MAIN IDEA DRILL

Read the following passage and write the main idea for each paragraph in the space on the right.

START TIME:

One of the most important discoveries in the history of astronomy was made by a computer in 1908. This may sound like an anachronism; computing machines of the early twentieth century, predecessors of our modern PC's, were nowhere near advanced enough to be making discoveries. However, this "computer" was not a machine at all, but a woman named Henrietta Swan Leavitt.

MAIN IDEA:

Throughout the nineteenth century, as optic technology burgeoned, academic institutions built larger and larger telescopes that could peer farther and farther into the night sky. With the invention of photography, observatories could now produce records of the images their telescopes captured. This meant the astronomers could leave the tedious work of data collection to low-paid workers without wasting valuable telescope time. These workers were called "computers", women who would compute the data in the photographs for 25 cents an hour.

MAIN IDEA:

Henrietta Leavitt was one such computer. Having graduated from Radcliffe College in 1892, she developed an interest in astronomy. The opportunities open to women in the scientific world being few and far between, she joined the photographic photometry department at the Harvard College Observatory as a computer. Her particular task was to search for "variables", stars whose brightness would vary over regular intervals, like a flashing street light. This sort of work resonated with her meticulous disposition, and she catalogued thousands of variables at an incredible rate.

MAIN IDEA:

While examining a group of variables within one of the Magellanic Clouds*, she noticed that the magnitude of the variables was directly proportional to the period of their pulsation. The brighter the star, the slower it flashed. This discovery was groundbreaking. For centuries, one of the chief mysteries of the universe was its size. Astronomers had no way of determining the distance to the stars. Brightness could be used as a guide, since objects are brighter when they are close and dimmer when they are far away. Brightness alone, however, can be deceptive without a frame of reference. To the casual observer, Venus seems about as bright as the North Star. But Venus is a planet, and is therefore much dimmer than any star. It only seems brighter because it is much, much closer to us. With Leavitt's discovery of the period-luminosity relationship, there was now a way to determine the *true* brightness of stars, not just the apparent brightness. While there were still a number of

MAIN IDEA:

CONTINUE

* The Magellanic Clouds are two galaxies visible from Earth.

questions to be answered before actual distances could be determined, Leavitt's discovery was fundamental to the eventual calculation of the size of the universe.

Leavitt never produced any other important work. She only worked sporadically, since she was plagued by poor health for most of her life. The most obvious factors working against her were her position and her sex. As a computer, she had no autonomy and could only work on what she was assigned, and as a woman, she had no chance for advancement. The tide of women's rights had begun to turn—Harvard would award a PhD in astronomy to a woman for the first time in 1925—but these changes came too late for Leavitt, who died of cancer in 1921. However, the importance of her discovery did not go unnoticed by the scientific community. Later astronomers such as Hubble and Hertzsprung acknowledged how indebted their work was to her discovery, and she was even nominated for a Nobel Prize five years after her death. Yet outside of academia, she remains little more than a footnote of history.

MAIN IDEA:

Spoiler alert: We're going to look at some questions about this passage over the next few pages. But this passage also appears in full with questions attached as a drill at the end of this chapter. Skip ahead to the end drill if you want to try them yourself first.

END TIME:

ANTICIPATION DRILL - MAIN IDEAS

Read the passage and anticipate for the questions. You get no answer choices. Deal with it. Just look up the line references, see what the passage says, and try to answer the question in your own words.

"Form ever follows function," the American architect Louis Sullivan decreed in 1896. Sullivan's motto offered a new way of approaching design problems, becoming the guiding principle for modernist movement in architecture for nearly a century. Up until this point, architecture throughout Europe and the United States had been dominated by Neoclassicism, a revival of Greek and Roman architectural styles. But as the twentieth century ushered in industrial innovations, designers sought to shake off conventions of the past and embrace a new aesthetic. In this era of growing cities and new production methods, buildings with fluted columns and gilded angels suddenly seemed old fashioned and out of touch. Modernists rejected these established styles, believing that the shape and substance of buildings should be dictated only by their purpose, not unnecessary adornment. The results of this philosophy were radical: details were pared down, and buildings took on a sleek, simple, almost naked quality. The ornate stone buildings of the past were replaced with minimalist structures made from plate glass and steel.

MAIN IDEA:

One noteworthy example of modernist architecture is the Guggenheim Museum, designed by Frank Lloyd Wright. The Guggenheim derives its visual appeal from its unusual shape, a simple spiral that gradually widens as it rises, standing in stark contrast to its rectilinear neighbors. This shape was inspired by the building's primary purpose of exhibiting artworks. Visitors enter the gallery at the ground level and slowly ascend the ramp, viewing pieces that are displayed on the periphery of the spiral, as light floods the center through a glass ceiling. In this way, visitors enjoy a traffic-free, continuous experience through the exhibition. By addressing function first, Wright was able to create a visually striking design that is also a work of art in its own right.

MAIN IDEA:

The modernist viewpoint was not confined to architecture, but was also adopted in the larger world of industrial and graphic design. Furniture designers, for example, rejected the traditional idea of a piece's value being defined by the quality of workmanship. Modernist furniture like the Eames lounge chair emphasized simplicity and accessibility. Designed by Charles and Ray Eames, the chair was made of three shell-shaped pieces fitted with leather cushions that could be easily disassembled for shipping. By separating the pieces of the chair, the design offered greater flexibility in reclining, but remained uncluttered and sophisticated. Likewise, poster designers in Switzerland developed Helvetica, a new typeface that epitomized the minimalism of modernist design by presenting stark,

MAIN IDEA:

CONTINUE

ANTICIPATION DRILL - MAIN IDEAS

Read the passage and anticipate for the questions. You get no answer choices. Deal with it. Just look up the line references, see what the passage says, and try to answer the question in your own words.

unadorned letters. Since the purpose of any text should be to convey information, Helvetica's simple letter shapes offered no curlicues or flourishes that might distract from the content of printed words.

Although modernism gave way to some of the most iconic designs of the twentieth century, other designers argued that whimsical elements can also contribute to an object's appeal. These dissenters felt that too strict an adherence to the "form follows function" mentality results in stifling uniformity and aesthetic boredom. After decades of impassive simplicity, they rediscovered the expressive power of decorative elements: architectural details, vibrant upholstery, or quirky fonts.

MAIN IDEA:

CONTINUE

ANTICIPATION DRILL

Read the passage and anticipate for the questions. You get no answer choices. Deal with it. Just look up the line references, see what the passage says, and try to answer the question in your own words.

"Form ever follows function," the American architect Louis Sullivan decreed in 1896. Sullivan's motto offered a new way of approaching design problems, becoming the guiding principle for modernist movement in architecture for nearly a century. Up until this point, architecture throughout Europe and the United States had been dominated by Neoclassicism, a revival of Greek and Roman architectural styles. But as the twentieth century ushered in industrial innovations, designers sought to shake off conventions of the past and embrace a new aesthetic. In this era of growing cities and new production methods, buildings with fluted columns and gilded angels suddenly seemed old fashioned and out of touch. Modernists rejected these established styles, believing that the shape and substance of buildings should be dictated only by their purpose, not unnecessary adornment. The results of this philosophy were radical: details were pared down, and buildings took on a sleek, simple, almost naked quality. The ornate stone buildings of the past were replaced with minimalist structures made from plate glass and steel.

