GRADE 8

B

The New York City Department of Education

Mock 6 Specialized High School 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.

Line 3: Print your birth date with the number of the month first, then the number of the day, then the last two digits of the year. For example, a birth date of March 1, 2005, would be 3-1-05.

Grid 4: Print the letters of your first name, or as many as will fit, in the boxes. Write your name exactly as you did on the application. 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: Carefully copy the order in which you ranked the specialized high schools on your Test Ticket onto Grid 5. If Grid 5 is not marked correctly, your admission to a specialized high school will be affected because your admission is based on the score you achieve and the order in which you rank your school preferences in this grid. The school choices indicated on your answer sheet are final.

Fill in one and only one circle for each school for which you wish to be considered. You may make as few as one or as many as eight choices. To increase your chances of being assigned to one of the specialized high schools, you are encouraged to make more than one choice. You **must** fill in a first choice school. Do not fill in a school more than once. Do not fill in the same school for each choice. Fill in only one circle in a row and only one circle in a column.

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:

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 and fill in the circle under the corresponding number or letter for each digit of the school code. (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 8: Print your student ID number in Grid 8. 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.

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> UNTIL YOU ARE TOLD TO DO SO.**
>
> **TURN YOUR BOOKLET OVER TO THE BACK COVER.**

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GENERAL DIRECTIONS, continued

Identifying Information, continued

Grid 9: In most cases, Grid 9 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. Print your test booklet letter and numbers, and your name, first name **first**, in the spaces provided.

Marking Your Answers

Mark each of your answers on the answer sheet in the row of circles corresponding to the question number printed in the test booklet. Use only a Number 2 pencil. If you change an answer, be sure to erase it completely. Be careful to avoid making any stray pencil marks on your answer sheet. Each question has only one correct answer. If you mark more than one circle in any answer row, that question will be scored as incorrect.

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┌─────────────────────────────────────────┐
│  SAMPLE ANSWER MARKS                     │
│   Ⓐ    Ⓑ    Ⓒ    ●    RIGHT             │
│   Ⓧ    Ⓑ    Ⓒ    Ⓓ    WRONG            │
│   Ⓐ    Ⓧ    Ⓒ    Ⓓ    WRONG            │
│   Ⓐ    Ⓑ    Ⓒ    Ⓓ    WRONG            │
│   Ⓐ    Ⓑ    ●    ●    WRONG             │
└─────────────────────────────────────────┘
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You can use your test booklet or the provided scrap paper to take notes or solve questions; however, your answers must be recorded on the answer sheet in order to be counted. **You will not be able to mark your answers on the answer sheet after time is up, and answers left in the test booklet will not be scored.**

DO NOT MAKE ANY MARKS ON YOUR ANSWER SHEET OTHER THAN FILLING IN YOUR ANSWER CHOICES.

Planning Your Time

You have 180 minutes to complete the entire test. **How you allot the time between the English Language Arts and Mathematics sections is up to you.** If you begin with the English Language Arts section, you may go on to the Mathematics section as soon as you are ready. Likewise, if you begin with the Mathematics section, you may go on to the English Language Arts section as soon as you are ready. If you complete the test before the allotted time (180 minutes) is over, you may go back to review questions in either section.

Be sure to read the directions for each section carefully. Each question has only one correct answer. Choose the best answer for each question. When you finish a question, go on to the next, until you have completed the last question. Your score is determined by the number of questions you answer correctly. **Answer every question, even if you may not be certain which answer is correct.** Don't spend too much time on a difficult question. Come back to it later if you have time. If time remains, you should check your answers.

Students must stay for the entire test session.

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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 corrects the error in sentence structure in the paragraph?

Social media has dramatically changed the way people <u>communicate. Platforms</u> like TikTok, Instagram, and Facebook allow users to share their thoughts, ideas, and experiences with a global audience. While these tools have made it easier to stay in touch with friends and <u>family, they</u> have also raised concerns about privacy, misinformation, and mental health. The constant flow of information can be <u>overwhelming, the pressure</u> to maintain a curated online image often leads to feelings of inadequacy. Despite these challenges, social media has proven to be an invaluable resource for organizing social <u>movements, raising</u> awareness on important issues, and connecting individuals with similar interests from across the world.

    A. communicate: platforms
    B. on, that
    C. overwhelming; the pressure
    D. movements. Raising

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4. How should this sentence be revised?

To sign up for the varsity swim team, the paperwork should be submitted by students to Mrs. Fields.

- E. To Mrs. Fields students should submit the paperwork for the varsity swim team.
- F. The paperwork for the varsity swim team should be submitted to Mrs. Fields by students.
- G. To sign up for the varsity swim team, students should submit the paperwork to Mrs. Fields.
- H. Students, to sign up for the varsity swim team, should submit the paperwork to Mrs. Fields.

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REVISING/EDITING PART B

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

Common Cold

(1) From that first itch in your nose to your final cough, a cold generally lasts from seven to ten days. (2) Though researchers have yet to find a cure for these common but pesky viruses, some home treatments can provide relief from a cold's most unpleasant symptoms.

(3) During the first days of a cold, no symptoms will alert you that you've been infected, but by day three, you'll start to sneeze, your body may ache, and you'll likely have a tickle or soreness in your throat. (4) Next, you'll feel congestion in your sinuses; your nose will run and, due to inflammation around the airways, you may develop a cough that can persist after your other symptoms are long gone. (5) Fortunately, two weeks after the infection, you will produce antibodies that prevent you from catching that particular cold virus again. (6) Unfortunately, there exist around another 199 strains of cold virus, so you can easily pick up another one!

(7) Purported cold remedies are almost as common as the cold virus itself. Some, like staying hydrated and gargling with saltwater, will likely ease your symptoms. (8) Others, such as taking vitamin C, zinc, or echinacea, have conflicting evidence. (9) In traditional Chinese medicine, common colds are divided into 3 categories, and each is treated with different herbs. (10) Evidently, the common cold defies medical science; it eludes both our immune systems and the pharmaceutical industry.

(11) Colds are most often caused by rhinoviruses, a large family of viruses with hundreds of variants. (12) This makes vaccination impossible and gives our immune system a challenging task. (13) Additionally, these viruses evolve rapidly, so even if we could produce vaccines to cover the full spectrum of rhinoviruses, they would quickly become resistant. (14) However, according to a new study, help may soon be at hand.

(15) Professor Ed Tate of Imperial College London in the United Kingdom and his team of scientists are taking a new approach. (16) They have been looking for a compound to combat malaria and have found two molecules that become effective when combined. (17) Using advanced techniques, they used these two molecules to produce a new compound that blocks

an enzyme called N-myristoyltransferase (NMT), which is found in human cells. (18) Viruses normally steal NMT from human cells and use it to create a protective shell; NMT is vital for the survival of cold viruses. (19) All strains of the common cold virus use this technique, so inhibiting NMT would cure all strains of common cold virus. (20) However, more research will be needed to confirm its efficacy and safety.

5. Which sentence should replace sentence 2 to best state the topic of the passage?

   A. However, new research might soon eliminate the common cold once and for all.
   B. Though almost everyone has had a common cold, far too little is known about these pesky viruses.
   C. Many home remedies for colds are not supported by science and might even be dangerous.
   D. While getting a cold can be inconvenient, the common cold is a fascinating topic of study.

6. Read this sentence.

   Antibodies are produced by the immune system; they work by recognizing and killing antigens that the body has previously encountered.

   Where should the sentence be added to best support the ideas in the second paragraph (sentences 3–6)?

   E. after sentence 6
   F. between sentences 5 and 6
   G. between sentences 3 and 4
   H. between sentences 4 and 5

7. Which sentence presents information that shifts away from the topic of the third paragraph (sentences 7–10) and should be deleted?

   A. sentence 7
   B. sentence 9
   C. sentence 8
   D. sentence 10

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8. Which sentence should be added before sentence 11 to best transition to the ideas in the fourth paragraph (sentences 11–14)?

    E. Despite its name, what we call the common cold is actually caused by several different types of viruses.
    F. The rhinovirus is the most common virus among humans.
    G. Many wonder whether a vaccine could ever be developed to prevent the common cold.
    H. The common cold will most likely continue to infect humans for the foreseeable future.

9. Which concluding sentence should be added after sentence 20 to support the topic of the passage?

    A. This will include studying the long term effects on the immune system of *not* getting the common cold, which might affect immunity in other areas.
    B. However, even if NMT inhibition does prove effective at preventing viral colds, this will likely lead to an increase in bacterial infections.
    C. Until then, the next time you have a cold you may want to experiment with different treatments to see what works helps speed your recovery.
    D. Until then, it may be tempting to try the latest internet-approved remedy, but the best thing to do is take care of yourself by resting and drinking fluids.

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12. Which sentence could best follow sentence 16 and support the main point of the fourth paragraph (sentences 17–18)?

