

SAT

WORKSHOP

BOBBY KENNEY

**FIRST, THANK
YOU!**

LOGISTICS

- End @ 11
- Devices
- Free practice test Saturday 3/30 @ 9am
- (Final) Session 3 Saturday 4/13 @ 9am

GET THESE SLIDES

- Get today's and last week's slides:

experttestprep.com/columbine

TODAY'S GOALS

- Practice Reading and Writing problems
 - Rhetorical Synthesis (from last week)
 - Pronouns
 - Subject-verb agreement
 - Modifier placement
 - Punctuation rules
 - Vocab & Transitions
- Practice Math strategies
 - Continue using Desmos
 - Plug in answer choices to the question
 - Plug in your own numbers to the question

PART I

SAT REVIEW

SAT/PSAT ESSENTIAL STATS

- 2 sections with 2 modules each
 - Reading & Writing
 - Two 32-minute modules with 27 questions each (54 total questions)
 - Short, independent passages with 1 question each
 - (10-minute break)
 - Math
 - Two 35-minute modules with 22 questions each (44 total questions)
 - YOU CAN USE DESMOS!!!
- Totals: 98 questions in 2 hr 14 min

SAT/PSAT ESSENTIAL STATS, II

- Second module of both sections is adaptive
 - You will face either an easier or a harder set of questions, depending on performance on Module 1
 - ~470-530 per section is cut off between easier and harder second module
 - Getting the harder second module means your score potential is higher
 - Module 2 may present timing difficulties
 - Do as well as you can no matter what
 - Don't try to get the easy second module, or your score will be lower

SAT/PSAT ESSENTIAL STATS, III

- Scored out of 1600 points
 - Average score: 1060
- 89% of test is multiple choice
 - All multiple-choice questions have 4 answer choices
 - There is always only 1 correct answer
- ~11 math questions are student-produced response
 - Sometimes, a range of answers can be correct
 - These can have a negative answer
 - Answers accept up to 5 characters

5 SIMPLE STRATEGIES FOR SAT

1. *Practice! There are 4 official practice tests available*
 - Khan Academy has free, official SAT-prep course
2. USE DESMOS AS MUCH AS POSSIBLE!
3. Never leave a question blank
4. Guess on difficult questions, flagging them to return with extra time
5. Instead of always searching for the right answer, eliminate 3 wrong answers

PART II

READING AND WRITING

ORDER OF QUESTIONS

Questions always go in this order:

1. Vocabulary (2-4 questions)
2. Reading comprehension (10-12 questions)
 - a. Question types: main idea, draw conclusions, function of underlined portion, interpret data, scientific inference
3. Grammar (7-9 questions)
 - a. Question types: subject-verb agreement, pronoun choice, punctuation, modifier placement, apostrophes
4. Transitions (1-4 questions)
5. Rhetorical synthesis (2-5 questions)
 - a. New question type!

ORDER OF QUESTIONS

Do the questions in this order:

1. Vocabulary (2-4 questions)—1st
2. Reading comprehension (10-12 questions)—SKIP (5th)
 - a. Question types: main idea, draw conclusions, function of underlined portion, interpret data, scientific inference
3. Grammar (7-9 questions)—2nd
 - a. Question types: subject-verb agreement, pronoun choice, punctuation, modifier placement, apostrophes
4. Transitions (1-4 questions)—3rd
5. Rhetorical synthesis (2-5 questions)—4th
 - a. New question type!

TOP READING STRATEGIES

1. Do vocabulary first, then skip to grammar (~#15)
 - Get quick/easy questions out of the way first
2. Read question before reading text
3. Eliminate wrong answers
 - Extreme answer choices, ones that draw too far of a conclusion, ones that are the opposite meaning
4. Pay attention to transition words and negatives
5. Pay attention to connotation
6. Never leave any question unanswered

SPECIFIC READING QUESTIONS

1. Rhetorical synthesis
2. Grammar
 - Subject-verb agreement
 - Modifier placement
 - Punctuation rules
3. Vocabulary and transitions
4. Reading comprehension (final session)

RHETORICAL SYNTHESIS

- 4-8 questions total (7-15% of test)
- Always the last ones on a module
- Question features a series of bullet-point notes taken on a subject
- You are asked to synthesize the information to achieve a rhetorical goal
 - “The student wants to emphasize the aim of the research study.”
 - “The student wants to emphasize the study’s methodology.”
 - “The student wants to emphasize the duration and purpose of the Smith’s work.”