One noteworthy example of modernist architecture is the Guggenheim Museum, designed by Frank Lloyd Wright. The Guggenheim derives its visual appeal from its unusual shape, a simple spiral that gradually widens as it rises, standing in stark contrast to its rectilinear neighbors. This shape was inspired by the building's primary purpose of exhibiting artworks. Visitors enter the gallery at the ground level and slowly ascend the ramp, viewing pieces that are displayed on the periphery of the spiral, as light floods the center through a glass ceiling. In this way, visitors enjoy a traffic-free, continuous experience through the exhibition. By addressing function first, Wright was able to create a visually striking design that is also a work of art in its own right.

The modernist viewpoint was not confined to architecture, but was also adopted in the larger world of industrial and graphic design. Furniture designers, for example, rejected the traditional idea of a piece's value being defined by the quality of workmanship. Modernist furniture like the Eames lounge chair emphasized simplicity and accessibility. Designed by Charles and Ray Eames, the chair was made of three shell-shaped pieces fitted with leather cushions that could be easily disassembled for shipping. By separating the pieces of the chair, the design offered greater flexibility in reclining, but remained uncluttered and sophisticated. Likewise, poster designers in Switzerland developed Helvetica, a new typeface that epitomized the minimalism of modernist design by presenting stark, unadorned letters. Since the purpose of any text should be to convey information, Helvetica's simple letter shapes offered no curlicues or flourishes that might distract from the content of printed words.

Although modernism gave way to some of the most iconic designs of the twentieth century, other designers argued that whimsical elements can also contribute to an object's appeal. These dissenters felt that too strict an adherence to the "form follows function" mentality results in stifling uniformity and aesthetic boredom. After decades of impassive simplicity, they rediscovered the expressive power of decorative elements: architectural details, vibrant upholstery, or quirky fonts.

1

As used in line 7, the word "dominated" most nearly means

2

The reference to "fluted columns and gilded angels" in line 12-13 is given in order to

3

Lines 14-17 ("Modernists… adornment") suggest that modernist buildings

CONTINUE

4

The passage states that the purpose of the "unusual shape" (line 25) of the Guggenheim is to

5

The passage suggests that, compared to the Guggenheim, the "neighbors" mentioned in line 27

6

As used in line 35, the word "striking" most nearly means

7

The primary purpose of the third paragraph (lines 37-55) is to

8

Lines 43-48 ("Designed … sophisticated") serve primarily to

9

Which of the following most closely describes the views of the "designers" mentioned in line 57?

10

The list in line 64 ("architectural… fonts") is intended to give examples of

CONTINUE

ELIMINATION DRILL

Here are the same passage and questions, but with answer choices. **Use your anticipations from the last drill** *and match them to the choices.* **Explain your reasoning** *by writing in the line below the choice, or by crossing out words that make the choice wrong.*

"Form ever follows function," the American architect Louis Sullivan decreed in 1896. Sullivan's motto offered a new way of approaching design problems, becoming the guiding principle for modernist movement in architecture for nearly a century. Up until this point, architecture throughout Europe and the United States had been dominated by Neoclassicism, a revival of Greek and Roman architectural styles. But as the twentieth century ushered in industrial innovations, designers sought to shake off conventions of the past and embrace a new aesthetic. In this era of growing cities and new production methods, buildings with fluted columns and gilded angels suddenly seemed old fashioned and out of touch. Modernists rejected these established styles, believing that the shape and substance of buildings should be dictated only by their purpose, not unnecessary adornment. The results of this philosophy were radical: details were pared down, and buildings took on a sleek, simple, almost naked quality. The ornate stone buildings of the past were replaced with minimalist structures made from plate glass and steel.

One noteworthy example of modernist architecture is the Guggenheim Museum, designed by Frank Lloyd Wright. The Guggenheim derives its visual appeal from its unusual shape, a simple spiral that gradually widens as it rises, standing in stark contrast to its rectilinear neighbors. This shape was inspired by the building's primary purpose of exhibiting artworks. Visitors enter the gallery at the ground level and slowly ascend the ramp, viewing pieces that are displayed on the periphery of the spiral, as light floods the center through a glass ceiling. In this way, visitors enjoy a traffic-free, continuous experience through the exhibition. By addressing function first, Wright was able to create a visually striking design that is also a work of art in its own right.

The modernist viewpoint was not confined to architecture, but was also adopted in the larger world of industrial and graphic design. Furniture designers, for example, rejected the traditional idea of a piece's value being defined by the quality of workmanship. Modernist furniture like the Eames lounge chair emphasized simplicity and accessibility. Designed by Charles and Ray Eames, the chair was made of three shell-shaped pieces fitted with leather cushions that could be easily disassembled for shipping. By separating the pieces of the chair, the design offered greater flexibility in reclining, but remained uncluttered and sophisticated. Likewise, poster designers in Switzerland developed Helvetica, a new typeface that epitomized the minimalism of modernist design by presenting stark, unadorned letters. Since the purpose of any text should be to convey information, Helvetica's simple letter shapes offered no curlicues or flourishes that might distract from the content of printed words.

Although modernism gave way to some of the most iconic designs of the twentieth century, other designers argued that whimsical elements can also contribute to an object's appeal. These dissenters felt that too strict an adherence to the "form follows function" mentality results in stifling uniformity and aesthetic boredom. After decades of impassive simplicity, they rediscovered the expressive power of decorative elements: architectural details, vibrant upholstery, or quirky fonts.

1

As used in line 7, the word "dominated" most nearly means

A) subdued.

B) intimidated.

C) characterized.

D) overshadowed.

2

The reference to "fluted columns and gilded angels" in line 12-13 is given in order to

A) describe some typical elements of modernist architecture.

B) bemoan the decline of artistic quality due to industrial growth.

C) give examples of stylistic elements that came to be seen as antiquated.

D) advocate for the renovation of dilapidated old structures.

CONTINUE

3

Lines 14-17 ("Modernists… adornment") suggest that modernist buildings

A) intentionally lacked excessive ornamentation.

B) used aesthetics based on Greek and Roman styles.

C) were constructed using innovative technology.

D) were harshly received by older critics.

4

The passage states that the purpose of the "unusual shape" (line 25) of the Guggenheim is to

A) exploit new construction materials.

B) distinguish it from older museums.

C) demonstrate Wright's artistic virtuosity.

D) enhance the building's intended use.

5

The passage suggests that, compared to the Guggenheim, the "neighbors" mentioned in line 27

A) are significantly different in appearance.

B) do not properly communicate their function.

C) display their artworks less effectively.

D) are not as visually appealing.

6

As used in line 35, the word "striking" most nearly means

A) shocking.