    E. Bike share programs are developed in cities mainly to improve air quality.

    F. Participating in a bike share program is the main way travelers can improve air quality in cities.

    G. Cities may begin to experience improved air quality as more travelers use bike share programs.

    H. Bike share programs may be more effective at improving air quality in some cities than they are in other cities.

13. Which sentence is irrelevant to the ideas in the third paragraph (sentences 11–16) and should be deleted?

    A. sentence 12

    B. sentence 14

    C. sentence 15

    D. sentence 16

14. Which sentence, if added to the last paragraph, would best support the information presented in the passage?

    E. Over time, bike sharing may become a routine part of modern urban life.

    F.

    G. Compared with other solutions, bike sharing seems to have the most potential.

    H. Ultimately, bike sharing is an interesting and unique way for tourists to explore a city.

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 —>

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Alexander Graham Bell

(1) In 1876, at the age of 29, Alexander Graham Bell invented the telephone. In 1877, he formed the Bell Telephone Company, and in the same year married Mabel Hubbard and embarked on a yearlong honeymoon in Europe.

(2) Bell might easily have been content with the success of his invention. His many laboratory notebooks demonstrate, however, that he was driven by a genuine and rare intellectual curiosity that kept him regularly searching, striving, and wanting always to learn and to create. He would continue to test out new ideas through a long and productive life. He would explore the realm of communications as well as engage in a great variety of scientific activities involving kites, airplanes, tetrahedral structures, sheep-breeding, artificial respiration, desalinization and water distillation, and hydrofoils.

(3) With the enormous technical and later financial success of his telephone invention, Bell's future was secure, and he was able to arrange his life so that he could devote himself to his scientific interests. Toward this end, in 1881, he used the $10,000 award for winning France's Volta Prize to set up the Volta Laboratory in Washington, D.C. A believer in scientific teamwork, Bell worked with two associates, his cousin Chichester Bell and Charles Sumner Tainter, at the Volta Laboratory. Their experiments soon produced such major improvements in Thomas Edison's phonograph that it became commercially viable. After 1885, when he first visited Nova Scotia, Bell set up another laboratory there at his estate, Beinn Bhreagh (pronounced Ben Vreeah), near Baddeck, where he would assemble other teams of bright young engineers to pursue new and exciting ideas.

(4) Among one of his first innovations after the telephone was the "photophone," a device that enabled sound to be transmitted on a beam of light. Bell and his assistant, Charles Sumner Tainter, developed the photophone using a sensitive selenium crystal and a mirror that would vibrate in response to a sound. In 1881, they successfully sent a photophone message over 200 yards from one building to another. Bell regarded the photophone as "the greatest invention I have ever made; greater than the telephone." Bell's invention reveals the principle upon which today's laser and fiber optic communication systems are founded, though it would take the development of several modern technologies to realize it fully.

(5) Over the years, Bell's curiosity would lead him to speculate on the nature of heredity, first among the deaf and later with sheep born with genetic irregularities. His sheep-breeding experiments at Beinn Bhreagh sought to increase the numbers of twin and triplet births. Bell was also willing to attempt inventing under the pressure of daily events, and in 1881 he hastily constructed an electromagnetic device called an induction balance to try and locate a bullet lodged in President Garfield after an assassin had shot him. He later improved this and

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produced a device called a telephone probe, which would make a telephone receiver click when it touched metal. That same year, Bell's newborn son, Edward, died from respiratory problems, and Bell responded to that tragedy by designing a metal vacuum jacket that would facilitate breathing. This apparatus was a forerunner of the iron lung used in the 1950s to aid polio victims. In addition to inventing the audiometer to detect minor hearing problems and conducting experiments with what today are called energy recycling and alternative fuels, Bell also worked on methods of removing salt from seawater.

(6) However, these interests may be considered minor activities compared to the time and effort he put into the challenge of flight. By the 1890s, Bell had begun experimenting with propellers and kites. His work led him to apply the concept of the tetrahedron (a solid figure with four triangular faces) to kite design as well as to create a new form of architecture. In 1907, four years after the Wright Brothers first flew at Kitty Hawk, Bell formed the Aerial Experiment Association with Glenn Curtiss, William "Casey" Baldwin, Thomas Selfridge, and J.A.D. McCurdy, four young engineers whose common goal was to create airborne vehicles. By 1909, the group had produced four powered aircraft, the best of which, the Silver Dart, made the first successful powered flight in Canada on February 23, 1909.

(7) Bell spent the last decade of his life improving hydrofoil designs, and in 1919 he and Casey Baldwin built a hydrofoil that set a world water-speed record that was not broken until 1963. Months before he died, Bell told a reporter, "There cannot be mental atrophy in any person who continues to observe, to remember what he observes, and to seek answers for his unceasing hows and whys about things."

(LOC,
https://www.loc.gov/collections/alexander-graham-bell-papers/articles-and-essays/inventor-and-scientist/)

10. Read the last sentence of the passage. The author most likely includes this quotation in order to

  E.   persuade readers to invest time and energy in observation and mental activity.
  F.   suggest that Bell developed technology related to aging and cognitive decline.
  G.   communicate Bell's personal values and dedication to lifelong learning.
  H.   explain how Bell managed to maintain his mental fitness into old age.

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13. Read this sentence from paragraph 6.

> **However, these interests may be considered minor activities compared to the time and effort he put into the challenge of flight.**

How does this sentence contribute to the development of ideas in the passage?
   A. It indicates that Bell was not truly interested in his work in other fields.
   B. It shows the depth and intensity of Bell's devotion to aeronautics.
   C. It tells the reader that Bell cared more about aeronautics than communications.
   D. It informs the reader that Bell's work in the other fields was less important.

14. Which sentence best summarizes Bell's professional trajectory?

   E. After obtaining early success, Bell dedicated himself to aeronautical research.
   F. After inventing the telephone, Bell was unable to focus on one field of research.
   G. Bell discovered his most significant inventions early in life, as a young man.
   H. Bell used his early success to dedicate his life to scientific research.

15. The central idea that Bell was "A believer in scientific teamwork." (paragraph 3) is conveyed in the passage primarily through

   A. discussing the lasting impact of Bell's inventions.
   B. explaining how Bell was influenced by others.
   C. listing the names of his different collaborators.
   D. the discussion of Bell's longtime assistant, Tainter.

16. The tone of the passage could best be described as

   E. reserved and curious.
   F. neutral and official.
   G. enthusiastic and admiring.
   H. excited and critical.

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The Picture of Dorian Gray

By Oscar Wilde, excerpt

(1) The studio was filled with the rich odour of roses, and when the light summer wind stirred amidst the trees of the garden, there came through the open door the heavy scent of the lilac, or the more delicate perfume of the pink-flowering thorn.

(2) From the corner of the divan of Persian saddle-bags on which he was lying, smoking, as was his custom, innumerable cigarettes, Lord Henry Wotton could just catch the gleam of the honey-sweet and honey-coloured blossoms of a laburnum, whose tremulous branches seemed hardly able to bear the burden of a beauty so flamelike as theirs; and now and then the fantastic shadows of birds in flight flitted across the long tussore-silk curtains that were stretched in front of the huge window, producing a kind of momentary Japanese effect, and making him think of those pallid, jade-faced painters of Tokyo who, through the medium of an art that is necessarily immobile, seek to convey the sense of swiftness and motion. The sullen murmur of the bees shouldering their way through the long unmown grass, or circling with monotonous insistence round the dusty gilt horns of the straggling woodbine, seemed to make the stillness more oppressive. The dim roar of London was like the bourdon note of a distant organ.

(3) In the centre of the room, clamped to an upright easel, stood the full-length portrait of a young man of extraordinary personal beauty, and in front of it, some little distance away, was sitting the artist himself, Basil Hallward, whose sudden disappearance some years ago caused, at the time, such public excitement and gave rise to so many strange conjectures.

(4) As the painter looked at the gracious and comely form he had so skilfully mirrored in his art, a smile of pleasure passed across his face, and seemed about to linger there. But he suddenly started up, and closing his eyes, placed his fingers upon the lids, as though he sought to imprison within his brain some curious dream from which he feared he might awake.

(5) "It is your best work, Basil, the best thing you have ever done," said Lord Henry languidly. "You must certainly send it next year to the Grosvenor. The Academy is too large and too vulgar. Whenever I have gone there, there have been either so many people that I have not been able to see the pictures, which was dreadful, or so many pictures that I have not been able to see the people, which was worse. The Grosvenor is really the only place."

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(6) "I don't think I shall send it anywhere," he answered, tossing his head back in that odd way that used to make his friends laugh at him at Oxford. "No, I won't send it anywhere."

