed to pick out from a bunch, and to cling to, forcing him gradually ahead, till, cutting him free from the bunch entirely, he bore him off into the swishing sage.

15 The steers coming on close behind followed their leader, and in, after them, swung others. The tide was turning from the rim. More and more were veering, and within a short time the whole herd, bearing off from the cliffs, was pounding over the open plains.

16 Whose race was it? It was Peroxide Jim's, according to Wade, for not by word or by touch of hand or knee had the horse been directed in the run. From the flash of the lightning the horse had taken the bit, had covered an indescribably perilous path at top speed, had outrun the herd and turned it from the edge of the rim rock, without a false step or a tremor of fear.

From "The Spirit of the Herd" by Dallas Lore Sharp—Public Domain

[2]**tapaderos:** leather covers for stirrups

26. Which sentence from the excerpt best explains why Wade reserved Peroxide Jim for "emergency work" (paragraph 1)?

E. "Are there not superior horses as well as superior men—a Peroxide Jim to complement a Wade?" (paragraph 1)

F. "Before him, behind him, beside him, pressing hard upon his horse, galloped the frenzied steers, and beyond them a multitude borne on, and bearing him on, by the heave of the galloping herd." (paragraph 10)

G. "He knew that he was being borne toward the rim, how fast he could not tell, but he knew by the swish of the brush against his tapaderos and the plunging of the horse that the ground was growing stonier, that they were nearing the rocks." (paragraph 11)

H. "From the flash of the lightning the horse had taken the bit, had covered an indescribably perilous path at top speed, had outrun the herd and turned it from the edge of the rim rock, without a false step or a tremor of fear." (paragraph 16)

27. Paragraphs 1–2 contribute to the development of the central idea of the excerpt by

A. revealing the respect Wade had for his horse.

B. emphasizing Wade's high expectations of his horse and himself.

C. indicating that Wade and his horse understood the cattle business.

D. demonstrating Wade's ability to gauge a horse's competence.

28. How does paragraph 3 convey the effect of the setting on the cattle drive?

E. It shows how the growing darkness created challenges for the riders in getting the herd to move.

F. It describes how the changing elevation contributed to the dangerousness of the environment.

G. It describes how the desert created an uncomfortable feeling of isolation for the riders and the cattle.

H. It shows how the steep terrain made it difficult for the cattle to keep moving forward.

29. How does paragraph 9 fit into the overall structure of the excerpt?

A. It hints at the change in the setting that caused Wade to suddenly become alert.

B. It creates a false sense of calm that shows how unprepared the men were for what was about to happen.

C. It introduces the idea that Wade was a skillful leader in unpredictable circumstances.

D. It presents the incident that caused the main conflict Wade and Peroxide Jim addressed.

30. Read this sentence from paragraph 13.

> **Close on their left bore down the flank of the herd, and on their right, under their very feet, was a precipice, so close that they felt its blackness—its three hundred feet of fall!**

The phrase "bore down the flank of the herd" conveys that Wade

E. struggled to see the front of the herd.

F. had to ride quickly to keep up with the herd.

G. was forced to ride between the edge of the cliff and the herd.

H. knew that the drop of the cliff would frighten the herd.

31. Read these sentences from the excerpt.

> **He was riding to turn the herd, too, back from the rim, as the horse also knew.** (paragraph 11)
>
> **It was Peroxide Jim's, according to Wade, for not by word or by touch of hand or knee had the horse been directed in the run.** (paragraph 16)

How do these sentences develop a central idea in the excerpt?

A. They suggest that Wade would have been unable to save the herd without Peroxide Jim.

B. They imply that Wade spent many hours training Peroxide Jim to herd cattle.

C. They show that Peroxide Jim was able to understand a situation and take action.

D. They indicate that Peroxide Jim was unafraid of the dangers presented by the stampede and the cliff.

32. How do the details in paragraphs 14–16 help convey a central idea of the excerpt?

E. They highlight Peroxide Jim's natural ability to control the herd.

F. They emphasize the danger of the situation from which Peroxide Jim rescued the herd.

G. They show that Peroxide Jim's physical strength allowed him to force the herd to turn.

H. They indicate that Peroxide Jim anticipated the herd's stampede before the men did.

33. Which sentence from the excerpt best reveals the mood on the drive before the lightning struck?

A. "The herd when overtaken by the dusk had been headed for a pass descending to the next lower bench, but was now halted within a mile of the rim rock on the east, where there was a perpendicular fall of about three hundred feet." (paragraph 3)

B. "It was not to soothe their savage breasts that the riders sang to the cattle, but rather to preempt the dreaded silence, to relieve the tension, and so to prevent the shock of any sudden startling noise." (paragraph 5)

C. "He checked his horse instantly, listening as the wind swept past him over the cattle." (paragraph 7)

D. "Then the breeze caught the dust and carried it back from the gray-coated, ghostly shapes, and Wade saw that the animals were still moving in a circle." (paragraph 9)

CONTINUE TO THE NEXT PAGE ►

A Miracle Mile

1 In the 1950s people compared running one mile in four minutes to scaling Mount Everest and nicknamed the feat a "dream mile." Although such an accomplishment was considered humanly impossible, several elite runners aimed to break that supposedly impenetrable barrier. One of them was a twenty-five-year-old medical student named Roger Bannister.

2 Roger Bannister had tasted failure during the 1952 Olympics. There, he was favored to win the 1,500-meter competition, a distance slightly shorter than a mile, but he finished in a dismal fourth place instead. Bannister's performance was a disappointment for him and his country, Great Britain. Determined to redeem himself, Bannister postponed his plans to retire from racing and focused on the ultimate prize—breaking the four-minute-mile barrier.

3 Bannister attacked the elusive milestone with a positive attitude and logical planning. The amateur athlete decided to use intensive interval training to develop endurance and speed. For these workouts, Bannister ran an interval of ten consecutive laps on a quarter-mile track, aiming for sixty seconds each lap. In between intervals, he let his body recover for two minutes.