Problem-Solving Process

1. DO NOT READ THE NOTES
2. Read the first sentence of the question
3. Eliminate answer choices that do not achieve the goal
4. Only reference notes if two choices could answer the question



While researching a topic, a student has taken the following notes:

- The Seikan Tunnel is a rail tunnel in Japan.
- It connects the island of Honshu to the island of Hokkaido.
- It is roughly 33 miles long.
- The Channel Tunnel is a rail tunnel in Europe.
- It connects Folkestone, England, to Coquelles, France.
- It is about 31 miles long.



The student wants to compare the lengths of the two rail tunnels. Which choice most effectively uses relevant information from the notes to accomplish this goal?

- (A) Some of the world's rail tunnels, including one tunnel that extends from Folkestone, England, to Coquelles, France, are longer than 30 miles.
- (B) The Seikan Tunnel is roughly 33 miles long, while the slightly shorter Channel Tunnel is about 31 miles long.
- (C) The Seikan Tunnel, which is roughly 33 miles long, connects the Japanese islands of Honshu and Hokkaido.
- (D) Both the Seikan Tunnel, which is located in Japan, and the Channel Tunnel, which is located in Europe, are examples of rail tunnels.



student has taken the following notes:

- Ancient Native American and Australian Aboriginal cultures described the Pleiades star cluster as having seven stars.
- It was referred to as the Seven Sisters in the mythology of ancient Greece.
- Today, the cluster appears to have only six stars.
- Two of the stars have moved so close together that they now appear as one.

The student wants to specify the reason the Pleiades' appearance changed. Which choice most effectively uses relevant information from the notes to accomplish this goal?

(A)

Ancient Native American and Australian Aboriginal cultures described the Pleiades, which was referred to in Greek mythology as the Seven Sisters, as having seven stars.

(B)

Although once referred to as the Seven Sisters, the Pleiades appears to have only six stars today.

(C)

In the time since ancient cultures described the Pleiades as having seven stars, two of the cluster's stars have moved so close together that they now appear as one.

(D)

The Pleiades has seven stars, but two are so close together that they appear to be a single star.

While researching a topic, a student has taken the following notes:

- The Philadelphia and Lancaster Turnpike was a road built between 1792 and 1794.
- It was the first private turnpike in the United States.
- It connected the cities of Philadelphia and Lancaster in the state of Pennsylvania.
- It was sixty-two miles long.

The student wants to emphasize the distance covered by the Philadelphia and Lancaster Turnpike. Which choice most effectively uses relevant information from the notes to accomplish this goal?

- A. The sixty-two-mile-long Philadelphia and Lancaster Turnpike connected the Pennsylvania cities of Philadelphia and Lancaster.
- B. The Philadelphia and Lancaster Turnpike was the first private turnpike in the United States.
- C. The Philadelphia and Lancaster Turnpike, which connected two Pennsylvania cities, was built between 1792 and 1794.
- D. A historic Pennsylvania road, the Philadelphia and Lancaster Turnpike was completed in 1794.

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PRONOUNS

- ~2 questions per test
- Examples of pronouns:
 - It
 - They
 - You
 - We
 - He or she
 - One
 - This
 - These

PRONOUNS

1. Notice all 4 choices are pronouns
2. Find/highlight the pronoun's antecedent
 - a. The "antecedent" is the noun the pronoun stands for
 - b. Antecedent can only be in the sentence you are in or in the previous sentence
3. Choose the pronoun that matches in kind and number
 - a. e.g., if antecedent is "houses," then pronoun could be "they" but not "it"

PRONOUNS



The violins handmade in the seventeenth century by Italian craftsman Antonio Stradivari have been celebrated as some of the finest in the world. In close collaboration with musicians, Stradivari introduced changes to the shape of a traditional violin, flattening some of the instrument's curves and making _____ lighter overall.