(7) Lord Henry elevated his eyebrows and looked at him in amazement through the thin blue wreaths of smoke that curled up in such fanciful whorls from his heavy, opium-tainted cigarette. "Not send it anywhere? My dear fellow, why? Have you any reason? What odd chaps you painters are! You do anything in the world to gain a reputation. As soon as you have one, you seem to want to throw it away. It is silly of you, for there is only one thing in the world worse than being talked about, and that is not being talked about. A portrait like this would set you far above all the young men in England, and make the old men quite jealous, if old men are ever capable of any emotion."

(8) "I know you will laugh at me," he replied, "but I really can't exhibit it. I have put too much of myself into it."

(9) Lord Henry stretched himself out on the divan and laughed.

(10) "Yes, I knew you would; but it is quite true, all the same."

(11) "Too much of yourself in it! Upon my word, Basil, I didn't know you were so vain; and I really can't see any resemblance between you, with your rugged strong face and your coal-black hair, and this young Adonis, who looks as if he was made out of ivory and rose-leaves. Why, my dear Basil, he is a Narcissus, and you—well, of course you have an intellectual expression and all that. But beauty, real beauty, ends where an intellectual expression begins. Intellect is in itself a mode of exaggeration, and destroys the harmony of any face. The moment one sits down to think, one becomes all nose, or all forehead, or something horrid. Look at the successful men in any of the learned professions. How perfectly hideous they are! Except, of course, in the Church. But then in the Church they don't think. A bishop keeps on saying at the age of eighty what he was told to say when he was a boy of eighteen, and as a natural consequence he always looks absolutely delightful. Your mysterious young friend, whose name you have never told me, but whose picture really fascinates me, never thinks. I feel quite sure of that. He is some brainless beautiful creature who should be always here in winter when we have no flowers to look at, and always here in summer when we want something to chill our intelligence. Don't flatter yourself, Basil: you are not in the least like him."

(12) "You don't understand me, Harry," answered the artist. "Of course I am not like him. I know that perfectly well. Indeed, I should be sorry to look like him. You shrug your shoulders? I am

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telling you the truth. There is a fatality about all physical and intellectual distinction, the sort of fatality that seems to dog through history the faltering steps of kings. It is better not to be different from one's fellows. The ugly and the stupid have the best of it in this world. They can sit at their ease and gape at the play. If they know nothing of victory, they are at least spared the knowledge of defeat. They live as we all should live—undisturbed, indifferent, and without disquiet. They neither bring ruin upon others, nor ever receive it from alien hands. Your rank and wealth, Harry; my brains, such as they are—my art, whatever it may be worth; Dorian Gray's good looks—we shall all suffer for what the gods have given us, suffer terribly."

(13) "Dorian Gray? Is that his name?" asked Lord Henry, walking across the studio towards Basil Hallward.

(14) "Yes, that is his name. I didn't intend to tell it to you."

17. Read this sentence from paragraph 7.

> **"My dear fellow, why? Have you any reason? What odd chaps you painters are! You do anything in the world to gain a reputation. As soon as you have one, you seem to want to throw it away."**

What can be inferred about Lord Henry based on this sentence?

A. He believes that artists should be more humble about their work.
B. He feels that reputation is irrelevant in the art world.
C. He is frustrated with Basil's reluctance to exhibit the portrait.
D. He values fame and reputation above all else.

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18. In paragraph 12, how do the words "fatality," "faltering," and "defeat" contribute to the meaning of the passage?

     E. They suggest that success and distinction come with inevitable suffering and loss.
     F. They emphasize the idea that intellectual and physical distinction are equally burdensome.
     G. They imply that Basil's life is controlled by forces beyond his control.
     H. They reveal Basil's pessimistic view of life, where happiness is fleeting.

19. What is the effect of Lord Henry's comparison of the flying birds' shadows to Japanese painting?

     A. It disorients the reader, because the passage is unrelated to Japan or Japanese artwork.
     B. It reveals that Lord Henry sees and understands life as though it were artwork.
     C. It indicates that Lord Henry has trouble distinguishing between reality and fantasy.
     D. It positions the birds as symbols for something that is yet to be disclosed to the reader.

20. Lord Henry would likely agree with which of the following statements?

     E. Artists always put a part of themselves into their work, whether they realize it or not.
     F. True beauty comes from a balance of intellect and physical appearance.
     G. Being talked about, whether positively or negatively, is better than being ignored.
     H. Those who achieve success should remain humble and avoid jealousy.

21. Why does Basil believe that he has "put too much of" himself "into" the portrait?

     A. He worries that the painting will reveal secrets about him.
     B. He believes that Dorian Gray is too much like himself.
     C. He thinks both he and it are exceptional and therefore will suffer.
     D. He feels that he was too dedicated and focused while painting it.

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12. Which sentence could best follow sentence 18 and support the main point of the fourth paragraph (sentences 17-18)?

    E. Bike share programs are developed in cities mainly to improve air quality.

    F. Participating in a bike share program is the main way travelers can improve air quality in cities.

    G. Cities may begin to experience improved air quality as more travelers use bike share programs.

    H. Bike share programs may be more effective at improving air quality in some cities than they are in other cities.

13. Which sentence is irrelevant to the ideas in the third paragraph (sentences 11-16) and should be deleted?

    A. sentence 12
    B. sentence 13
    C.
    D.

14.

    E. Over time, bike sharing may become a routine part of modern urban life.

    F. Even small- or medium-sized cities can benefit from implementing a bike share program.

SHSAT Mock Test 6 *(adapted from Mock 2, 2021 B)*

Green Energy

(1) Fossil fuels, oil, and natural gas have provided the power we need to drive our cars, heat our houses, and operate our businesses for more than the last hundred years. Unfortunately, in about another hundred years, the world's reserves of fossil fuels will be depleted. The demise of the fossil fuel industry will not be mourned by all because carbon emissions are a source of pollution and a major factor in climate change. But the end of fossil fuels does mean there will be a crucial need for alternate sources of energy, and now is the time to find them. Wind and solar power are among the promising new sources of the energy our great-grandchildren will require in the next century.

(2) The wind and the sun provide renewable energy, at least as long as the wind blows and the sun shines. They are also free, though harvesting their energy is not. Their energy is stored in a similar manner. The sun's heat can be absorbed by specially designed panels, which convert the sun's heat and light into electrical energy, which is stored within a battery. High-tech windmills power a turbine, which converts wind into electrical energy and stores it within a battery. The two sources differ, however, in more ways than they are similar.

(3) Wind energy is more cost-effective than solar energy is. The panels that gather the sun's energy are more expensive to install—so expensive, in fact, that it may take many years before consumers start to save the money they would have spent on oil or natural gas. Wind is a more reliable source of energy because it can blow all day and all night. The sun cannot shine all day and all night, and even during the day, it can be blocked by clouds. Solar panels require less maintenance than wind turbines, but not so much less to make them more cost-effective.

(4) Solar panels do have the advantage when it comes to location. They can be installed on the roof of a house, in an urban neighborhood. Wind turbines are too noisy to erect in an urban neighborhood. They usually sprout on wind farms remote from urban settings, and even in oceans, where the wind can be fierce. The cost of transporting wind energy to the consumers and businesses that need it can be high. Too many wind farms are a blight on the landscape. And they can be lethal to inattentive birds, which all too frequently unwittingly fly into their deadly blades.

(5) Some environmentally conscious homeowners are installing both solar panels and wind turbines to provide uninterrupted energy to heat and light their houses and run their entertainment units and appliances. This approach solves or at least diminishes the problem of intermittent energy loss, which occurs when the sun is not shining or the wind is not blowing. It is not an ideal solution. Upfront installation costs are high. The wind turbine needs to be as high as possible to catch the wind, but it will still generate noise that might disturb the neighbors.

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Ironically, the system can produce too much energy, which can overwhelm and harm the batteries, or it might produce too little energy on calm nights.

(6) Those skeptical of the promise of green energy love the joke "Is the wind blowing? I want to watch TV tonight." There is still some truth in this jest. But green energy engineers continue to work hard to lower costs and improve performance, and they are confident that, properly harnessed, energy from the wind and the sun can significantly diminish our reliance on disappearing fossil fuels and improve the air we breathe.