4 By early 1954, Bannister had succeeded in lowering his quarter-mile pace to sixty-one seconds, but he had to shave off at least one more second in order to reach his target. Frustrated by the plateau he had reached, Bannister took a break from training and went mountain climbing for three days. The rest from running permitted his muscles to recuperate and left him feeling refreshed. When Bannister returned to the track, he completed ten quarter-mile-long intervals at fifty-nine seconds each. He finally felt prepared to attempt to break the world record.

5 As a member of the Amateur Athletic Association (AAA), Bannister joined the AAA team for a track meet against Oxford University. The event took place on a cinder track in Oxford on May 6, 1954. Bannister and his two AAA teammates, Chris Chataway and Chris Brasher, were close friends and frequent running partners. Chataway and Brasher agreed to help Bannister accomplish his goal by being his "rabbits."

6 In track and field, rabbits are runners who enter the race solely to pace a teammate for a segment of the course. Typically, a runner settles in behind the rabbit and allows the rabbit to set an appropriate tempo. Additionally, by running behind the rabbit, the runner conserves about 15 percent of his or her effort. When the starting pistol fired, Brasher pounced into the lead, and Bannister followed behind his first rabbit.

7 Propelled by the excitement, Bannister lost his instinctive feel for his pace and shouted "Faster!" at Brasher. Brasher, however, remained composed and maintained his current steady but grueling pace, completing the first two laps in a desirable one minute and fifty-eight seconds. Then Chataway surged forward, leading Bannister at this same punishing rate for another lap and a half. At the beginning of the back straightaway of the track, Bannister bolted past Chataway. Bannister said, "I felt that the moment of a lifetime had come. There was no pain, only a great unity of movement and aim." Bannister crossed the finish line in 3 minutes 59.4 seconds. The ecstatic crowd erupted the moment the timekeeper announced the word "three."

8 Soon after Bannister's achievement, four other athletes matched his performance. A new mindset had taken root among runners. Over the years, the record continued to fall. However, the current record, 3 minutes 43.13 seconds, has stood unbroken since 1999. Some question whether this

record represents the limits of human ability. But perhaps there is another Bannister, an athlete who, with willpower and dedication, will accomplish the miraculous.

34. The words "feat," "humanly impossible," and "impenetrable barrier" in paragraph 1 affect the tone of the paragraph because they

E. highlight the idea that only the most skilled runners would be able to run a four-minute mile.

F. emphasize the idea that running a mile in less than four minutes was a seemingly unattainable goal.

G. convey the competitiveness among elite runners to consistently set and break speed records.

H. show the intensity of the training programs athletes endure in order to achieve their goals.

35. Which sentence best supports the idea that Bannister needed an alternative to "logical planning" (paragraph 3) in order to accomplish his goal?

A. "Bannister's performance was a disappointment for him and his country, Great Britain." (paragraph 2)

B. "The amateur athlete decided to use intensive interval training to develop endurance and speed." (paragraph 3)

C. "For these workouts, Bannister ran an interval of ten consecutive laps on a quarter-mile track, aiming for sixty seconds each lap." (paragraph 3)

D. "Frustrated by the plateau he had reached, Bannister took a break from training and went mountain climbing for three days." (paragraph 4)

36. Read these sentences from paragraph 7.

> **Bannister said, "I felt that the moment of a lifetime had come. There was no pain, only a great unity of movement and aim."**

The sentences contribute to the development of ideas in the passage by showing that Bannister

E. knew that he was about to achieve the goal he had worked toward.

F. was no longer experiencing personal disappointment from his past failure in the Olympics.

G. felt grateful to his teammates for helping him take the lead.

H. was satisfied that his training had helped him perfect his running technique.

37. The phrase "a new mindset had taken root" in paragraph 8 conveys the idea that

A. runners recognized that running a mile in under four minutes was physically possible.

B. breaking the four-minute-mile barrier was no longer considered an impressive feat for elite runners.

C. runners understood how hard they would have to train in order to run a mile in under four minutes.

D. elite runners entered races in an attempt to break the four-minute-mile barrier.

38. Which sentence from the passage indicates that Bannister nearly made a mistake that would have cost him the world record?

E. "By early 1954, Bannister had succeeded in lowering his quarter-mile pace to sixty-one seconds, but he had to shave off at least one more second in order to reach his target." (paragraph 4)

F. "When the starting pistol fired, Brasher pounced into the lead, and Bannister followed behind his first rabbit." (paragraph 6)

G. "Propelled by the excitement, Bannister lost his instinctive feel for his pace and shouted 'Faster!' at Brasher." (paragraph 7)

H. "At the beginning of the back straightaway of the track, Bannister bolted past Chataway." (paragraph 7)

39. Bannister's loss in the 1952 Olympics influenced his decision to pursue breaking the four-minute-mile barrier by

A. allowing him to recognize his weaknesses and improve his running ability.

B. prompting him to take a different approach to his regular training.

C. motivating him to prove to himself that he could set and achieve a goal.

D. giving him the opportunity to reach a goal no runner had ever accomplished.

40. How did interval training affect Bannister's performance?

E. It helped him learn how to moderate his pace while running.

F. It helped him conserve effort when running with teammates.

G. It helped him improve his pace and stamina while running.

H. It helped him decrease his recovery time after an intense run.

41. How does the author's use of chronological structure contribute to the development of ideas in the passage?

A. It presents the increasing physical effects of Bannister's training methods as he prepared to break the four-minute-mile barrier.

B. It shows the increase in Bannister's confidence in his ability to break the four-minute-mile barrier.

C. It emphasizes the key events in Bannister's life that inspired him to break the four-minute-mile barrier.

D. It highlights the progression of Bannister's training and details about his successful attempt to break the four-minute-mile barrier.