Which choice completes the text so that it conforms to the conventions of Standard English?

(A) those

(B) one

(C) them

(D) it

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PRONOUNS



In 1930, Japanese American artist Chiura Obata depicted the natural beauty of Yosemite National Park in two memorable woodcuts: *Evening at Carl Inn* and *Lake Basin in the High Sierra*. In 2019, _____ exhibited alongside 150 of Obata's other works in a single-artist show at the Smithsonian American Art Museum.



Which choice completes the text so that it conforms to the conventions of Standard English?

(A) it was

(B) they were

(C) this was

(D) some were

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PRONOUNS

this perpetually dark environment. The bacteria have evolved to use hydrogen sulfide instead of sunlight for the energy that drives their metabolic processes, and hydrothermal venting is the source of the chemical soup necessary to support **4** him or her. Seawater seeping


4

- A) NO CHANGE
- B) one.
- C) them.
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PRONOUNS: IT'S VS ITS VS THEIR

- It's = It is
- Its = possessive
- Its' = NOT A WORD

- They're = They are
- Their = Possessive
- There = Place (“that car over there”)

PRONOUNS: IT'S VS ITS VS THEIR

donors. At **23** it's best, the system can give creators direct access to millions of potential backers.

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PRONOUNS: IT'S VS ITS VS THEIR

As the parade winds its way through Chinatown, the music crescendos, and the lion dance reaches **20** it's climax with the “plucking of the greens.” Approaching a

20

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- C) there
- D) their

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PRONOUNS: IT'S VS ITS VS THEIR

devour the kelp. [4] Like **29** their terrestrial plant

cousins, kelp removes carbon dioxide from the

atmosphere, turning it into sugar fuel through

photosynthesis, and releases oxygen back into the air.

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- ★ C) its
- D) it's

SUBJECT-VERB AGREEMENT

- ~2 questions per test
- All 4 choices will be the same verb but different conjugations of it
 - e.g., **was** vs **were** vs **has been** vs **was being**
- On SAT, 60% of these questions test subject-verb agreement, while other 40% test tense

SUBJECT-VERB AGREEMENT

1. Recognize that all 4 choices are different conjugations of the same verb
2. Find/highlight the subject
 - a. Earliest noun in the sentence after introduction
3. Remove all other words and test subject with choices
4. If unsure, replace singular subject with “it” and plural subject with “they” and sound out
5. If SAT is testing for tense instead, look for time clues in sentence and surrounding sentences

SUBJECT-VERB AGREEMENT

Narratives such as the heroic epic *Beowulf* and the
mournful poem *The Seafarer* has been passed on

16

by people being conversant for centuries.


- 16. F.** NO CHANGE
G. were
H. was
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SUBJECT-VERB AGREEMENT

that comes to mind. Yet some of the earliest known works of art, including paintings and drawings tens of thousands of years old found on cave walls in Spain and

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- A) NO CHANGE
- B) portraying
- C) portray
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SUBJECT-VERB AGREEMENT

Objects ranging from the Kikkoman soy sauce bottle to the Yamaha VMAX motorcycle to the Komachi bullet train _____ designed by twentieth-century industrial designer Kenji Ekuan.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. was
- B. is
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Which choice completes the text so that it conforms to the conventions of Standard English?

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- D. were ★

SUBJECT-VERB AGREEMENT

During the American Civil War, Thomas Morris Chester braved the front lines as a war correspondent for the *Philadelphia Press*. Amplifying the voices and experiences of Black soldiers _____ of particular importance to Chester, who later became an activist and lawyer during the postwar Reconstruction period.