B) remarkable.

C) functional.

D) forceful.

7

The primary purpose of the third paragraph (lines 37-55) is to

A) extend the discussion of the previous paragraphs into other fields.

B) praise the simplicity and ingenuity of the Eames chair's design.

C) assess the repercussions of the changes previously mentioned.

D) analyze the critical response to the modernist aesthetic.

8

Lines 43-48 ("Designed … sophisticated") serve primarily to

A) demonstrate the expense and effort required to produce a high-quality chair.

B) show the difficulties of applying modernist principles to furniture design.

C) argue that architecture and furniture design both rely on outdated ideas.

D) elaborate on the convenience and innovation of a particular design.

CONTINUE

9

Which of the following most closely describes the views of the "designers" mentioned in line 57?

A) A building's shape should be dictated by its function.

B) Excessive focus on an object's purpose can lead to monotonous designs.

C) Modernism allows museums to be works of art in their own right.

D) Industrial materials like plate-glass and steel provide sleek, elegant construction.

10

The list in line 64 ("architectural… fonts") is intended to give examples of

A) embellishments that modernists valued for their expressive power.

B) features whose presence helps designers emphasize an object's function.

C) architectural elements that Sullivan sought to eliminate.

D) details that critics of modernism have come to appreciate.

STOP

CONVENTIONS OF USAGE EXERCISE

This exercise contains a full passage with 11 questions, just like an SAT passage. Unlike a real SAT passage, it only features ***Conventions of Usage*** *questions. Look out for all the rules discussed above.*

PASSAGE I

Bicycling the Copenhagen Way

Last summer, while my parents and I spent a few weeks in Copenhagen, I 1 developed a new fascination with bicycles. We noticed that bicycle culture there was far different from what we were used to in America. The number of bicycles on the city streets 2 were astounding. Almost every block in the center of town had a bike rack filled with them, sometimes overflowing onto the street. The city even had a free bicycle sharing program. 3 You could pick up a bike from an outpost in one part of the city and drop it off at our destination.

Americans don't use bicycles this way. Back home, people usually cycle for recreation or fitness. People associate bikes with memories of Dad running alongside them the first time they 4 had took off their training wheels, or teenagers riding mountain bikes down homemade ramps. Others think of triathlons or cardio machines at the gym. But places like Copenhagen engage in "utility cycling": locals use bikes simply as a way to get around town. About 500,000 residents of the city—over a third of 5 its population— 6 commutes by bicycle every day.

1

A) NO CHANGE
B) develop
C) am developing
D) would of developed

2

A) NO CHANGE
B) was
C) is
D) are

3

A) NO CHANGE
B) People
C) We
D) One

4

A) NO CHANGE
B) had took in
C) took off
D) take to

5

A) NO CHANGE
B) it's
C) they're
D) there

6

A) NO CHANGE
B) commuted
C) will commute
D) commute

CONTINUE

Utility cycling has many advantages over commuting by car, both for individuals and for the community as a whole. Cycling is a cleaner form of transportation because it produces no emissions. Cycling is safer than driving, both for passengers and for pedestrians. 7 It's also more economical than driving—bicycles are cheap to own and only 8 requires the fuel you need to run your body. On top of all that, it's great exercise and promotes a healthy lifestyle.

If utility cycling is so great, why don't more Americans do it? One problem is that American cities are not well equipped for bike travel. Most American cities are dominated by suburban areas 9 which neighborhoods are far from each other, making commutes too long and often too dangerous for bike travel. European cities have smaller, interconnected streets that are more bicycle-friendly.

While utility cycling in the United States 10 are still far less common than in Europe, more and more people have 11 started using bicycles for transportation. Cities from New York to Seattle have launched initiatives to encourage utility cycling. They have even contemplated bike-sharing programs like the one in Copenhagen. "All big cities should promote bicycle use," one transit official said. "Bicycles take cars off the road, which is a big win for everyone."

7

A) NO CHANGE
B) Its
C) Its'
D) Their

8

A) NO CHANGE
B) required
C) were required by
D) require

9

A) NO CHANGE
B) whom
C) whose
D) who's

10

A) NO CHANGE
B) were
C) is
D) was

11

Which of the following alternatives to the underlined portion would NOT be acceptable?

A) begun to use
B) started with using
C) started to use
D) begun using

STOP

SENTENCE STRUCTURE EXERCISE

This exercise contains a full passage with 11 questions, just like an SAT passage. Unlike a real SAT passage, it only features **Sentence Structure** *questions. Look out for all the rules discussed above. Enjoy!*

PASSAGE II

Scraping the Sky

As long as people have known how to build, people have tried to build tall structures. Skyscrapers as we know them are a modern 1 invention, but we can find examples of very tall buildings throughout ancient history. The Romans lived in *insulae*, high-rise apartment buildings that could rise to heights over 10 stories. Some medieval Italian cities featured stone towers over 200 feet 2 tall. Such as the Towers of Bologna or the Tower of Pisa. In Yemen, the walled city of 3 Shibam, which was built in the sixteenth century and consists entirely of buildings with five to eleven stories.

Buildings that tall, however, were rare until the nineteenth century. Because older buildings were made of materials like stone and brick, the outer walls bore the brunt of the building's 4 weight, this limited the maximum height that a tower could safely be built. However, 5 once engineer Henry Bessemer discovered a process for cheap steel production, buildings could be made with skeletal steel construction. A network of steel beams would distribute the weight of the building away from the outer walls, allowing taller construction on relatively small plots of land.

1

A) NO CHANGE
B) invention, we can find
C) invention. But finding
D) invention we can find

2

A) NO CHANGE
B) tall, some examples are
C) tall; such as
D) tall, such as

3

A) NO CHANGE
B) Shibam, built in the sixteenth century,
C) Shibam was built in the sixteenth century, it
D) Shibam, a sixteenth century building that

4

A) NO CHANGE
B) weight. Limiting
C) weight. This design limited
D) weight. Thus limiting

5

A) NO CHANGE
B) a process for cheap steel production, engineer Henry Bessemer discovered that
C) engineer Henry Bessemer, a process for cheap steel production, discovered
D) the discovery by engineer Henry Bessemer of a process for cheap steel production,

CONTINUE

Another problem was that tall buildings were 6 inconvenient; no one likes climbing ten flights of stairs every day. Elevators had existed in primitive form since the time of the Greek mathematician Archimedes, but they were cumbersome and dangerous. In 1852, Elisha Otis created the first safety elevator, which was equipped with a braking system to stop the car if the cables snapped. Furthermore, innovations in hydraulic and electric power made these new elevators practical to install and 7 they were maintained in urban environments.

These advancements, along with a few others like central heating and electric water pumps, made modern skyscrapers possible. Inspired by these developments, 8 a construction boom was started by engineers at the turn of the century. Soon, taller and taller skyscrapers 9 popped up in cities like Chicago and New York at an incredible rate. From 1890 to 1913, the record for the world's tallest skyscraper was broken eight times.