Energy Costs in USD
■ Fossil Fuels ■ Wind ■ Solar
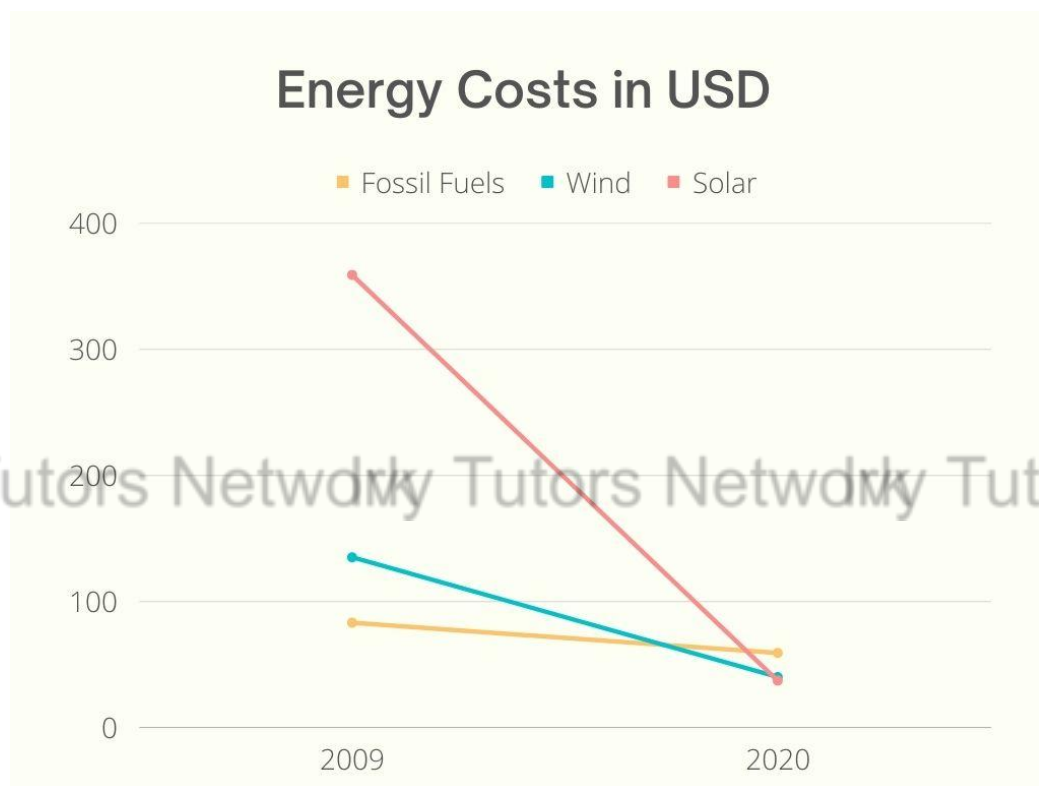
(Proprietary chart)

26. According to the passage, wind and solar energy

    E. have different disadvantages.
    F. are ideal replacements for fossil fuels.
    G. will never run out or stop existing.
    H. have the same cost-effectiveness.

START SHSAT PREP

27. All of the following are differences between wind and solar energy except their

    A. energy storage.
    B. installation costs.
    C. maintenance needs.
    D. reliability.

28. Read this sentence from the last paragraph.

    There is still some truth in this jest.

Which of the following is the best possible explanation for why the author includes this sentence?

    E. To communicate his personal bias against green forms of energy.
    F. To show he understands that concerns about green energy are legitimate.
    G. To reveal that he doesn't believe solar and wind will replace fossil fuels.
    H. To explicitly give the reader permission to be skeptical about green energy.

29. Which best describes the author's tone throughout the article?

    A. Reluctant and disengaged
    B. Passionate and informed
    C. Formal and neutral
    D. Opinionated and biased

30. Which of the following best describes the structure of the passage?

    E. A compare and contrast essay
    F. A personal narrative
    G. An argumentative essay
    H. An expository essay

START SHSAT PREP

31. Read the last sentence of the passage.

The words "confident" and "significantly" in the sentence convey the idea that

 A. there will be significant improvements to green energy technology.
 B. the author has confidence in these particular engineers.
 C. the green energy engineers are sure that they will succeed.
 D. the author knows that these efforts will be successful.

32. With which statement would the author most likely agree?

 E. Because of climate change, humanity will not survive another 100 years.
 F. Human beings will not be wiped out by climate change.
 G. Nuclear energy could help transition people away from fossil fuels.
 H. Economic issues are as important as the problem of climate change.

33. How does the chart provide additional support for the topic presented in the passage?

 A. It shows that the price of renewable energy is now comparable to that of fossil fuels.
 B. It shows that fossil fuels continue to fall in price and remain an affordable source of energy.
 C. It disproves the author's claim that one of solar energy's disadvantages is its high cost.
 D. It suggests that the low cost of wind energy will lead to more ruined landscapes and dead birds.

START SHSAT PREP

TAP TO GET FULL SHSAT MATERIALS & PREP

Ithaka

By C. P. Cavafy

(1) As you set out for Ithaka
hope your road is a long one,
full of adventure, full of discovery.
Laistrygonians, Cyclops,
(5) angry Poseidon—don't be afraid of them:
you'll never find things like that on your way
as long as you keep your thoughts raised high,
as long as a rare excitement
stirs your spirit and your body.
(10) Laistrygonians, Cyclops,
wild Poseidon—you won't encounter them
unless you bring them along inside your soul,
unless your soul sets them up in front of you.

Hope your road is a long one.
(15) May there be many summer mornings when,
with what pleasure, what joy,
you enter harbors you're seeing for the first time;
may you stop at Phoenician trading stations
to buy fine things,
(20) mother of pearl and coral, amber and ebony,
sensual perfume of every kind—
as many sensual perfumes as you can;
and may you visit many Egyptian cities
to learn and go on learning from their scholars.

(25) Keep Ithaka always in your mind.
Arriving there is what you're destined for.
But don't hurry the journey at all.
Better if it lasts for years,
so you're old by the time you reach the island,
(30) wealthy with all you've gained on the way,
not expecting Ithaka to make you rich.

Ithaka gave you the marvelous journey.
Without her you wouldn't have set out.
She has nothing left to give you now.

(35) And if you find her poor, Ithaka won't have fooled you.
Wise as you will have become, so full of experience,
you'll have understood by then what these Ithakas mean.

START SHSAT PREP

34. The phrase "As you set out for Ithaka" in the first line of the poem primarily serves to:

    E.   emphasize the physical challenges that lie ahead on a difficult journey.
    F.   encourage the traveler to approach the journey with optimism and purpose.
    G.   highlight the importance of focusing solely on the destination.
    H.   warn the traveler about the dangers posed by mythical creatures.

35. Which lines from the poem best support the idea that the journey is more rewarding than the destination itself?

    A.   "Hope your road is a long one. / Full of adventure, full of discovery." (lines 2–3)
    B.   "Keep Ithaka always in your mind. / Arriving there is what you are destined for." (lines 25-26)
    C.   "But don't hurry the journey at all. / Better if it lasts for years," (lines 27-28)
    D.   "Ithaka gave you the marvelous journey. / Without her, you wouldn't have set out." (lines 32-33)

36. The repetition of the word "Ithaka" in the poem is intended to:

    E.   symbolize the obstacles and hardships encountered on the journey.
    F.   emphasize the centrality of the destination in the traveler's thoughts.
    G.   remind the reader of the ultimate insignificance of reaching the goal.
    H.   highlight the inspiration and purpose Ithaka provides throughout the journey.

37. Which of the following best describes the tone of the poem?

    A.   Hopeful, as it encourages the traveler to embrace the journey and its lessons.
    B.   Regretful, as it laments the challenges faced along the way to Ithaka.
    C.   Detached, as it views the journey as an obligation rather than a joy.
    D.   Nostalgic, as it reflects on the past with longing for simpler times.

START SHSAT PREP

38. What does the line "Don't be afraid of the Laestrygonians, / the Cyclops, the angry Poseidon" (lines 5–6) mean?

    E.   The traveler will not encounter obstacles unless they carry fear within.
    F.   Mythical creatures will pose the greatest challenges on the journey.
    G. The journey will be dangerous, but the destination is worth the risk.
    H. Facing fears directly will ensure a swift and safe arrival at Ithaka.

39. Read lines 32–33:

    "Ithaka gave you the marvelous journey.
    Without her, you wouldn't have set out."

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

    A.   They celebrate Ithaka as the sole source of joy and fulfillment in life.
    B.   They suggest that the purpose of life lies in the experiences gained along the way.
    C.   They emphasize the importance of material wealth and the rewards of reaching a goal.
    D.   They criticize the idea of longing for an unreachable destination.

40. Which of the following lines describes how the traveler reflects on the journey rather than the destination?

    E.   Line 2
    F.   Line 12
    G. Line 16
    H. Line 24

41. How does the poet most effectively convey the poem's central theme about the journey of life?

    A.   By emphasizing the unpredictability of external obstacles that may hinder the traveler's progress.
    B.   Through the speaker's reflection on how personal growth and wisdom are gained through experiences along the way.
    C.   By illustrating the inevitability of reaching one's destination, regardless of the choices made during the journey.
    D.   Through the contrast between material wealth and the intangible rewards of ambition and perseverance.