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MODIFIER PLACEMENT

- Modifiers are words or phrases that describe other words in a sentence
 - a. Most commonly adjectives and adverbs
 - b. But can be verb phrases (especially -ing verbs)
- Modifiers **MUST** come next to the word they modify

Problem-Solving Process

1. Notice all 4 choices are the same wording but rearranged
2. Find the modifier
 - a. Usually it's the introduction to the sentence
 - b. Usually it's an -ing verb
3. Ask who or what the modifier is describing
4. Choose the answer that puts that word first

MODIFIER PLACEMENT

In assessing the films of Japanese director Akira Kurosawa, _____ have missed his equally deep engagement with Japanese artistic traditions such as Noh theater.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. many critics have focused on Kurosawa's use of Western literary sources but
- B. Kurosawa's use of Western literary sources has been the focus of many critics, who
- C. there are many critics who have focused on Kurosawa's use of Western literary sources, but they
- D. the focus of many critics has been on Kurosawa's use of Western literary sources; they

MODIFIER PLACEMENT

In assessing the films of Japanese director Akira Kurosawa, _____ have missed his equally deep engagement with Japanese artistic traditions such as Noh theater.

Who or what is “assessing the films”?
Put that word first

Which choice completes the text so that it conforms to the conventions of Standard English?

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Same words but rearranged

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D. the focus of many critics has been on Kurosawa's use of Western literary sources; they

“Critics” were assessing the films and therefore must be the first word

MODIFIER PLACEMENT

Despite being cheap, versatile, and easy to produce, _____ they are made from nonrenewable petroleum, and most do not biodegrade in landfills.


Which choice completes the text so that it conforms to the conventions of Standard English?

- A) there are two problems associated with commercial plastics:
- B) two problems are associated with commercial plastics:
- C) commercial plastics' two associated problems are that
- D) commercial plastics have two associated problems:

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“Commercial plastics” are “cheap, versatile, and easy to produce” and therefore must come first

MODIFIER PLACEMENT

In 1453, English King Henry VI became unfit to rule after falling gravely ill. As a result, Parliament appointed Richard, Third Duke of York, who had a strong claim to the English throne, to rule as Lord Protector. Upon recovering two years later, _____ forcing an angered Richard from the royal court and precipitating a series of battles later known as the Wars of the Roses.


Which choice completes the text so that it conforms to the conventions of Standard English?

- A. Henry resumed his reign,
- B. the reign of Henry resumed,
- C. Henry's reign resumed,
- D. it was Henry who resumed his reign,

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“Henry” is the one described as “recovering two years later,” so his name must be the first word

PUNCTUATION RULES

- Commas are the most common punctuation tested
 - These often come in pairs around interruptions
- Semicolons are identical to periods
 - Need an independent clause before and after
 - **Can eliminate semicolon and period if both are options with identical wording**
- Colons introduce or reveal
 - Need an independent clause before; after can be anything
- Dashes act like parentheses
 - These signal interruptions or side comments
- Consider the no-punctuation options

PUNCTUATION RULES



Beatrix Potter is perhaps best known for writing and illustrating children's books such as *The Tale of Peter Rabbit* (1902), but she also dedicated herself to mycology, the study of _____ more than 350 paintings of the fungal species she observed in nature and submitting her research on spore germination to the Linnean Society of London.



Which choice completes the text so that it conforms to the conventions of Standard English?

(A) fungi; producing

(B) fungi. Producing

(C) fungi producing

(D) fungi, producing

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PUNCTUATION RULES

As British scientist Peter Whibberley has observed, “the Earth is not a very good timekeeper.” Earth’s slightly irregular rotation rate means that measurements of time must be periodically adjusted.

Specifically, an extra “leap second” (the 86,401st second of the day) is _____ time based on the planet’s rotation lags a full nine-tenths of a second behind time kept by precise atomic clocks.



Which choice completes the text so that it conforms to the conventions of Standard English?

(A) added, whenever

(B) added; whenever

(C) added. Whenever

(D) added whenever

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added; whenever



added. Whenever



added whenever

VOCABULARY AND TRANSITIONS

Some members of the US Supreme Court have resisted calls to televise the court's oral arguments, concerned that the participants would be tempted to perform for the cameras (and thus lower the quality of the discourse). _____ the justices worry that most viewers would not even watch the full deliberations, only short clips that could be misinterpreted and mischaracterized.

Which choice completes the text with the most logical transition?

- A. However,
- B. Additionally,
- C. In comparison,
- D. For example,

Former astronaut Ellen Ochoa says that although she doesn't have a definite idea of when it might happen, she _____ that humans will someday need to be able to live in other environments than those found on Earth. This conjecture informs her interest in future research missions to the moon.