New designs in engineering continue to push the limits of human 10 achievement, this race to be the tallest has not stopped. In 2010, the city of Dubai celebrated the opening of the Burj 11 Khalifa. A huge tower that stands at 2,717 feet tall—over twice as tall as the Empire State Building. As we continue to create new technologies and building techniques, we will keep rising to new heights.

6

Which of the following alternatives to the underlined portion would NOT be acceptable?

A) inconvenient: no one
B) inconvenient. No one
C) inconvenient, no one
D) inconvenient—no one

7

A) NO CHANGE
B) for maintenance
C) maintaining
D) to maintain

8

A) NO CHANGE
B) engineers started a construction boom at the turn of the century.
C) a boom in construction at the turn of the century was started by engineers.
D) the turn of the century saw a construction boom started by engineers.

9

A) NO CHANGE
B) that popped
C) popping
D) to pop

10

A) NO CHANGE
B) achievement, and this
C) achievement the
D) achievement, the

11

A) NO CHANGE
B) Khalifa and is a huge tower standing
C) Khalifa, a huge tower stands
D) Khalifa, a huge tower that stands

STOP

CONVENTIONS OF PUNCTUATION EXERCISE

Here it is! Another passage! ***Punctuation*** *only! Wheeee!*

PASSAGE IV

My Dream Home

I recently moved into the apartment of my dreams. It's 1 tiny, its inconveniently located, and, it's too expensive. But the best thing about my apartment 2 is, the fact that it sits above a wonderful place called Emily's Bakery.

All independent 3 bakeries have a certain small-town charm to them, and this one is no different. The store, actually owned by a woman named Emily, is a very cute place, but proximity to a bakery is not the sort of thing one usually makes living decisions around. Living above a bakery, though, is more important to me than having walk-in closets or 4 beautiful wood, floors.

There's one thing that makes life above Emily's so 5 great; the smell. Nothing in the world is better than the smell of fresh bread coming into your apartment first thing in the morning. Because the store starts baking when I get up in the morning, I don't even need an alarm 6 clock, the aroma of warm rolls nudges me awake and eases me into the day. I can't imagine a more pleasant way to get up.

1

A) NO CHANGE
B) tiny it's inconveniently located, and
C) tiny, it's inconveniently located, and
D) tiny, it's inconveniently located; and

2

A) NO CHANGE
B) is the fact, that it sits above
C) is the fact that it sits above
D) is the fact that it sits, above

3

A) NO CHANGE
B) bakeries'
C) bakery's
D) bakerys'

4

A) NO CHANGE
B) beautiful, wood floors.
C) beautiful, wood floor's.
D) beautiful wood floors.

5

A) NO CHANGE
B) great? The
C) great! The
D) great: the

6

A) NO CHANGE
B) clock—the aroma
C) clock, the aroma,
D) clock the aroma;

CONTINUE

By now I can even distinguish all the different 7 rolls scents. I can tell what's coming out of the oven without leaving my bedroom. Baguettes have a rich, dense aroma. Surprisingly, the sourdough loaves smell more sweet than sour, almost like maple syrup. My favorites are the croissants. They're nice and buttery, and it's easy to detect the chocolate ones.

People are amazed to learn that, despite my obsession, I rarely keep any bread in the apartment. Why would I? If I want bread, I can just go downstairs and pick up something fresh. When I first moved in, this convenience made me a bit concerned about my weight. Fresh 8 cupcakes and doughnuts, sit literally steps away from my bedroom all day and much of the night! I've done a good job of staying in shape—I've actually lost 9 weight since moving here but, I have to be careful not to indulge myself too often.

I was also 10 worried that, constant exposure to the bakery's smell might desensitize me until I no longer noticed it. Even worse, I might start to resent the smell or even hate it. My friend Paul used to love Indian food before he moved next to an Indian restaurant. After three months there, the smell drove him so crazy that he had to move. But I've been here over a year now. The smell is still as wonderful as it was on the first 11 day and, I have no intention of ever leaving.

7

A) NO CHANGE
B) rolls' scent's.
C) roll's scents'.
D) rolls' scents.

8

A) NO CHANGE
B) cupcakes, and doughnuts sit
C) cupcakes and doughnuts sit
D) cupcakes and, doughnuts, sit

9

A) NO CHANGE
B) weight, since moving here but
C) weight since moving here—but
D) weight—since moving here but,

10

A) NO CHANGE
B) worried, that
C) worried, that,
D) worried that

11

A) NO CHANGE
B) day, and I have
C) day, and I have,
D) day and I have,

STOP

EXPRESSION OF IDEAS EXERCISE

This exercise contains a full passage with 11 questions, just like an SAT passage. Unlike a real SAT passage, it only features ***Expression of Ideas*** *questions. Look out for all the rules discussed above. Enjoy!*

PASSAGE V

Margaret Mitchell's First Novel

[1] It was clear from a young age that Margaret Mitchell had a knack for storytelling. [2] As a child growing up in Atlanta, she would make up tales by the hundreds, writing them in homemade 1 books, which she made herself. [3] After spending one year at Smith College, she eventually got a job as a columnist for the *Atlanta Journal*. [4] As she got older, she would write plays that she would act out with her friends. [5] Later, she was a literary editor of her high school yearbook and founded a drama society. [6] She became one of the first women to write for a major newspaper in the South. 2

While working at the newspaper, 3 an accidental injury launched her literary career. In 1926, she broke her ankle and was forced to stay home while it healed. Bored with her bed rest, she began to occupy herself by writing chapters for a novel. 4 She kept writing after her ankle healed, and the manuscript soon evolved into her masterpiece, the Civil War epic *Gone with the Wind*.

1

A) NO CHANGE
B) books by herself in her youth.
C) books she assembled by herself.
D) books.

2

For the sake of the logic and coherence of the paragraph, Sentence 3 should be placed:

A) where it is now.
B) after Sentence 1.
C) after Sentence 4.
D) after Sentence 5.

3

Which choice provides the most specific and detailed information?

A) NO CHANGE
B) a freak occurrence
C) a life-changing episode
D) the occasion of an unexpected event

4

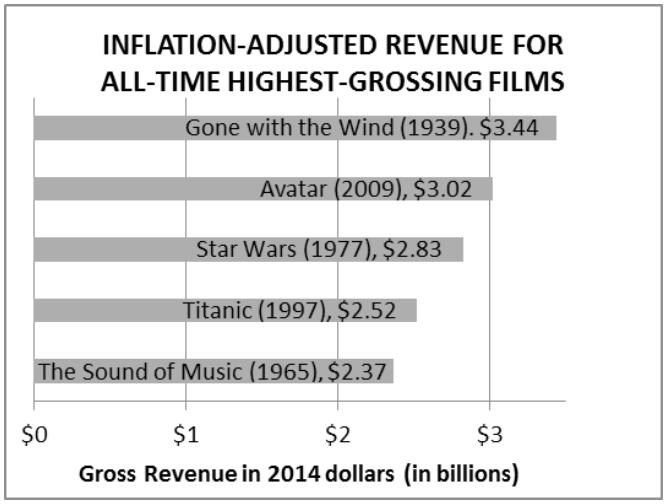
The writer wishes to indicate that writing the manuscript took a great deal of work. Which of the choices provides a vivid and specific detail that accomplishes that goal?