The Great Serpent Mound, located in Adams County, Ohio, is a human-made mound of earth that researchers believe was created between 300 B.C. and A.D. 1100 by an indigenous culture.

Serpent Mound

Ohio, 1846

Brush Creek stood low when the museum men came
with their measuring tapes and sketchbooks.
It was winter. Fringed with ice,
the creek doubled back on itself
as if it had forgotten something.
Pa was in Cincinnati, or else on his way home,
so Ma told me to lead the men
into the marshy low grounds. It being winter,
there was little underbrush to speak of—
in the summer there would have been
briars, poison ivy, biting flies. I listened
for the *swish* of a beaver's heavy tail,
the chitter of a chickadee, or the cry of a hawk,
but the winter silence of the creek pressed
down on all of us like a weight.
The humps in the ground were all but
invisible until you were right up on them. The figure
was even less obvious: the sinuous body,
the tail coiled three times around,
and at the other end, the mouth wide open.
In the summer the creek bottom was crowded
with so much life that you could trip over
the ridges of earth before you saw
anything at all. In winter you could climb
a tree and get some idea of the whole thing:
the serpent's body undulating, slithering
silently across the ancient
earth. At the mouth end, there was an oval mound
as if the snake were about to swallow an egg—
as snakes sometimes did in our rickety
henhouse—my Pa always said, or
as if swallowing the sun, one of the museum
men suggested, taking notes with his quill pen,
an old-style inkhorn slung at his side.
I liked that: swallowing the sun,
just the sort of thing a snake might do,
might want to do. When, later, I told my sister Ruth,
she disagreed. It is singing to the sun,
she insisted. That is why its mouth
is wide open. She said, "Sometimes I think
I hear it on summer nights. Not swallowing, singing."

42. How does the poem's form contribute to the poem's meaning?

E. The use of one continuous stanza and the pattern of the lines mimic the long and winding shape of the mound.

F. The uneven line lengths emphasize the variety of ways people interpret the meaning of the mound.

G. The dashes throughout the poem highlight the speaker's changing thoughts about the significance of the mound.

H. The lack of a regular rhyme scheme and meter convey that the speaker struggles to comprehend the vastness of the mound.

43. Which lines reveal how the setting affects the speaker and the men from the museum?

A. "It being winter, / there was little underbrush to speak of—" (lines 8–9)

B. "but the winter silence of the creek pressed / down on all of us like a weight." (lines 14–15)

C. "The humps in the ground were all but / invisible until you were right up on them." (lines 16–17)

D. "In the summer the creek bottom was crowded / with so much life that you could trip" (lines 21–22)

44. Lines 1–2 contribute to the development of ideas in the poem by

E. suggesting that the men are too busy with their work to talk to the speaker.

F. helping establish the reason for the men's visit and purposeful behavior.

G. hinting that the men have hidden motives for studying the mound.

H. indicating why the speaker is fascinated by the men and wants to help them.

45. Read line 28 from the poem.

At the mouth end, there was an oval mound

How does the line contribute to the development of ideas in the poem?

A. It describes a feature of the mound that the men from the museum need to document.

B. It introduces a comparison of the body of the mound with the head of the mound.

C. It introduces a feature of the mound that has a different meaning to different people.

D. It describes a part of the mound that is difficult to see from far away.

46. What impact do the phrases "all but / invisible" and "even less obvious" in lines 16–18 have on the meaning of the poem?