Which choice completes the text with the most logical and precise word or phrase?

- A. demands
- B. speculates
- C. doubts
- D. establishes

VOCABULARY AND TRANSITIONS

- 10-12 questions (~19-22% of test)
- Read full selection
- Pay attention to transition words already in the text and negatives (e.g., “however,” “although,” “while,” “but,” “not,” “don’t,” “didn’t”)
- Think of root words and prefixes/suffixes
- Identify the connotation(s) of the text
- Process of elimination and matching connotation are vital for these

VOCABULARY AND TRANSITIONS

Researchers Helena Mihaljević-Brandt, Lucía Santamaría, and Marco Tullney report that while mathematicians may have traditionally worked alone, evidence points to a shift in the opposite direction. _____ mathematicians are choosing to collaborate with their peers—a trend illustrated by a rise in the number of mathematics publications credited to multiple authors.

Which choice completes the text with the most logical transition?

- A) Similarly,
- B) For this reason,
- C) Furthermore,
- D) Increasingly,

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VOCABULARY AND TRANSITIONS

Following the principles of community-based participatory research, tribal nations and research institutions are equal partners in health studies conducted on reservations. A collaboration between the Crow Tribe and Montana State University _____ this model: tribal citizens worked alongside scientists to design the methodology and continue to assist in data collection.

Which choice completes the text with the most logical and precise word or phrase?

- A. circumvents
- B. eclipses
- C. fabricates
- D. exemplifies

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VOCABULARY AND TRANSITIONS

In studying the use of external stimuli to reduce the itching sensation caused by an allergic histamine response, Louise Ward and colleagues found that while harmless applications of vibration or warming can provide a temporary distraction, such _____ stimuli actually offer less relief than a stimulus that seems less benign, like a mild electric shock.

Which choice completes the text with the most logical and precise word or phrase?

- A. deceptive
- B. innocuous
- C. novel
- D. impractical

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VOCABULARY AND TRANSITIONS

The artisans of the Igun Eronmwon guild in Benin City, Nigeria, typically _____ the bronze- and brass-casting techniques that have been passed down through their families since the thirteenth century, but they don't strictly observe every tradition; for example, guild members now use air-conditioning motors instead of handheld bellows to help heat their forges.

Which choice completes the text with the most logical and precise word or phrase?

(A) experiment with

(B) adhere to

(C) improve on

(D) grapple with

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(D) grapple with

PART III

MATH

SAT MATH TIPS

1. Use Desmos as much as possible
2. Guess on difficult questions, and flag them to return
3. Focus on what you DO know, not what is confusing you
4. If you don't see how to solve the entire problem, take one step you know you can take
5. If a word problem gives you a number, you are almost certainly going to use that number
6. Pay special attention to negatives in problems, as this is the most common source of errors
7. $y=mx+b$ is the most important equation for the test

TOP MATH STRATEGIES

1. Using Desmos
2. Guessing and checking
3. Plugging numbers in

USING DESMOS

1. Solving for x
 - Note: if using Desmos to solve for x in an equation with no “ y ,” Desmos displays the solutions as vertical lines
2. Systems of equations
3. Finding maximum/minimum values
4. Finding factors of a polynomial
5. Finding equivalent expressions
6. Translating graphs
7. Inequalities

USING DESMOS

$$\frac{55}{x+6} = x$$

What is the positive solution to the given equation?

USING DESMOS

At how many points do the graphs of the equations $y = x + 20$ and $y = 8x$ intersect in the xy -plane?

A. 0

B. 1

C. 2

D. 8

USING DESMOS

$$6x + 7y = 28$$

$$2x + 2y = 10$$

The solution to the given system of equations is (x, y) . What is the value of y ?

A. -2

B. 7

C. 14

D. 18

USING DESMOS

$$f(x) = 4x^2 - 50x + 126$$

The given equation defines the function f . For what value of x does $f(x)$ reach its minimum?

USING DESMOS

$$y = 76$$
$$y = x^2 - 5$$

The graphs of the given equations in the xy -plane intersect at the point (x, y) . What is a possible value of x ?