A) NO CHANGE
B) Three years and one thousand pages later,
C) Written with exquisite prose,
D) A story about the daughter of a Georgia plantation owner,

CONTINUE

5 She got some of the ideas for the book from her grandfather, a Civil War veteran. She was too humble and too bashful to show it to anyone or even to acknowledge that she had written anything. One day, when an editor from New York came to Atlanta looking for talented new authors, she graciously showed him around town without even mentioning her own book. 6 It was quickly accepted and finally published the following year.

Gone with the Wind received near universal praise both from the general public and from critics: the book sold millions of copies and won the Pulitzer Prize. 7 The film adaptation, premiering in Atlanta three years later, was just as popular as the book. It won ten Academy Awards, and 8 took in more than twice as much money as any other film in history when prices are adjusted for inflation.



5

Given that all the choices are true, which choice would provide the most effective transition from the previous paragraph while introducing the topic of this one?

A) NO CHANGE
B) She wrote the last chapter first and filled in earlier chapters in a random order.
C) It wasn't until 1936, however, that the book was actually published.
D) While most of the book was finished, she had not yet given the book a title.

6

Assuming that all the choices are accurate, which provides the most effective transition from the preceding sentence to this one?

A) Later that night, she changed her mind and decided to show him the manuscript.
B) Most publishing houses were based in the northeast.
C) Besides, at the time it was difficult for a woman to get a novel published.
D) Her job at the newspaper made her rather well known around town.

7

If the writer were to delete the phrase "and won the Pulitzer Prize" from the preceding sentence, the paragraph would primarily lose:

A) a detail that explains why Mitchell decided to write the book.
B) a contrast to the phrase "sold millions of copies" in the same sentence.
C) a statement that reveals how the book was made into a film.
D) a detail supporting the idea that the book was well received.

8

Which of the following most accurately and effectively represents the information on the graph?

A) NO CHANGE
B) took in more money in 1939 than any other film
C) cost more to make than any other movie in history
D) still holds the record as the highest-grossing movie of all time

CONTINUE

Despite the success of *Gone with the Wind*, Mitchell never published another novel. 9 In fact, the success of her first book may have prevented her from writing another. She had immediately become an international 10 celebrity almost overnight, but the constant demands of fame were overwhelming for her. 11 When a reporter once asked her whether she had been writing anything, she said she was too busy responding to mail about her last book to work on anything new. But even without writing any other books, she had secured literary immortality. Upon her death in 1949, her obituary described *Gone with the Wind* as "the most phenomenal best seller ever written by an unknown author of a first novel."

9

A) NO CHANGE
B) Consequently,
C) Therefore,
D) On the other hand,

10

A) NO CHANGE
B) celebrity incredibly quickly,
C) celebrity at once,
D) celebrity,

11

At this point, the writer is considering adding the following true statement:

> A steadfast humanitarian, she dedicated herself to volunteering with the American Red Cross upon the start of World War II.

Should the writer make this addition here?

A) Yes, because it provides evidence of Mitchell's international fame.
B) Yes, because it helps clarify Mitchell's reasons for writing the book.
C) No, because it repeats information given earlier in the essay.
D) No, because it is irrelevant to the focus of the paragraph.

STOP

BIG TECHNIQUE EXERCISE

Please enjoy this Big Technique Exercise! **You must use one of the Techniques—Plug In or Backsolve—on every problem on this exercise.** *If you get a question right, but did not use a technique, you will get no credit.*

1

If $a \neq 0$, then 25% of $12a$ equals

A) $3a$
B) $4a$
C) $8a$
D) $9a$

2

Rita has 5 fewer than 4 times the number of peaches that Sal has. If R represents the number of Rita's peaches and S represents the number of Sal's peaches, which of the following expressions correctly relates R and S?

A) $R = 4S - 5$
B) $R = 4(S - 5)$
C) $R = 5S - 4$
D) $R = 5S + 4$

3

What is the greatest of four consecutive integers whose sum is 26?

A) 5
B) 6
C) 7
D) 8

4

If x is a positive integer and $\frac{x+3}{2^x} = \frac{1}{4}$, then $x =$

A) 2
B) 3
C) 4
D) 5

CONTINUE

5

Last month Company A sold 200 more copy machines than Company B. This month, Company A sold 75 fewer than Company B. Which of the following must be true about Company A's total sales for the two months compared to Company B's?

A) Company A sold 275 fewer machines than Company B.

B) Company A sold 125 fewer machines than Company B.

C) Company A sold 125 more machines than Company B.

D) Company A sold 275 more machines than Company B.

6

To steam rice, Paul uses m cups of water for every p cups of rice. In terms of m and p, how many cups of water are needed to steam $p + 2$ cups of rice?

A) $m(p + 2)$

B) $\frac{m}{p+2}$

C) $\frac{m(p+2)}{p}$

D) $\frac{p}{m(p+2)}$

7

The width of a rectangular rug is one-sixth of the length. If the perimeter is 56, what is the rug's width?

A) 4
B) 7
C) 12
D) 24

8

The combined price of a pair of pants and a shirt is 100 dollars. If the pants cost 14 dollars less than 2 times the shirt, what is the price, in dollars, of the shirt?

A) 28
B) 38
C) 46
D) 62

CONTINUE

9

If $4^a = b$, which of the following equals $16b^2$?

A) 4^{4a}

B) 4^{a^4}

C) 4^{2a+2}

D) 4^{2a^2}

10

Let j, k, and m be integers, where $j > k > m > 1$. If $j \times k \times m = 120$, what is the greatest possible value of j?

A) 15
B) 20
C) 30
D) 60

11

Which of the following would yield the same result as multiplying by $\frac{6}{7}$ and then dividing by $\frac{2}{7}$?

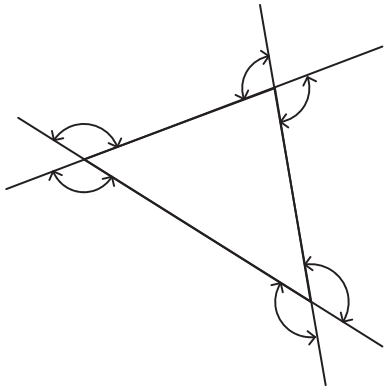
A) Multiplying by 3

B) Multiplying by $\frac{1}{3}$

C) Dividing by 2

D) Dividing by $\frac{1}{2}$

12



In the figure above, what is the sum of the measures of the marked angles?

A) 360
B) 540
C) 720
D) 900

CONTINUE

13

If $x \neq 0$, what is the value, in terms of x, of

$$\frac{3}{\frac{2}{x}} + \frac{1}{\frac{4}{10x}} \; ?$$

A) $\frac{1}{4x}$

B) $\frac{4}{x}$

C) $\frac{x}{4}$

D) $4x$

14

At a certain gym, 18 people take an aerobics class and 24 people take a karate class. If 32 people take only one of the two classes, how many people take both classes?