E. They indicate that viewing the full size and shape of the mound is difficult.

F. They suggest that the location of the mound is unknown to most people.

G. They imply that the speaker wants the location of the mound to remain a secret.

H. They reveal that the speaker is unfamiliar with the significance of the mound.

47. What impact do the words "*swish*," "chitter," and "cry" in lines 12–13 have in the poem?

A. They illustrate how lively the mound's surroundings are during the summer.

B. They show how the mound disrupts natural life in the marsh.

C. They indicate the variety of wildlife found in the area around the mound.

D. They suggest that the speaker prefers the mound's appearance in winter.

48. How does the speaker's interaction with Ruth in lines 37–41 convey a central idea of the poem?

E. It suggests that the most accurate interpretations of the mound come from knowing the purpose of the mound.

F. It emphasizes that there are multiple interpretations of the mound based on feelings and experiences.

G. It reveals the benefit of considering different interpretations of the mound's significance.

H. It implies that scientific study of the mound's purpose will affect what the mound symbolizes to people.

49. The poet contrasts the speaker's and Ruth's points of view regarding the mound by using dialogue to

A. imply that Ruth is worried that her interpretation of the mound will be seen as too abstract.

B. indicate that Ruth hopes her interpretation of the mound will be shared by the men from the museum.

C. suggest that Ruth wants the speaker to agree with her interpretation of the mound.

D. show that Ruth has already decided on her interpretation of the mound.

CONTINUE TO THE NEXT PAGE ►

A Memory Revolution

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

A Dependable and Valuable Asset

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

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

Filing Information Away

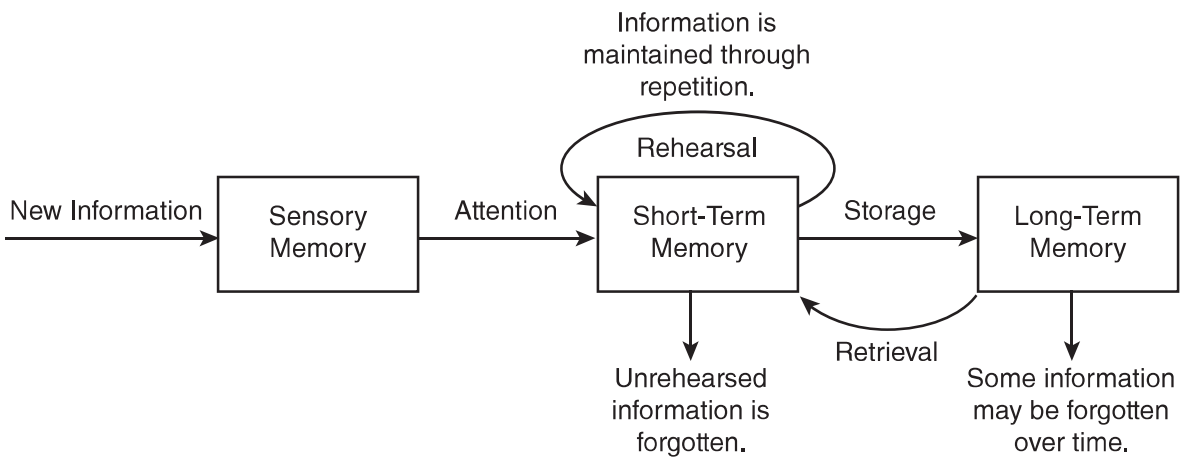
4 The use of the Internet also appears to be modifying the strategies people use to store information in their mind. Researchers Betsy Sparrow from Columbia University, Jenny Liu from the University of Wisconsin-Madison, and Daniel Wegner from Harvard University conducted several studies to discover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

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

6 In another experiment, the same researchers tested the ability of study participants to remember where to access information. For this trial, participants read and typed trivia statements, which they saved in folders with generic names such as "Facts" and "Items." After spending ten minutes writing down all the facts they could recall from memory, participants were asked which folder contained a particular fact based on a keyword. For example, "Which folder has the fact about ostriches?" Overall, participants recalled the information's location more often than the content itself, correctly identifying 49 percent of the folders for specific facts while remembering only 23 percent of the actual trivia. The researchers concluded that our memory is adapting to the Internet age by prioritizing where to locate information even when the specific details are forgotten. According to Sparrow, the Internet has become an important form of transactive memory, an external source of the recollections and associative networks that constitute memory.

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

HOW MEMORY WORKS



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

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

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

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

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

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

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

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

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

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

52. Read this sentence from paragraph 7.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

56. Which sentence from the passage suggests that using Internet search engines may lead people to rely less on their own ability to recall information?

E. "In the past few decades, the Internet has become an integral component of daily life for many people." (paragraph 1)

F. "The Internet group was required to use the search engine Google to answer eight challenging trivia questions." (paragraph 2)

G. "Their results showed that 83 percent of the Internet group continued to consult Google in the second round, while only 63 percent of the memory group chose to do so." (paragraph 2)

H. "For this experiment, participants read forty trivia facts, such as 'An ostrich's eye is bigger than its brain,' and typed the statements into a computer file." (paragraph 5)

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

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

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

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

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

CONTINUE TO THE NEXT PAGE ►

PART 2 — MATHEMATICS

57 QUESTIONS

IMPORTANT NOTES

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

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

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

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

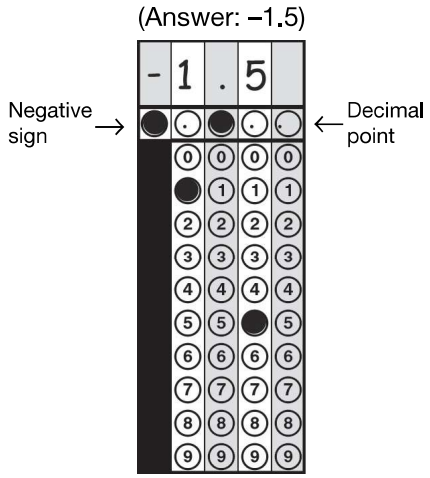
(5) Reduce (simplify) all fractions to lowest terms.

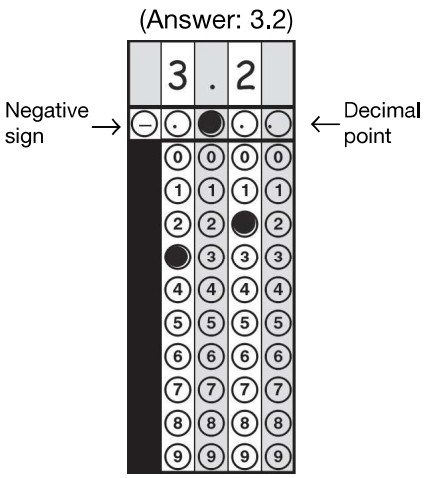
GRID-IN QUESTION NOTES

(1) For each grid-in question, write your answer at the top of the grid.

(2) Begin recording your answer in the columns on the far left.

(3) Fill in the circle under the box that matches the number or symbol you wrote. Leave the negative sign bubble blank if your answer is positive.





CONTINUE TO THE NEXT PAGE ►

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. How many 5-digit numbers can be created using the digits 2, 3, 5, 7, and 8 without repeating any digits within that 5-digit number?

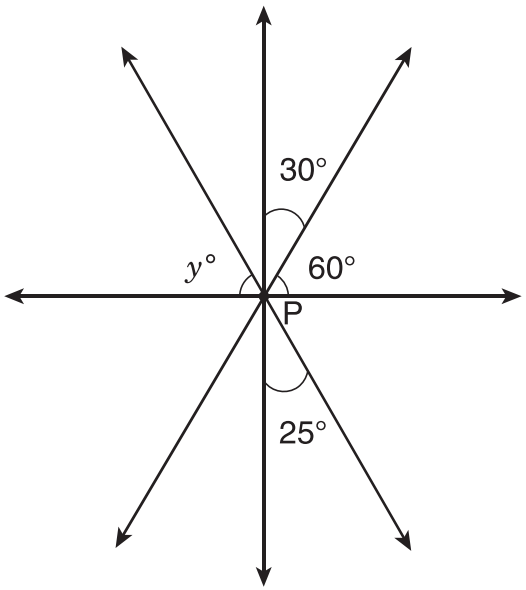
59. $$\frac{147 - x}{12} = 12$$

What is the value of x in the equation shown above?