START SHSAT PREP

Jumbo's Ghost

(1) In his 1886 book *The Ivory King*, the American naturalist Charles Fredrick Holder describes the status of elephants through a conservationist lens. While acknowledging that the elephant is "the true king of the beasts, the largest and most powerful of existing land animals, and to young and old a never ceasing source of wonder and interest," it is nevertheless "doomed." Citing prehistoric hunters and the contemporary ivory trade as major factors in the elephant's decline, Holder also mentions the "rapid advance of the British in the East, the introduction of railroads and improvements which mark the progress of civilization in India, where heretofore the elephant has been employed, cannot fail to have a fatal effect, and their extermination is only a matter of time." The elephant may be the "king of the beasts," but it can offer no competition to the steam locomotive and other Western technologies.

(2) While comparisons between elephants and machines are a common feature of twenty-first century consumer culture—elephant-adjacent terms like "mammoth" and, of course, "Jumbo," are regularly used when marketing motors and countless other commodities—the idea truly gained traction in the nineteenth century. The invention of steam locomotion coincided with the expansion of European imperialism in the parts of the world (Africa, South Asia, and Southeast Asia) that elephants call home. From a Western perspective, elephants were powerful and impressive animals that performed much of the work that machines did in Europe and North America. At the same time, it was clear to colonial observers that modern technology was not only superior to the physical labor of elephants, but it would also eventually displace them, perhaps even to the point of extinction. In his 1854 *Hard Times*, Charles Dickens famously describes the resemblance between "the piston of [a] steam engine work[ing] monotonously up and down" and "the head of an elephant in a state of melancholy madness," an image he returns to four more times in a relatively short novel. The blend of "melancholy" and "madness" that was so often used to portray captive elephants speaks to cultural anxieties about the powerful, unpredictable, and disruptive industrial machinery of the Victorian era.

(3) The symbolic clash Holder discussed between railroads and elephants has often resulted in literal collisions—and the best-known collision remains the death of Jumbo in 1885. Holder devotes a whole chapter to Jumbo, recounting the story of his capture and purchase in Africa, his many years at the London Zoological Gardens, his sale to P. T. Barnum, the outrage this purchase caused among the British public, and the scene of Jumbo's death in St. Thomas, Ontario. After a final performance of Barnum's circus, Jumbo was being led to his boxcar, when an unscheduled freight train bore down on him. Attempting to stop, it nevertheless struck Jumbo, whose body—weighing more than 13,000 lbs—derailed the engine and two cars. The elephant died some fifteen minutes later. In the 1889 edition of his autobiography, Barnum

SHSAT Mock Test 6 *(adapted from Mock 2, 2021 B)*

described the death of Jumbo as a "universally announced and regretted tragedy," and claimed to have received "hundreds of telegrams and letters of sympathy."

(4) Jumbo's death produced a curious catalog of material (and perhaps immaterial) remainders. To commemorate the tragedy's centenary in 1985, the city of St. Thomas installed a life-size statue of the elephant, crafted out of concrete and reinforced steel by the self-taught Canadian artist Winston Bronnum (who made a career creating giant animal sculptures as roadside attractions). And after Jumbo's death, his hide was stuffed and continued to tour with Barnum, eventually retiring to the showman's eponymous natural history museum at Tufts University, where the elephant became a school mascot. The taxidermied Jumbo was destroyed by a fire in 1975. All that remains of his great hide is the tail—accidentally severed and stored in the university archives—and a small pile of ashes, kept in a Peter Pan Crunchy Peanut Butter jar, which still resides in the office of Tufts' athletic director.

(5) The material objects of Jumbo's afterlife exist at extremes: heavy statues, a handful of ashes. This tension between the corporeal and incorporeal was noted at the time of Jumbo's death as well. While Barnum was displaying his skeleton, trying to cash in on the elephant's corpse, at least one writer imagined that death had somehow freed Jumbo from his bulky materiality. A jokey aside published in the September 26, 1885 issue of Chicago's *The Current* speculated that, "It may possibly be said that Jumbo's ghost will not have so much trouble in getting around the world as Jumbo had." Indeed, in the decades after his demise, the elephant's spirit seemed to haunt a variety of media.

AFRICAN ELEPHANT POPULATION OVER TIME
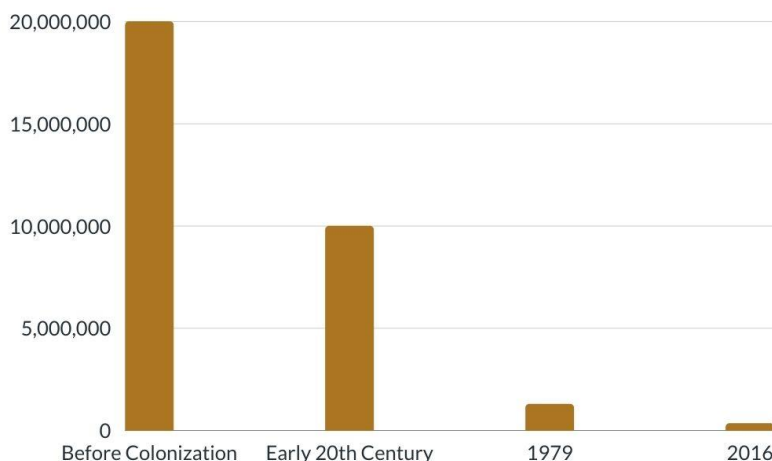
(edited for length, https://publicdomainreview.org/essay/jumbos-ghost)
(Proprietary chart)

START SHSAT PREP

42. According to the passage, Victorian depictions of captive elephants reflected

    E. environmental anxieties about causing animal extinctions.
    F. feelings of guilt about the brutality of colonialism and imperialism.
    G. cultural fears about the role played by technology and machinery.
    H. an ongoing fascination with ancient animals and unspoiled nature.

43. Which of the following is the best summary of Holder's perspective on elephants and technology?

    A. Elephants will go extinct as a necessary result of social and historical progress.
    B. The fact that we will cause elephants' extinction is a moral failing of our society.
    C. Animals will never be able to compete with human technology and are doomed.
    D. Human beings have a special responsibility to care for animals like elephants.

44. Nineteenth century attitudes about elephants

    E. have largely been forgotten in popular culture.
    F. raise questions about animal rights and welfare.
    G. continue to shape our view of these animals.
    H. left a legacy on certain marketing phrases.

45. Read the sentence from paragraph 3.

> **In the 1889 edition of his autobiography, Barnum described the death of Jumbo as a "universally announced and regretted tragedy," and claimed to have received "hundreds of telegrams and letters of sympathy."**

The reader is meant to interpret these details

    A. as indication that Barnum felt sincere remorse for the way he treated Jumbo.
    B. as a sincere and heartfelt statement from Jumbo's grieving owner.
    C. as troubling, because they reveal the public only cared after Jumbo died.
    D. with skepticism, as Barnum was likely responsible for Jumbo's death.

START SHSAT PREP

46. The author focuses on Holder's book in order to

    E. introduce the reader to a key thinker who is one of the main topics of the passage.
    F. explain why the author disagrees with Holder and his contemporaries.
    G. present a paradigmatic example of typical nineteenth century attitudes towards elephants.
    H. demonstrate how different the nineteenth century was to today.

47. What are the "immaterial remainders" referred to in paragraph 4?

    A. Jumbo's impact and memory.
    B. Jumbo's ashes and tail.
    C. the art that Jumbo has inspired.
    D. the role of elephants in the circus.

48. How do the details in paragraph 5 further develop the passage's perspective on Jumbo?

    E. They reveal that he was hugely influential and continued to be memorialized long after his death.
    F. They show that he continued to be exploited and disrespected after his death.
    G. They prove that Barnum never intended for Jumbo to be killed or harmed.
    H. They express the author's anger and sadness about the way Jumbo was treated.

49. Read this sentence from paragraph 3.

> **The symbolic clash Holder discussed between railroads and elephants has often resulted in literal collisions—and the best-known collision remains the death of Jumbo in 1885.**

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

    A. It marks a shift in tone from a more neutral, journalistic tone to one that is more biased.
    B. It begins an investigation of how, when, and why metaphorical ideas occur in reality.
    C. It transitions from a broader exploration of ideas in culture to the story of Jumbo.
    D. It draws a contrast between theoretical ideas and significant historical events.

START SHSAT PREP

TAP TO GET FULL SHSAT MATERIALS & PREP

12. Which sentence could best follow sentence 18 and support the main point of the fourth paragraph (sentences 17–18)?

E. Bike share programs are developed in cities mainly to improve air quality.

F. Participating in a bike share program is the main way travelers can improve air quality in cities.

G. Cities may begin to experience improved air quality as more travelers use bike share programs.

H. Bike share programs may be more effective at improving air quality in some cities than they are in other cities.

13. Which sentence is irrelevant to the ideas in the third paragraph (sentences 11–16) and should be deleted?

TAP TO GET FULL SHSAT MATERIALS & PREP

14. Which concluding sentence should replace sentence 20 to better support the information presented in the passage?

E. Over time, bike sharing may become a routine part of modern urban life.

F.