A) 5
B) 10
C) 13
D) 15

15

The length and width of a rectangle are both reduced by 60%. Its length and width are then both increased by 50%. The area of the rectangle is what percent of its original area?

A) 10%
B) 36%
C) 81%
D) 90%

STOP

HEART OF ALGEBRA EXERCISE

1

If $3x - 5 = 5x + 3$, then $x = ?$

A) 4
B) 1
C) −1
D) −4

2

If $9(x - 8) = -12$, $x = ?$

A) $-\frac{4}{3}$

B) $-\frac{3}{2}$

C) $\frac{20}{3}$

D) $\frac{69}{9}$

3

Weng is cataloguing all the books in the library. Each day he must enter one bookcase's books into a database. The number of books remaining to be catalogued at any point during the day can be modeled with the equation $B = 200 - 30h$, where B is the number of books remaining and h is the number of hours he has worked that day. What is the meaning of the number 30 in this equation?

A) There are 30 books in each bookcase.
B) It takes Weng 30 hours to catalogue all the books in one bookcase.
C) Weng catalogues books at a rate of 30 books per hour.
D) Weng catalogues books at a rate of 30 books per day.

4

The number of games that the baseball team won in 2010 is twice the number of games that it won in 2012. If the team won 42 games in 2010 and x games in 2012, which of the following equations is true?

A) $\frac{x}{2} = 42$

B) $x + 2 = 42$

C) $2x = 42$

D) $42x = 2$

CONTINUE

5

If $3(3x - 5) + 1 < 2x + 7$, which of the following expressions gives the solution set for x?

A) $x < -1$
B) $x > -1$
C) $x > 3$
D) $x < 3$

6

For all nonzero values of m, n and p, which of the following expressions gives the solution set for x of the equation $mx + n = p$?

A) $\frac{p+n}{m}$

B) $\frac{p-n}{m}$

C) $\frac{n-p}{m}$

D) $\frac{p}{m} - n$

7

$$x + 2y = -13$$
$$x + 3y = -22$$

According to the system of equations above, what is the value of x?

A) -35
B) -9
C) -7
D) 5

8

$$C = 8T + 36$$

Amir has determined that the number of ice cream cones he will sell on a given day is related to the temperature. The equation above estimates the relationship where T is the day's high temperature in °F and C is the number of ice cream cones he sells that day. How will the number of ice cream cones he sells change if the temperature increases by 4°F?

A) Amir will sell 4 more ice cream cones.
B) Amir will sell 8 more ice cream cones.
C) Amir will sell 32 more ice cream cones.
D) Amir will sell 40 more ice cream cones.

CONTINUE

9

$$4x + 5y = 2$$
$$3y - 2x = 10$$

What is the solution (x, y) to the system of equations above?

A) $(-7, 6)$
B) $(-2, 2)$
C) $(1, 4)$
D) $(4, 6)$

10

If $5x - 3 \leq 2$, what is the greatest possible value of $5x + 3$?

A) 1
B) 3
C) 5
D) 8

11

Raoul opens a bank account with simple interest, which can be calculated using $I = Prt$, where I is the interest, P is the initial amount of money invested, r is annual interest rate expressed as a decimal, and t is the time, in years. If Raoul invests \$1,000 with a 4% interest rate, how much interest will he earn after 5 years?

A) \$200
B) \$400
C) \$4,000
D) \$20,000

12

$$ax + 3y = -2$$
$$5x + 8y = -9$$

In the system of equations above, a is a constant and x and y are variables. For what value of a will the system of equations have no solution?

A) $-\frac{10}{9}$
B) $\frac{3}{8}$
C) $\frac{10}{9}$
D) $\frac{15}{8}$

CONTINUE

13

If a is the sum of t and 5, b is the sum of $3t$ and 13, and c is the sum of $2t$ and 6, what is the average of a, b, and c in terms of t ?

A) $t + 4$
B) $2t + 8$
C) $3t + 12$
D) $6t + 24$

14

For all real numbers a and b such that a is the sum of b and 5, which of the following expressions represents the product of b and 5 in terms of a ?

A) $5(a - 5)$
B) $5(a + 5)$
C) $5a$
D) $5a - 5$

15

If $a = \frac{x}{y - 2x}$, which of the following shows y in terms of x and a ?

A) $y = \frac{x}{a} - 2$
B) $y = \frac{x}{a} - 2a$
C) $y = \frac{x}{a}(1 + 2a)$
D) $y = \frac{3x}{a}$

STOP

PASSPORT TO ADVANCED MATH EXERCISE

1

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

A) -3
B) -2
C) 0
D) 2

2

$$\sqrt{x^2 + 16} - c = 0$$

If $x > 0$ and $c = 5$, what is the value of x?

A) 1
B) 3
C) 4
D) 5

3

Which of the following is equivalent to $(x - a)(x + b)$?

A) $x^2 - (b - a)x - ab$
B) $x^2 + (b - a)x - ab$
C) $x^2 + (a - b)x + ab$
D) $x^2 + (a + b)x + ab$

4

The expression $(4p + 3)(5p - 6)$ is equivalent to:

A) $20p^2 - 18$
B) $20p^2 - 3p - 18$
C) $20p^2 - 9p - 18$
D) $20p^2 + 39p - 18$

CONTINUE

5

$$(3x^4 - 2x^3 - 5) - 2(x^4 - 2x^3 + 3x^2 - 2x + 2)$$

The expression above is equivalent to which of the following expressions?

A) $x^{17} - 9$
B) $x^4 + 2x^3 - 6x^2 + 4x - 9$
C) $x^4 - 4x^3 + 3x^2 - 2x - 3$
D) $x^4 - 6x^3 + 6x^2 - 4x - 1$

6

If $x^2 \neq 16$, $\dfrac{(x+4)^2}{x^2-16} = ?$

A) $8x$

B) $-\dfrac{1}{4}$

C) $\dfrac{1}{x-4}$

D) $\dfrac{x+4}{x-4}$

7

$$x^2(x^2 - 10) = -9$$

Which of the following gives the solution set for x ?

A) $\{1, 3\}$
B) $\{1, 9\}$
C) $\{-3, -1, 1, 3\}$
D) $\{-9, -1, 1, 9\}$

8

If $f(x) = x^2 - 14$, then $f(x + c) = ?$

A) $x^2 + c - 14$
B) $x^2 - 14cx + c^2$
C) $x^2 + 2cx + c^2$
D) $x^2 + 2cx + c^2 - 14$

CONTINUE

9

The solution set for x for the equation $x^2 + kx - 12 = 0$ is $\{-3,4\}$. What does k equal?

A) -7
B) -1
C) 1
D) 7

10

If $f(x) = x^2 + 4$, what is $f(f(-2))$?

A) 0
B) 8
C) 20
D) 68

11

Which of the following expressions is equivalent to $6x^2 + 15x - 36$?