60. $\left|(-6) - (-5) + 4.2\right| - \left|3 - 9.6\right| =$

61. Tyler has completed 60 pages in his French workbook. This is 20% of the total number of pages in the workbook. How many pages are in the workbook?

62.



Four straight lines intersect at point P as shown above. What is the value of y?

Multiple Choice Questions

Questions 63–114

DIRECTIONS: Solve each problem. Select the best 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. If $x = 9$ and $y = -7$, what is the value of $x(x - 2y)$?

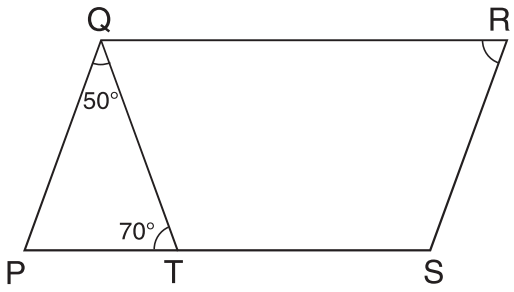
A. 18

B. 45

C. 144

D. 207

64.



In the figure above, PQRS is a parallelogram. The measure of $\angle PQT$ is $50°$, and the measure of $\angle PTQ$ is $70°$. What is the measure of $\angle QRS$?

E. $60°$

F. $70°$

G. $80°$

H. $120°$

65. $$M = 3N = \frac{P}{4} = Q + 5 = \frac{R}{7} > 0$$

Based on the statement above, which variable has the **greatest** value?

A. M

B. N

C. P

D. R

66.

DESSERT CHOICES

Dessert	Number of Times Ordered
Cookies	42
Pie	23
Cake	47
Ice Cream	48

The table above shows the number of times that different desserts were ordered at a restaurant. Based on this information, what is the probability of a customer ordering ice cream as a dessert?

E. 25%
F. 30%
G. 40%
H. 48%

67. To make party invitations, Macie could buy a package of paper for $10.50, or she could buy x individual sheets of the same paper for $0.15 each. What is the largest value of x that would make buying the individual sheets **less** expensive than buying the package?

A. 60
B. 65
C. 69
D. 70

68. At 1:00 p.m. one day, the temperature was 8 degrees above zero. During the rest of the day, the temperature fell 3 degrees per hour. What was the temperature at 7:00 p.m. that day?

E. $-13°$
F. $-10°$
G. $-7°$
H. $5°$

69. A bag contains 75 marbles that are red, blue, or green. The ratio of red to blue marbles is 15:7, and the ratio of blue to green marbles is 7:3. If 2 blue marbles are removed and replaced with 2 green marbles, what will be the new ratio of red to green marbles?

A. 3:1
B. 5:1
C. 15:3
D. 45:11

70. A roofing contractor uses shingles at a rate of 3 bundles for every 96 square feet of roof covered. At this rate, how many bundles of shingles will he need in order to cover a roof that is 416 square feet?

E. 5
F. 12
G. 13
H. 14

71. What is the least common multiple of 24, 6, and 18?

A. 36
B. 48
C. 72
D. 144

72. One day, the Early Bird Restaurant used 15 dozen eggs for 200 breakfast customers. At this rate, approximately how many dozen eggs are needed for 300 breakfast customers?

E. 20
F. 23
G. 25
H. 30

73. A cooler contains three types of beverages:
5 bottles of apple juice, 3 bottles of grape juice, and 6 bottles of orange juice. What is the probability that a bottle chosen at random from this cooler is **not** apple juice?

A. $\frac{1}{9}$
B. $\frac{5}{14}$
C. $\frac{9}{14}$
D. $\frac{2}{3}$

74. A large circular dinner plate has a radius of 20 centimeters. A smaller circular plate with a circumference of 20π centimeters is placed in the center of the larger dinner plate. What is the area of the part of the larger dinner plate that is not covered by the smaller plate?

E. 20π sq cm
F. 100π sq cm
G. 200π sq cm
H. 300π sq cm

75.

PRICES FOR NEWSPAPER ADVERTISING

Page Space	Price
$\frac{1}{4}$ page	$200
$\frac{1}{2}$ page	$350
full page	$600

The table above shows prices for newspaper advertising. A store purchased $\frac{1}{4}$ pages, $\frac{1}{2}$ pages, and full pages of page space in equal numbers for a total of $11,500. What is the total amount of page space the store purchased?

A. $1\frac{3}{4}$ pages

B. 10 pages

C. $16\frac{1}{2}$ pages

D. $17\frac{1}{2}$ pages

76. How many positive odd numbers satisfy the inequality $3x + 8 \leq 92$?

E. 13

F. 14

G. 17

H. 28

77. If $\frac{36}{y} = 4x$, what is the value of x when $y = 3$?

A. 3

B. 4

C. 9

D. 12

78. Points X , Y , and Z are on a straight line, and Y is between X and Z . Length $\overline{YZ} = \frac{3}{5}\overline{XY}$, and length $\overline{XY} = 20$ centimeters. What is the length of $\overline{XZ}$?

E. 12 cm

F. 24 cm

G. 30 cm

H. 32 cm

79. Bryana bought $1\frac{3}{4}$ yards of cloth at \$8.00 per yard. If there was an 8% sales tax, what was the total cost of the cloth?

A. \$12.96

B. \$14.08

C. \$15.12

D. \$16.08

80.

On the number line above, MN = $5\frac{5}{6}$. What is the position of point M?

E. $-7\frac{1}{6}$

F. $-4\frac{1}{2}$

G. $4\frac{1}{2}$

H. $7\frac{1}{6}$

81. A United States presidential coin is made from an alloy of four metals—copper, zinc, manganese, and nickel—with weights in the ratio of 177:12:7:4, respectively. The coin weighs a total of 8 grams. What is the weight of the zinc in this coin?