G. Compared with other solutions, bike sharing seems to have the most potential.

H. Ultimately, bike sharing is an interesting and unique way for tourists to explore a city.

The First Solo Flight Across the Atlantic

(1) On the morning of May 20, 1932, Amelia Earhart prepared for a flight that would make history. The weather was cold and cloudy, with winds coming from the northwest. The conditions weren't ideal, but Amelia was determined to proceed with her attempt to be the first woman to fly solo across the Atlantic Ocean. At 7:00 a.m., she met with her ground crew at a small airfield in Newfoundland, Canada. The winds were strong, and the sky was overcast, but Amelia felt confident in her abilities and was ready for the challenge.

(2) Her aircraft, a Lockheed Vega, had been carefully inspected the night before. Amelia knew the flight would be dangerous and needed everything to be perfect. Fuel tanks were filled, and the plane was checked for any mechanical issues. Although Amelia had flown long distances before, this journey was unlike any she had attempted. The Atlantic was vast, and the weather unpredictable. The success of the flight depended entirely on her focus, skill, and the performance of her plane.

(3) Amelia climbed into the cockpit, adjusted her gear, and checked her instruments one last time. She was flying solo for this journey, with no co-pilot or navigator to help guide her. It was just her and the open sky. As she tightened her seatbelt and donned her flight helmet, she felt a surge of determination. This flight was not just about breaking records—it was about proving that women could excel in aviation, just like their male counterparts.

(4) With a quick wave to the men on the ground, she started the engine. The roar of the propeller echoed across the field as the plane began to move down the runway. The cold wind whipped at her face, but she focused on the task ahead. The Lockheed Vega slowly picked up speed, and after a few moments, Amelia's plane lifted off the ground and into the clouds.

(5) Once airborne, Amelia had to carefully navigate through the dense fog and turbulent winds that made the flight difficult. As she flew further into the Atlantic, the weather grew more unpredictable. Dark clouds surrounded her, and the gusty winds rocked the plane back and forth. The engine hummed steadily, but there were moments when it sounded strained. Amelia's hands gripped the controls tightly as she skillfully adjusted the plane's course.

(6) Hours passed, and the flight became more grueling. The small cockpit was cramped, and Amelia had little room to stretch or move around. She had to rely on her training to maintain focus. The air grew colder, and the turbulence was relentless. Amelia fought against

her exhaustion, knowing that stopping wasn't an option. As the hours wore on, the fuel gauge dropped lower and lower. She knew that she would have to find land soon or risk running out of fuel. Every decision she made counted.

(7) After nearly 14 hours of flying, Amelia spotted a break in the clouds and saw the coastline of Ireland in the distance. The sight of land gave her a renewed sense of hope. But the journey wasn't over yet. She still had to navigate through the clouds and find a safe place to land. With the fuel tank dangerously low, Amelia knew she had only one chance to get it right.

(8) As she descended toward a small field near Derry, Ireland, she felt the tension in her body ease. She skillfully guided the plane down, making a smooth landing on the uneven ground. When the plane finally touched down at 9:00 p.m., she had completed the first solo transatlantic flight by a woman. She had flown 2,026 miles across the ocean, facing challenges from the weather, mechanical difficulties, and the long hours of isolation.

(9) The moment Amelia landed was a historic one, celebrated around the world. She had not only made an incredible achievement but had also shown that women could perform extraordinary feats in aviation. Her flight was a symbol of courage and perseverance, and it inspired countless others, especially women, to pursue their own dreams. Amelia Earhart had set a new standard for what was possible in flight, and her legacy would continue to inspire future generations of explorers and pilots.

START SHSAT PREP

51. How does the first paragraph of the passage introduce the idea that Amelia Earhart's flight was risky?

    A. through the mention of the small airfield where she took off, implying a lack of preparation.
    B. by describing the challenging weather conditions she faced, including cold temperatures and strong winds.
    C. by noting that Amelia was the only woman in her crew, making her flight more dangerous.
    D. through the suggestion that she had never flown in such poor weather before, adding to the uncertainty.

52. Read this sentence from Paragraph 4:

> **"Amelia climbed into the cockpit, adjusted her gear, and checked her instruments one last time."**

How does this sentence contribute to the development of ideas in the excerpt?

    E. It emphasizes Amelia's thorough preparation and focus before taking on the challenges of the flight.
    F. It suggests that Amelia was unsure of her ability to handle the flight and needed to check her instruments repeatedly.
    G. It highlights how the cockpit was not properly equipped, leading to complications during the flight.
    H. It shows that Amelia was confident and had no need for further preparation before beginning her journey.

53. How do the details in paragraph 6 about Amelia's handling of turbulence convey a central idea of the excerpt?

    A. by showing that the turbulence was a minor obstacle that had no impact on the overall success of the flight.
    B. by explaining how Amelia's ability to adjust the plane's controls in challenging conditions highlights her skill and resilience.
    C. by suggesting that the turbulence was the main factor that prevented the success of her flight.
    D. by describing how the turbulence caused Amelia to lose control of the plane, making the flight dangerous.

==START SHSAT PREP==

TAP TO GET FULL SHSAT MATERIALS& PREP

56. Read this sentence from paragraph 8:

> **"The moment Amelia landed was a historic one, celebrated around the world, for it marked not only a personal triumph but a groundbreaking achievement in the history of aviation."**

The words "historic," "celebrated," and "groundbreaking" most clearly convey the idea that:

E. The flight, though remarkable to the public, was seen as a small step forward in the broader context of aviation progress.
F. Amelia's landing was largely perceived as an isolated achievement without much long-term influence on the field of aviation.
G. The celebration surrounding the flight focused mainly on its novelty, rather than its lasting impact on aviation technology.
H. Despite its personal significance to Amelia, the flight was recognized as a transformative moment for aviation on a global scale.

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

A. illustrating the sequence of challenges Amelia faced during her flight and how she overcame them step by step.
B. showing how Amelia planned her flight and prepared for each stage, emphasizing her strategic thinking.
C. outlining the events leading up to Amelia's final flight, focusing on her previous accomplishments in aviation.
D. emphasizing the technical advancements in aviation that made Amelia's flight possible.

START SHSAT PREP

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.

START SHSAT PREP

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.

$$\frac{1}{5}(4x + 9) - x$$

After the expression above is simplified, what is the coefficient of x expressed as a decimal?

59.
Two number cubes have sides labeled 1 through 6. Both number cubes are rolled. How many different outcomes will have a sum of 4?

60.

15 cm

2 cm

5 cm

9 cm
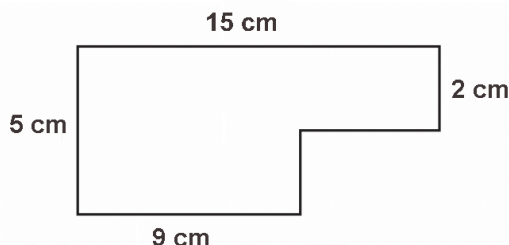
The figure above shows a scale drawing of a garden, where 1 centimeter represents 3 meters. What is the perimeter of the actual garden in meters?

START SHSAT PREP

61.
The temperature on a cold winter morning in Vermont increased from −8° Celcius to 2° Celcius between 6:00 a.m. and 10:00 a.m. By 11:00 a.m., the temperature was 1.5 times greater than the 10:00 a.m. temperature. What was the total increase in temperature between 6:00 a.m. and 11:00 a.m., in degrees Celsius?

62.
The figure below is a triangular prism. The lateral sides are rectangles.
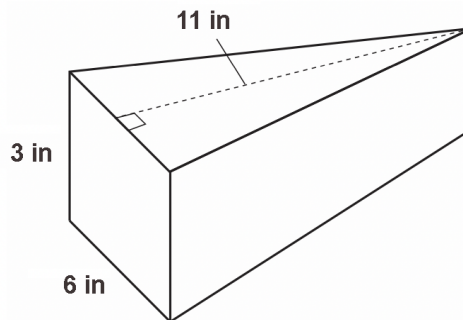
What is the volume of the figure, in cubic inches

SHSAT Mock Test 6 *(adapted from Mock 2, 2021 B)*

Multiple Choice Questions
Questions 63 - 114

Directions: Solve each problem. Select the best answer from the choices given. Mark the letter of each 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.
This graph shows y, the weight of a thin metal rod of length x.