A) $(2x + 9)(3x - 4)$
B) $(6x - 3)(x + 12)$
C) $3(2x + 3)(x - 4)$
D) $3(2x - 3)(x + 4)$

12

Rosie opens a savings account with an initial deposit of $1,000. If the account offers 2% interest compounded annually, which of the following functions f shows the amount of her deposit after t years?

A) $f(t) = 1{,}000(1.02)^t$
B) $f(t) = 1{,}000(0.02)^t$
C) $f(t) = 1.02(1{,}000)^t$
D) $f(t) = 0.02(1{,}000)^t$

CONTINUE

13

If $x > 2$, which of the following is equivalent to

$$\frac{1}{x+5}+\frac{1}{x-2}?$$

A) $x^2+3x-10$

B) $\frac{1}{2x+3}$

C) $\frac{1}{x^2+3x-10}$

D) $\frac{2x+3}{x^2+3x-10}$

14

Which of the following quadratic expressions has solutions $x = -8m$ and $x = 2n^2$?

A) $x^2 + (8m - 2n^2)x - 16mn^2$

B) $x^2 + (8m + 2n^2)x + 16mn^2$

C) $x^2 - (8m + 2n^2)x + 16mn^2$

D) $x^2 - (8m - 2n^2)x - 16mn^2$

15

In reviewing her financial history, Zoe determined that in 2005 she spent $3,500 on food over the course of the year. She estimated that the annual amount she spent on food has increased by 5% every 3 years after 2005. If her expenses continue to grow at that rate, which of the following expressions represents her estimate of the amount she will spend on food t years after 2005?

A) $3{,}500(1.05)^{\frac{t}{3}}$

B) $3{,}500(1.05)^{3t}$

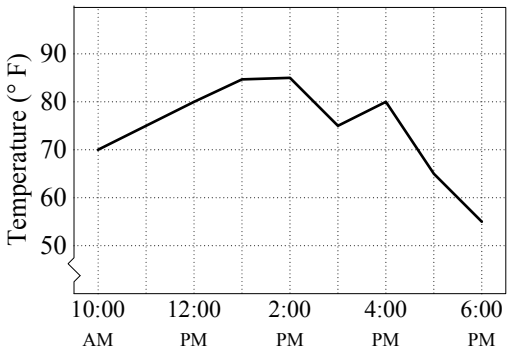
C) $3{,}500(0.05)^{\frac{t}{3}}$

D) $3{,}500(0.05)^{3t}$

STOP

PROBLEM SOLVING AND DATA ANALYSIS EXERCISE

1



The figure above shows the change in temperature in degrees Fahrenheit over the course of a certain day. In which of the following intervals is the temperature strictly increasing?

A) Between 10:00 AM and 12:00 PM
B) Between 12:00 PM and 2:00 PM
C) Between 2:00 PM and 4:00 PM
D) Between 4:00 PM and 6:00 PM

2

Four randomly chosen employees at Dave's company will win large cash prizes. If there are 100 employees at the company, what is the probability that Dave will <u>not</u> win?

A) $\frac{1}{100}$

B) $\frac{1}{25}$

C) $\frac{24}{25}$

D) $\frac{99}{100}$

3

Mr. Gordon surveyed a random sample of students in Seabreeze High School to determine what their new school mascot should be. Of the 70 students he surveyed, 32.8% preferred the mascot to be the Fightin' Sand Crabs. Based on this information, about how many students in the entire 425-person class would be expected to prefer the mascot to be the Fightin' Sand Crabs?

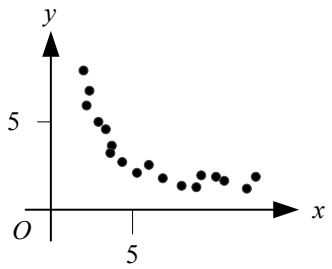
A) 130
B) 140
C) 150
D) 160

CONTINUE

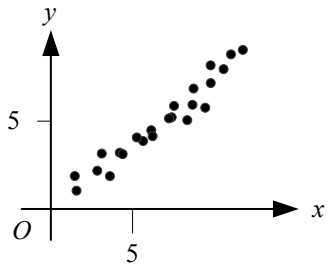
4

Which of the following scatterplots best shows a strong negative linear association between x and y ?

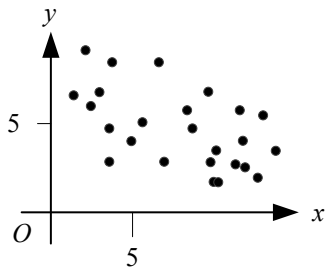
A)



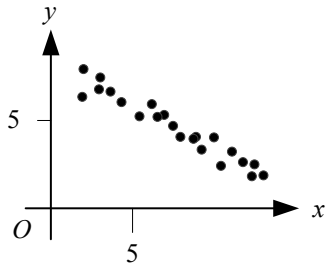
B)



C)



D)



Questions 5 and 6 refer to the following information

	Pronunciation		
Gender	Two syllables	Three syllables	Total
Male	8	6	14
Female	5	11	16
Total	13	17	30

Bob asked some of his coworkers how they pronounce the word "caramel". Some pronounced it with two syllables (CAR-mul), while other pronounced it with three syllables (CARE-ah-mell). The results are shown in the table.

5

According to the results, what is the ratio of men who pronounce the word with three syllables to women who pronounce it with two syllables?

A) $\frac{6}{5}$

B) $\frac{6}{11}$

C) $\frac{8}{5}$

D) $\frac{8}{11}$

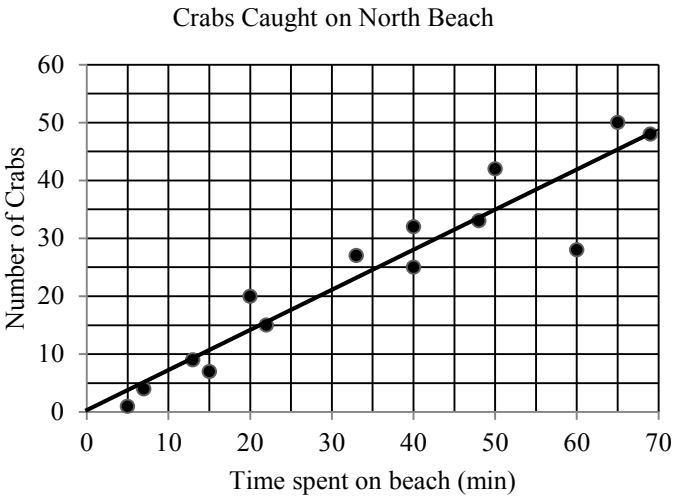
6

Approximately what percent of the women who responded pronounce the word with three syllables?

A) 31%
B) 36%
C) 65%
D) 69%

CONTINUE

Questions 7 and 8 refer to the following information



Carla made 15 trips to North Beach to try to catch crabs she found on the beach. The scatterplot above shows the amount of time she spent on each trip to the beach with the number of crabs she found on that trip.