A. 0.28 g

B. 0.48 g

C. 0.96 g

D. 48 g

82. Jack scored a mean of 15 points per game in his first 3 basketball games. In his 4th game, he scored 27 points. What is his mean score for the first 4 games?

E. 15

F. 17

G. 18

H. 21

83. A cylindrical oil drum can hold 4,320 liters when it is completely full. Currently, the drum is $\frac{1}{3}$ full of oil. How many **kiloliters** of oil need to be added in order to fill the drum completely?

A. 1.44
B. 2.88
C. 4.32
D. 14.10

84. Nicole's age now is three times Carmen's age. If Carmen will be 17 in two years, how old was Nicole 5 years ago?

E. 38 yr
F. 40 yr
G. 45 yr
H. 50 yr

85. A chemical decays in such a way that the amount left at the end of each week is 20% less than the amount at the beginning of that same week. What percent of the original amount is left after two weeks?

A. 40%
B. 60%
C. 64%
D. 80%

86. If $w - 1$ is an odd integer, which one of the following **must** be an even integer?

E. $w + 1$
F. $2w - 1$
G. $2w - 2$
H. $2w + 1$

87. Three students stand at the starting line of a running track and begin running laps at the same time. Ann completes 1 lap every 2 minutes, Jack completes 1 lap every 3 minutes, and Lee completes 1 lap every 4 minutes. How many laps does Ann complete before all three runners are once again at the starting line at the same time?

A. 4
B. 6
C. 12
D. 20

88. Simplify this expression:

$$4(7 - 3x) - (5 - x)$$

E. $23 - 4x$

F. $23 - 11x$

G. $28 - 4x$

H. $28 - 12x$

89.

PET SURVEY

Number of Pets	Number of Students
0	12
1	16
2	7
3 or more	5

Amy surveyed students at her school about the number of pets they have. What is the probability that a student who participated in the survey has at least 2 pets?

A. $\frac{7}{40}$

B. $\frac{1}{12}$

C. $\frac{1}{8}$

D. $\frac{3}{10}$

90. A large container is partially filled with n liters of water. Ito adds 10 liters of water to the container, making it 60% full. If Ignacio adds 6 more liters of water, the container will be 75% full. What is the value of n?

E. 14

F. 15

G. 26

H. 30

91. $$5x^3 + 3x + 9 + \frac{1}{x^2}$$

If $x = 10$, what is the value of the expression above?

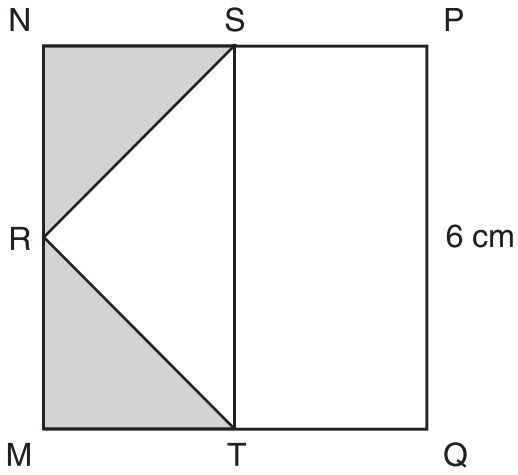
A. 2,539.01

B. 5,039.01

C. 5,039.1

D. 5,139

92.



R, S, and T are midpoints of the sides of square MNPQ, as shown above. What is the sum of the areas of the shaded triangles?

E. 9 sq cm
F. 12 sq cm
G. 18 sq cm
H. 36 sq cm

93. The Chens spend $5 of every $8 they earn on planned expenses. If the family earns $29,600 in one year, how much will they spend on planned expenses that year?

A. $1,850
B. $3,700
C. $5,920
D. $18,500

94. A pizza shop offers a choice of 3 sizes (small, medium, and large) and 7 different toppings. Different pizzas can be created by changing the size and/or the choice of toppings. If Cody wants to order a pizza with exactly 2 different toppings, how many different pizzas can he create?

E. 6
F. 21
G. 63
H. 126

95.

SURVEY OF CATS PER FAMILY

Number of Cats	Number of Families
0	15
1	42
2	35
3 or more	8

The table above shows the number of cats per family in 100 households in the Blaine neighborhood. By what **percentage** is the number of families with 1 cat greater than the number of families with 2 cats?

A. 7%
B. 10%
C. 17%
D. 20%

96. A wooden box has a square base. The height of this box is 3 times the length of one side of the base. If one side of the base is 3 feet long, what is the volume of this box?

E. 9 cu ft
F. 27 cu ft
G. 36 cu ft
H. 81 cu ft

97. On a bike trip, Rajiv traveled 65 kilometers in 5 hours, while Shaina traveled 72 kilometers in 4 hours. How much **less** was Rajiv's mean speed, in kilometers per hour (kph), than Shaina's?

A. 1
B. 5
C. 7
D. 9

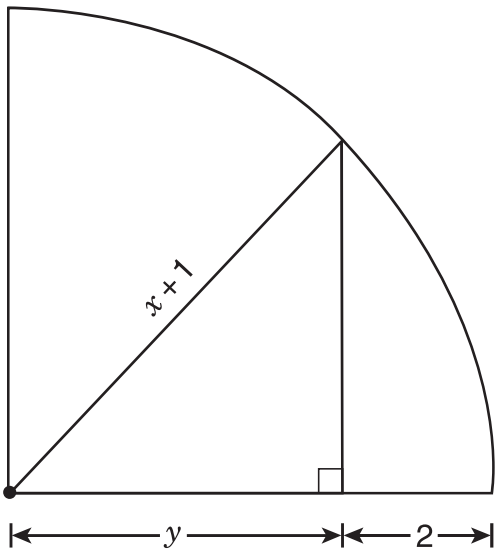
98. Points P, Q, R, and S represent -3, -1, 0, and 2, respectively, on a number line. How many units is the midpoint of $\overline{PQ}$ from the midpoint of $\overline{RS}$?