(A) $-\frac{76}{5}$

(B) -9

(C) 5

(D) 76

USING DESMOS

The graph of $9x - 10y = 19$ is translated down 4 units in the xy -plane. What is the x -coordinate of the x -intercept of the resulting graph?

USING DESMOS

$$x(x + 1) - 56 = 4x(x - 7)$$

What is the sum of the solutions to the given equation?

USING DESMOS

$$\sqrt{(x - 2)^2} = \sqrt{3x + 34}$$

What is the smallest solution to the given equation?

USING DESMOS

$$64x^2 + bx + 25 = 0$$

In the given equation, b is a constant. For which of the following values of b will the equation have more than one real solution?

- A. -91
- B. -80
- C. 5
- D. 40

USING DESMOS

$$x - 29 = (x - a)(x - 29)$$

Which of the following are solutions to the given equation, where a is a constant and $a > 30$?

I. a

II. $a + 1$

III. 29

(A) I and II only

(B) I and III only

(C) II and III only

(D) I, II, and III

USING DESMOS

In the xy -plane, a line with equation $2y = c$ for some constant c intersects a parabola at exactly one point. If the parabola has equation $y = -2x^2 + 9x$, what is the value of c ?

GUESSING AND CHECKING

1. Solving for x
 - a. Desmos is often easier for this
2. Other algebra problems
3. Systems of equations
 - a. E.g., what is the value of x in the solution of the following system of equations?
 - b. System of equation word problems
4. Word problems
5. Finding equivalent expressions
6. Inequalities

GUESSING AND CHECKING

The function p is defined by $p(n) = 7n^3$. What is the value of n when $p(n)$ is equal to 56?

A) 2

B) $\frac{8}{3}$

C) 7

D) 8

GUESSING AND CHECKING

A company that provides whale-watching tours takes groups of 21 people at a time. The company's revenue is 80 dollars per adult and 60 dollars per child. If the company's revenue for one group consisting of adults and children was 1,440 dollars, how many people in the group were children?

- A) 3
- B) 9
- C) 12
- D) 18

GUESSING AND CHECKING

The product of two positive integers is 546. If the first integer is 11 greater than twice the second integer, what is the smaller of the two integers?

- A) 7
- B) 14
- C) 39
- D) 78

GUESSING AND CHECKING

A candle is made of 17 ounces of wax. When the candle is burning, the amount of wax in the candle decreases by 1 ounce every 4 hours. If 6 ounces of wax remain in this candle, for how many hours has it been burning?

- A) 3
- B) 6
- C) 24
- D) 44

GUESSING AND CHECKING

$$y > 14$$

$$4x + y < 18$$

The point $(x, 53)$ is a solution to the system of inequalities in the xy -plane. Which of the following could be the value of x ?

(A) -9

(B) -5

(C) 5

(D) 9

PLUGGING NUMBERS IN

1. When asked to solve for the value of a constant
2. When given constants that make using Desmos difficult
3. When asked to interpret part of an equation/expression

PLUGGING NUMBERS IN

Square A has side lengths that are 166 times the side lengths of square B. The area of square A is k times the area of square B. What is the value of k ?

PLUGGING NUMBERS IN

The population of Greenville increased by 7% from 2015 to 2016. If the 2016 population is k times the 2015 population, what is the value of k ?

- A) 0.07
- B) 0.7
- C) 1.07
- D) 1.7

PLUGGING NUMBERS IN

A window repair specialist charges \$220 for the first two hours of repair plus an hourly fee for each additional hour. The total cost for 5 hours of repair is \$400. Which function f gives the total cost, in dollars, for x hours of repair, where $x \geq 2$?

A. $f(x) = 60x + 100$

B. $f(x) = 60x + 220$

C. $f(x) = 80x$

D. $f(x) = 80x + 220$

PLUGGING NUMBERS IN

The first term of a sequence is 9. Each term after the first is 4 times the preceding term. If w represents the n th term of the sequence, which equation gives w in terms of n ?

(A) $w = 4(9^n)$

(B) $w = 4(9^{n-1})$

(C) $w = 9(4^n)$

(D) $w = 9(4^{n-1})$

**AGAIN,
THANK YOU!**