7

According to the line of best fit in the scatterplot above, which of the following best approximates the amount of time it would take to find 25 crabs ?

A) 18 min
B) 30 min
C) 35 min
D) 40 min

8

On the trip that took 50 minutes, Carla actually caught about how many crabs more than the number predicted by the line of best fit?

A) 5
B) 7
C) 10
D) 12

CONTINUE

Questions 9 and 10 refer to the following information

Number of trees	Number of blocks
0	18
1	44
2	36
3	21
4	13
5	18
Total	150

A survey counted the number of trees on 150 randomly selected blocks in the town of New Shelbyville. The results are shown in the table above. There are a total of 20,000 blocks in New Shelbyville.

9

What is the median number of trees per city block in the survey?

A) 1
B) 2
C) 3
D) 4

10

Based on the survey data, which of the following is the closest to the expected total number of blocks that have at least one tree?

A) 8,800
B) 16,400
C) 17,600
D) 42,800

11

The average (arithmetic mean) of a, b, c, d, e, f, and g is 50. If the average of a, b and c is 30, what is the average of d, e, f, and g?

A) 40
B) 44
C) 55
D) 65

CONTINUE

Questions 12-14 refer to the following information

A survey studied 150 randomly selected students in each grade level across all 6 high schools in New Shelbyville. The survey gathered data about how many days during the 2014-2015 school year they missed school due to illness. The results are shown in the table below.

Sick Days Taken by Students in New Shelbyville High School, 2014-2015					
Grade	**0**	**1-2**	**3-4**	**5+**	**Total**
9	46	81	21	2	150
10	74	57	18	1	150
11	27	85	38	0	150
12	51	69	27	3	150
Total	198	292	104	6	600

12

Which of the following is closest to the percent of students who took at least 1 sick day?

A) 17%
B) 33%
C) 50%
D) 67%

13

Based on the data shown, what is the probability that a 12^{th} grader took 3 or more sick days?

A) $\frac{1}{5}$
B) $\frac{1}{50}$
C) $\frac{9}{50}$
D) $\frac{33}{50}$

14

Based on the survey data, how many times more likely is it for a 10^{th} grader to have taken no sick days than it is for an 11^{th} grader to have taken 3 or more sick days? (Round the answer to the nearest hundredth.)

A) 0.72
B) 1.38
C) 1.96
D) 3.77

15

There are 15 consecutive numbers in a list. Which of the following operations would change the value of the median?

A) Decreasing the smallest number by 5
B) Decreasing the largest number by 5
C) Increasing the smallest number by 8
D) Increasing the largest number by 8

STOP

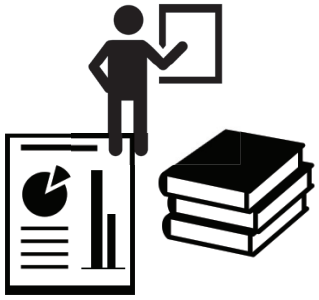
A LIST

A-LIST EDUCATION PRODUCTS & SERVICES

✔ Test Preparation & Advising

Our test prep program takes a unique approach matching each student's learning style and motivation with the right educator.

- In-person or online tutoring for the SSAT, SAT, ACT, GRE, LSAT, MCAT & more
- Full support for elementary, university, and graduate school application process
- Academic support, time management, and study skills development



✔ Direct Instruction

A-List provides direct instruction services to schools and institutions. Our class offerings can focus on any of the following subjects:

- ACT/SAT
- State Exams
- Core Skills
- College Readiness Programming

✔ Professional Development

Our professional development programs equip instructors with the resources to effectively integrate ACT/SAT content into existing curricula or to run a stand-alone test prep course. Offerings include:

- ACT/SAT Test Prep
- ACT/SAT Integrated Curriculum
- ACT/SAT Comparison
- Customized Academic Workshops

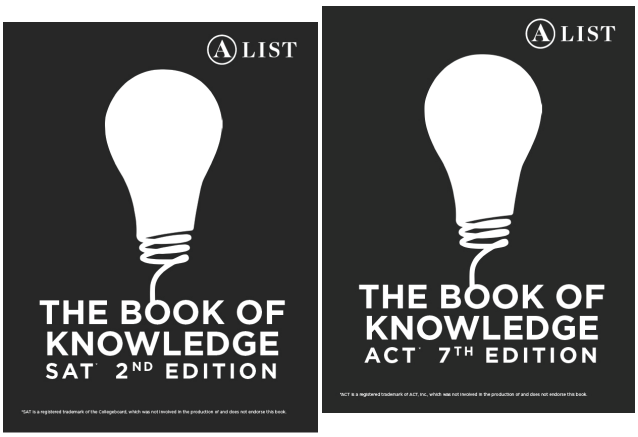
> *"We have been using A-List since 2012 and are very happy with our results. A-List has trained our teachers how to integrate SAT/ACT skills and use A-List materials in their classrooms. Our school SAT mean this year is 1211 compared to our district mean of 962. Overall, 97% of our students meet the SAT ELA benchmark, 89% of our students meet the SAT Math benchmark, and 95% of our students are above the district mean. Thank you!"*
>
> **- Kevin F., Principal, Manhattan Hunter Science High School, New York**

Learn more at www.alisteducation.com

The ACT/SAT Book of Knowledge

A-List's core text contains all the test taking skills and content necessary to conquer the ACT or SAT.

- ✔ **The Book of Knowledge SAT**
  Everything you need for the SAT
- ✔ **The Book of Knowledge SAT Student Solutions**
  Detailed explanations for the SAT book
- ✔ **The Book of Knowledge SAT Teacher Manual**
  All of the regular book alongside explanations
- ✔ **The Book of Knowledge ACT**
  Everything you need for the ACT
- ✔ **The Book of Knowledge ACT Student Solutions**
  Detailed explanations for the ACT book
- ✔ **The Book of Knowledge ACT Teacher Manual**
  All of the regular book alongside explanations



Visit www.alisteducation.com/bookstore to shop A-List's products!

ACT & SAT in The Classroom Series

This series reveals how the content of the ACT & SAT closely align with state standards. Teachers learn how to integrate test prep into an existing curriculum. Books are available for ACT ELA, ACT Math, SAT ELA, and SAT Math.

Online Test Content & Assessment Portal

The portal is a low-cost, automated, rapid solution for ACT & SAT scoring and analysis. Data allows teachers to steer instruction and address crucial topics. Features include:

- Test grading and analysis
- Downloadable lesson plans, quizzes, and drills
- Slides featuring explanations for every question in The Book of Knowledge

---

ACT & SAT Instructional Videos

Watch A-List's educators discuss every concept and question found in The Book of Knowledge.

- Advice from trainers with thousands of hours of classroom experience
- Highly engaging videos followed by assessments that ensure retention

---

Vocab Videos Online System + Workbook

Vocab Videos uses short videos to illustrate the meanings of 500 high-value high school vocabulary words.

- Quizzes and worksheets for each episode
- Multimedia flashcard maker
- Photo & video uploading (for students to create their own!)