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

99. There are 1,000 cubic centimeters in 1 liter, and 1,000 cubic millimeters in 1 milliliter. How many cubic millimeters are there in 1,000 cubic centimeters?

A. 1,000
B. 10,000
C. 100,000
D. 1,000,000

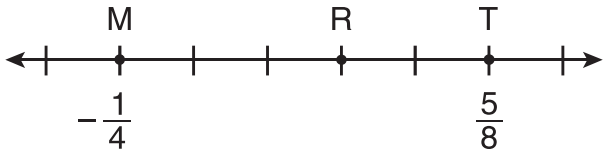
100.



In the quarter circle above, what is y in terms of x?

E. $x - 1$
F. $x + 1$
G. $\frac{x+1}{2}$
H. $\sqrt{\frac{(x+1)^2}{2}}$

101.



The hash marks on the number line above are evenly spaced. What is the coordinate of point R?

A. $\frac{7}{40}$

B. $\frac{9}{40}$

C. $\frac{11}{40}$

D. $\frac{21}{40}$

102. Phan chose an Internet service that charges $18.00 per month plus $0.024 per minute. Deion chose an Internet service that charges $30.00 per month for unlimited usage. At the end of the month, Phan's and Deion's charges were identical. For how many minutes did Phan use the Internet service that month?

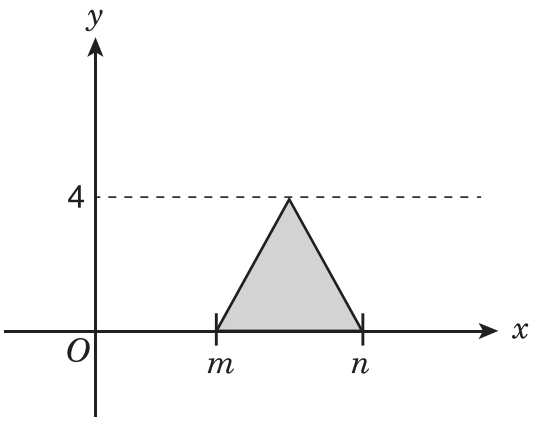
E. 50

F. 60

G. 100

H. 500

103.



What is the area of the shaded triangle shown above?

A. $m + n$

B. $n - m$

C. $2(n - m)$

D. $4(n - m)$

104. The decimal 0.06 can be written as the fraction $\frac{x}{50}$. What is the value of x?

E. 3

F. 6

G. 12

H. 30

105. In a sample of 50 cars at a local dealership, there are 12 red cars and 10 cars with backup cameras. Of the 12 red cars, 4 have backup cameras. If a car is selected at random from the given sample, what is the probability that **both** of the following are true: the car is **not** red and does **not** have a backup camera?

A. $\frac{3}{5}$

B. $\frac{16}{25}$

C. $\frac{19}{25}$

D. $\frac{4}{5}$

106.

ANIMAL CARDS

Number of Cards	Picture on Card
8	cat
6	dog
5	bird
4	fish
1	horse

The cards in the table above are mixed in a box. Which animal pictured on a card has exactly a 1 in 4 chance of being picked at random from the box?

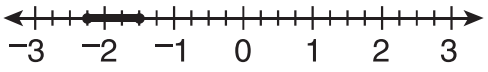
E. cat

F. dog

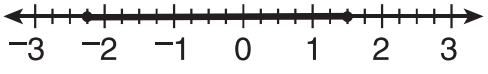
G. fish

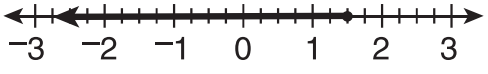
H. horse

107. Which number line below shows the solution set for $2x - 2 \leq y \leq 4x + 10$ when $y = 1$?

A.


B.


C.


D.


108.

$$\frac{14}{21} = \frac{p}{7}$$

In the equation above, what is the value of p?

E. $\frac{2}{3}$

F. 3

G. $\frac{14}{3}$

H. 14

109. A ball is selected at random from a box that contains 7 black balls, 14 green balls, and 21 red balls. What is the probability that the ball selected is black?

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

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

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

D. $\frac{5}{6}$

110. At North High School, a survey asked two questions, Question A and Question B. For each question, students could answer either "yes" or "no." Of the 800 students who responded to the survey, 720 answered "yes" to Question A, and 640 answered "yes" to Question B. What is the **least** possible number of these students who could have answered "yes" to **both** questions?

E. 80

F. 160

G. 560

H. 640

111. Raoul is at least 3 years older than Vahn. Which of the following inequalities gives the relationship between Raoul's age (r) and Vahn's age (v)?

A. $r - v \geq 3$

B. $r - v \leq 3$

C. $3 - v \leq r$

D. $3 - r \leq v$

112. 1 sind = 5.6 ricks

1 sind = 12.88 dalts

Using the conversion above, how many dalts are equal to 1 rick?

E. 0.43

F. 2.30

G. 7.28

H. 18.48

113. There are now x cans stacked on a shelf that holds 36 cans when full. If 4 of these cans were removed, the shelf would be half full. What is the value of x?

A. 14

B. 16

C. 18

D. 22

114. Carlos tossed a paper cup in the air 50 times and found that the probability of it landing on its side was 72%. If he tosses the cup in the air 150 **more** times, what is the total number of times he can expect the cup to land on its side?

E. 72

F. 108

G. 144

H. 158

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. ■

112. (F) Since 5.6 ricks and 12.88 dalts are both equal to 1 sind, then 5.6 ricks = 12.88 dalts. To calculate the number of dalts (d) in 1 rick, set up a proportion:

$$\frac{5.6}{12.88} = \frac{1}{d}$$

$5.6d = 12.88$

$d = 2.3$

113. (D) The shelf, when full, holds 36 cans. When the shelf is half full, it holds 18 cans.