Weight of Metal Rod
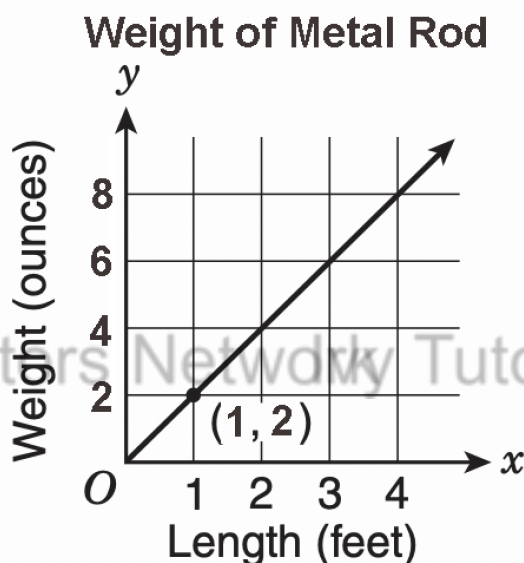
What is represented by the point with coordinates (1, 2)?

A. The unit rate is 2 ounces per foot.
B. The y-intercept is 2.
C. A pole 2 feet long weighs 1 ounce.
D. The length increases 2 feet for each 1 ounce of weight.

64.
The number line shows points E, F, G, and H.
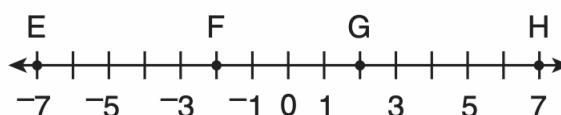
Which point represents the sum of $-5.5 - (-3.5)$?

E. point E
F. point F
G. point G
H. point H

65.
If $\dfrac{x}{14} = \dfrac{9}{7y}$, where x ≠ 0 and y ≠ 0, what is the product of x and y ?

A. 2
B. 9
C. 18
D. 36

31.

HOW PEOPLE GET TO WORK
IN CENTER CITY

Bicycle 4%

Car Pool 15%   Walk 22%
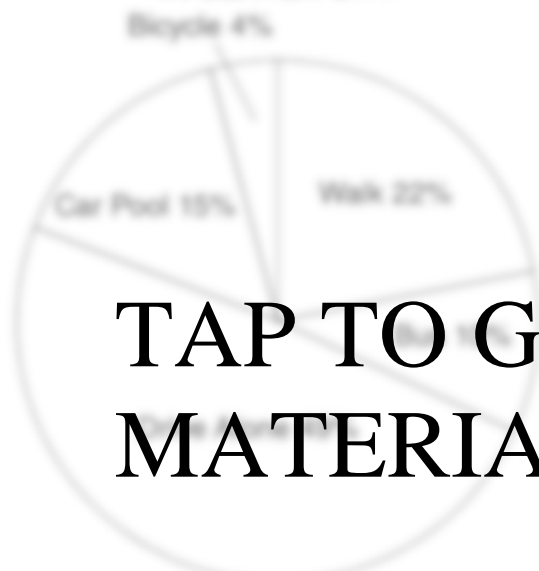
working in Center City = 15,000

How many more people in Center City walk to work than ride their bicycle to work?

A. 2,500
B. 2,700
C. 2,800
D. 3,000

32. Which of the following numbers has factors that include the smallest factor (other than 1) of 91?

E. 30
F. 33
G. 39
H. 44

33. In a scale drawing of a triangular banner, one side measures 16 centimeters and the other two sides each measure 12 centimeters. On the actual banner, these two sides each measure 36 feet. What is the length of the remaining side of the actual banner?

A. 16 ft
B. 32 ft
C. 40 ft
D. 48 ft

34. The faculty of a certain four-year college consists of 179 teachers. There are [...] in the total number of second-, third-, and fourth-year students?

F. 2,022
G. 2,052
H. 2,085

35. $8\frac{1}{5} + 3\frac{3}{10} + 4\frac{2}{5} + 5\frac{1}{2}$

What is the value of the expression shown above?

A. $14\frac{7}{20}$
B. $14\frac{2}{5}$
C. $15\frac{7}{20}$
D. $15\frac{2}{5}$

70.

$$2r + p = r(p + 1) + 1$$

In the equation above, if $p = 2$, what is the value of r ?

    E. 0
    F. 1
    G. 2
    H. 3

71.
Dmitri and Marcus have the same 840-page reading assignment. Dmitri reads at a rate of 30 pages per day. Marcus reads 40% more pages per day than Dmitri. If each begins on the same day, how many days sooner will Marcus complete the reading assignment than Dmitri?

    A. 4
    B. 8
    C. 12
    D. 17

72.
Delia is riding a bicycle on a circular track. Each lap around the track is 250 meters. She has already ridden a total of 1,250 meters. She wants to ride at least 6,000 meters in all. How many more laps does she need to ride to reach her goal?

    E. 5
    F. 6
    G. 15
    H. 19

73.
A store had 300 customers per day in the year 2000. Between 2000 and 2005 the number of customers per day increased by 60%. The number of customers per day increased again by 10% between 2005 and 2010. What was the number of customers per day in 2010?

    A. 370
    B. 480
    C. 490
    D. 528

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74.
A basket contains 14 blue balls, 3 yellow balls, and some red balls. The probability of choosing a blue ball at random is twice as great as the probability of choosing a red ball at random. What is the probability of choosing a yellow ball at random?

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

F. $\frac{5}{12}$

G. $\frac{7}{24}$

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

75.
An appliance store conducted a survey of its customers. The survey showed that 91.3% of its customers were satisfied with their purchase. What fraction of the customers were unsatisfied with their purchase?

A. $\frac{1}{913}$

B. $\frac{87}{1000}$

C. $\frac{87}{913}$

D. $\frac{913}{1000}$

76.
Siobhan was studying the number of fish in three different size ponds in her area. The table below shows the data she gathered.

NUMBER OF FISH IN PONDS

Size of Pond (sq ft)	Number of fish
150	400
300	800
450	1200

Which equation represents the relationship between the size of the pond, x square feet, and the number of fish, y?

E. $y = \frac{8}{3}x$

F. $y = \frac{3}{8}x$

G. $y = 4x + 15$

H. $y = 150x + 400$

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77.

Springfield is going to hold a vote on whether they should build a new library on the east side of town. The city board surveyed a random sample of 200 city residents to determine whether they would be in favor of building the new library. The table below shows the survey results.

SURVEY RESULTS

Opinion	Number of Residents
Yes	116
No	44
Undecided	40

The head of the city council estimates that half the undecided voters will vote in favor of building the library. Based on the survey results, if the head of the city council is correct, how many of the 16,800 voters will be in favor of building the park?

    A. 9,744
    B. 11,424
    C. 11,592
    D. 13,104

78.

$$-\frac{1}{25},\ -25,\ -\frac{1}{2},\ -1$$

Which number shown above is the **greatest**?

    E. $-\frac{1}{25}$
    F. -25
    G. $-\frac{1}{2}$
    H. -1

79.

What decimal is equivalent to $\frac{7}{-6}$?

    A. $-0.\overline{857142}$

    B. $-1.\overline{16}$

    C. $-1.1\overline{6}$

    D. -1.7

#1.

HOW PEOPLE GET TO WORK
IN CENTER CITY

Bicycle 4%

Car Pool 15%

Walk 22%

Bus 10%
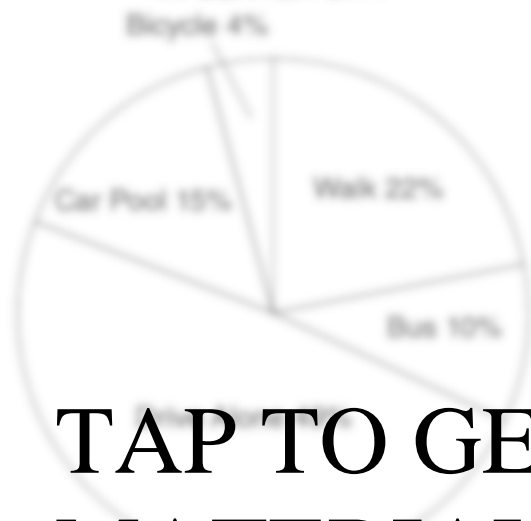
How many more people in Center City walk to
work than ride their bicycle to work?

A. 1,500
B. 1,700
C. 2,800
D. 3,000

#2. Which of the following numbers has factors
that include the smallest factor (other than 1)
of 91?

E. 30
F. 35
G. 39
H. 44

#3. In a scale drawing of a triangular banner, one
side measures 16 centimeters and the other
two sides each measure 12 centimeters. On
the actual banner, those two sides each
measure 36 feet. What is the length of the
remaining side of the actual banner?

A. 16 ft
B. 32 ft
C. 40 ft
D. 48 ft

#4. The faculty of a certain four-year college
consists of 179 teachers. There are
663 first-year students. The student-to-faculty
ratio for the entire college is 15 to 1. What is
the total number of second-, third-, and
fourth-year students?