$x - 4 = 18$

$x = 22$

114. (G) The probability of the cup landing on its side is 72%. Carlos tossed the cup a total of 200 times (50 + 150). The number of times the cup lands on its side is 72% of 200:

$0.72 \times 200 = 144$

Answer Key for Sample Form B

1. C	14. G	27. A	40. G	53. C	66. F	79. C	92. E	105. B
2. F	15. A	28. F	41. D	54. H	67. C	80. F	93. D	106. F
3. C	16. G	29. D	42. E	55. B	68. F	81. B	94. G	107. C
4. H	17. A	30. G	43. B	56. G	69. D	82. G	95. D	108. G
5. B	18. G	31. C	44. F	57. A	70. G	83. B	96. H	109. A
6. H	19. B	32. E	45. C	58. 120	71. C	84. F	97. B	110. G
7. C	20. G	33. B	46. E	59. 3	72. F	85. C	98. G	111. A
8. E	21. B	34. F	47. A	60. -3.4	73. C	86. G	99. D	112. F
9. C	22. F	35. D	48. F	61. 300	74. H	87. B	100. E	113. D
10. F	23. D	36. E	49. D	62. 65	75. D	88. F	101. C	114. G
11. B	24. F	37. A	50. F	63. D	76. F	89. D	102. H	
12. H	25. A	38. G	51. D	64. E	77. A	90. E	103. C	
13. B	26. H	39. C	52. G	65. D	78. H	91. B	104. E	

CC

NEW YORK CITY PUBLIC SCHOOLS

USE A PENCIL ONLY

SIDE 2

2021 SPECIALIZED HIGH SCHOOLS ADMISSIONS TEST

GRADE 8

Test Booklet Letter | Test Booklet Number

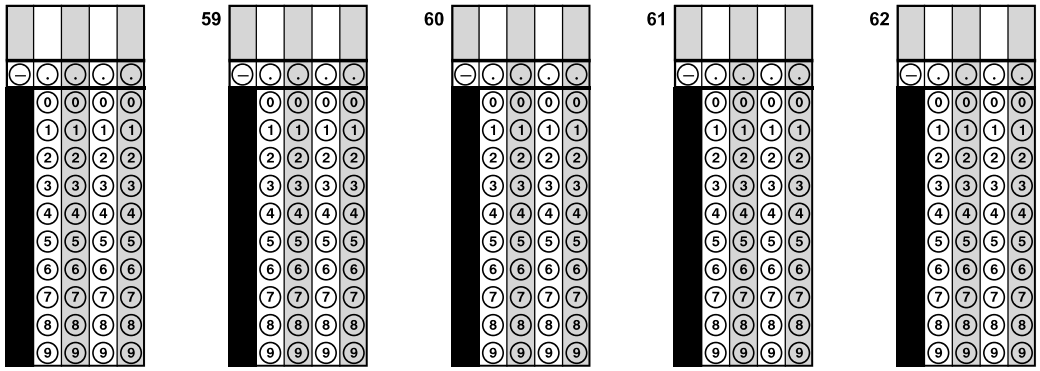
Student's First Name (please print) | Student's Last Name (please print)

PART 1 ENGLISH LANGUAGE ARTS

1	A	B	C	D	16	E	F	G	H	31	A	B	C	D	46	E	F	G	H
2	E	F	G	H	17	A	B	C	D	32	E	F	G	H	47	A	B	C	D
3	A	B	C	D	18	E	F	G	H	33	A	B	C	D	48	E	F	G	H
4	E	F	G	H	19	A	B	C	D	34	E	F	G	H	49	A	B	C	D
5	A	B	C	D	20	E	F	G	H	35	A	B	C	D	50	E	F	G	H
6	E	F	G	H	21	A	B	C	D	36	E	F	G	H	51	A	B	C	D
7	A	B	C	D	22	E	F	G	H	37	A	B	C	D	52	E	F	G	H
8	E	F	G	H	23	A	B	C	D	38	E	F	G	H	53	A	B	C	D
9	A	B	C	D	24	E	F	G	H	39	A	B	C	D	54	E	F	G	H
10	E	F	G	H	25	A	B	C	D	40	E	F	G	H	55	A	B	C	D
11	A	B	C	D	26	E	F	G	H	41	A	B	C	D	56	E	F	G	H
12	E	F	G	H	27	A	B	C	D	42	E	F	G	H	57	A	B	C	D
13	A	B	C	D	28	E	F	G	H	43	A	B	C	D					
14	E	F	G	H	29	A	B	C	D	44	E	F	G	H					
15	A	B	C	D	30	E	F	G	H	45	A	B	C	D					

PART 2 MATHEMATICS

58 59 60 61 62



63	A	B	C	D	76	E	F	G	H	89	A	B	C	D	102	E	F	G	H
64	E	F	G	H	77	A	B	C	D	90	E	F	G	H	103	A	B	C	D
65	A	B	C	D	78	E	F	G	H	91	A	B	C	D	104	E	F	G	H
66	E	F	G	H	79	A	B	C	D	92	E	F	G	H	105	A	B	C	D
67	A	B	C	D	80	E	F	G	H	93	A	B	C	D	106	E	F	G	H
68	E	F	G	H	81	A	B	C	D	94	E	F	G	H	107	A	B	C	D
69	A	B	C	D	82	E	F	G	H	95	A	B	C	D	108	E	F	G	H
70	E	F	G	H	83	A	B	C	D	96	E	F	G	H	109	A	B	C	D
71	A	B	C	D	84	E	F	G	H	97	A	B	C	D	110	E	F	G	H
72	E	F	G	H	85	A	B	C	D	98	E	F	G	H	111	A	B	C	D
73	A	B	C	D	86	E	F	G	H	99	A	B	C	D	112	E	F	G	H
74	E	F	G	H	87	A	B	C	D	100	E	F	G	H	113	A	B	C	D
75	A	B	C	D	88	E	F	G	H	101	A	B	C	D	114	E	F	G	H