E. 1,022
F. 1,021

#5.

$$3\tfrac{1}{5} + 5\tfrac{3}{10} + 4\tfrac{2}{5} + 5\tfrac{1}{2}$$

What is the value of the expression shown
above?

A. $14\tfrac{7}{20}$

B. $14\tfrac{2}{5}$

C. $15\tfrac{7}{20}$

D. $15\tfrac{2}{5}$

84.
Simplify:

$$5x - (6 + 1.5x) + 4$$

    E. $3.5x - 10$
    F. $3.5x - 2$
    G. $6.5x - 10$
    H. $6.5x - 2$

86.
Basket A contains 16 balls, and basket B contains 9 balls. The probability of drawing a red ball at random from Jar A is $\frac{3}{4}$. The probability of drawing a red ball at random from Jar B is $\frac{1}{3}$. All the balls are poured into an empty jar, Jar C. What is the probability of drawing a red ball at random from Jar C?

    E. $\frac{1}{4}$
    F. $\frac{7}{25}$
    G. $\frac{3}{5}$
    H. $\frac{4}{7}$

85.
Wilber can repair 3 lamps every 2 hours. At this rate, how long will it take them to repair 7 lamps?

    A. 4 hours 20 minutes
    B. 4 hours 40 minutes
    C. 5 hours 20 minutes
    D. 10 hours 30 minutes

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87.

SELENA'S BAG OF MIXED NUTS

Nut	Number in Bag
Peanuts	16
Almonds	12

Selena and her friends counted the numbers of peanuts and almonds in their bags of mixed nuts. The table above shows the number of each in Selena's bag. Whose bag of mixed nuts has a ratio of peanuts to almonds in the same proportion as Selena's bag?

A. AIDA'S BAG OF MIXED NUTS

Nut	Number in Bag
Peanuts	8
Almonds	20

B. BLAIR'S BAG OF MIXED NUTS

Nut	Number in Bag
Peanuts	15
Almonds	11

C. CODY'S BAG OF MIXED NUTS

Nut	Number in Bag
Peanuts	12
Almonds	8

D. DELCINA'S BAG OF MIXED NUTS

Nut	Number in Bag
Peanuts	12
Almonds	9

88.
If $y = 3x$, what is the value of
$2y + 3(y + 1) - 2x$ in terms of x?

E. $5x + 3$
F. $7x + 3$
G. $13x + 3$
H. $15x + 3$

89.
Two circular discs have the dimensions shown.
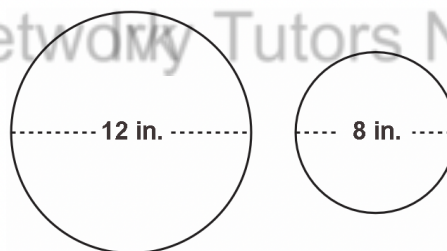
What is the difference between the areas of the two discs, in square inches?

A. 4π
B. 16π
C. 20π
D. 80π

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TAP TO GET FULL SHSAT MATERIALS & PREP

94.

Andrea gave two musical performances. Her second performance occurred 81 days after her first performance. If Andrea's second performance was on a Friday, on what day of the week was her first performance?
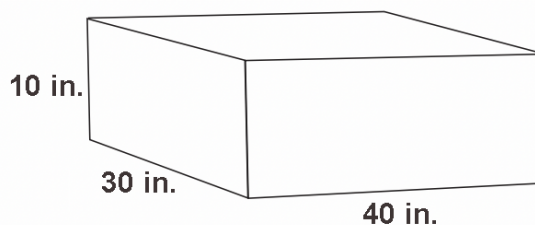
E. Monday
F. Tuesday
G. Wednesday
H. Thursday

96.

10 in.

30 in.

40 in.

What is the total surface area, in square inches, of the closed box shown above?

E. 1,900
F. 2,400
G. 3,800
H. 4,800

95.

Li-Mei received a check for $297 for working 20 hours at her part-time job. The amount on the check was her total pay after $33 in taxes was deducted. What was Li-Mei's hourly pay rate before taxes were deducted?

A. $13.20
B. $14.85
C. $16.50
D. $22.85

97.

The value of a particular truck decreases the same amount every year. If the car is worth $24,000 three years after its original purchase date and $16,000 five years after its original purchase date, what was the value of the truck on its original purchase date?

A. $27,200
B. $32,000
C. $36,000
D. $40,000

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98.

A basket contains 4 yellow, 3 red, and 2 green marbles. Kareem selects 3 disks from the bag at random, one at a time, without replacing them. What is the probability that he selects all 3 red disks?

E. $\dfrac{1}{72}$

F. $\dfrac{1}{84}$

G. $\dfrac{2}{243}$

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

99.

Baxter earns $\dfrac{1}{10}$% per year on the money in his savings account. Which expression is **not** another way to write $\dfrac{1}{10}$% ?

A. $\dfrac{0.001}{100}$

B. $\dfrac{0.10}{100}$

C. $\dfrac{1}{1000}$

D. $\dfrac{0.01}{10}$

100.

In 2011 a community garden had 100 members. In each of the next two years, the number of members increased by 20% over the number of members from the previous year. How many members were there in 2013?

E. 112
F. 120
G. 140
H. 144

101.

Which inequality is equivalent to $4x - 15 < x - 3(4 - 2x)$?

A. $x < 3$

B. $x < -\dfrac{3}{2}$

C. $x < -1$

D. $x > -1$

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102.
A box contains a total of 21 color pencils with colors in the ratio blue:red:green = 2:4:1. Suppose that one pencil of each color is removed from the box and not replaced. What is the probability that the next pencil chosen will be green?

E. $\dfrac{1}{21}$

F. $\dfrac{2}{21}$

G. $\dfrac{1}{9}$

H. $\dfrac{1}{7}$

104.
Byron has four different wooden toys he would like to paint. He has four different colors of paint and would like no two toys to be the same color. How many different ways are there to paint the four toys?

E. 4
F. 24
G. 64
H. 256

103.
The least positive integer evenly divisible by the first 5 positive integers is 60. What is the least positive integer evenly divisible by the first 7 positive integers?

A. 210
B. 420
C. 720
D. 840

105.
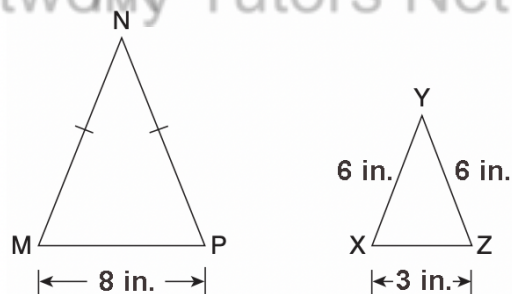
Triangle MNP is similar to triangle XYZ, and MN = NP. What is the perimeter of triangle MNP?

A. 20
B. 24
C. 30
D. 40

113.

SERVINGS OF FRUITS AND VEGETABLES

Number of Servings of Fruits and Vegetables	Number of Students
0	5
1	7
2	8
3	4
4	2

There are [...] Frequency [...] students in this class who ate 0, 1, 2, 3, or 4 servings of fruits and vegetables yesterday. [...] this class?

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

B. 2

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

D. 4

114. A paste is made by mixing the following ingredients by weight: 4 parts powder, 3 parts water, 2 parts resin, and 1 part hardener. One billboard requires 30 pounds of this paste. How many total pounds of resin are required for 4 billboards?

E. 6 lb.

F. 8 lb.

G. 24 lb.

H. 48 lb.

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

110.
Which graph represents the solution to
$|x| + 1 \geq 4$?

E.

F.

G.

H.

112.
Typically, a movie theater sells 3 times as many tickets on Saturday as on any weekday. They sell 2 times as many tickets on Sunday as on Saturday. If the number of tickets sold on Saturday and Sunday totaled 8,100, how many tickets are expected to be sold on the following Monday?

 E. 900
 F. 1,012
 G. 1,350
 H. 1,620
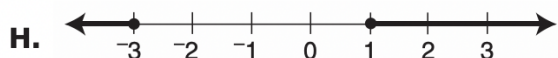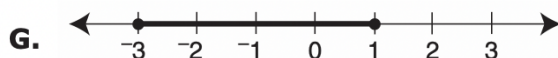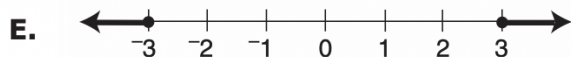
111.

A bathroom floor is 9 feet long and 7.5 feet wide. It will be covered completely with ceramic square tiles measuring 0.75 of a foot on each side. How many tiles will cover the floor?

 A. 67.5
 B. 75
 C. 90
 D. 120

113.
A rectangular field had a length of 100 meters and a width of 60 meters. The field was recently enlarged, with the length increased by 20% and the width increased by 15 meters. By what percentage was the area of the field increased?

 A. 20%
 B. 35%
 C. 50%
 D. 80%

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