

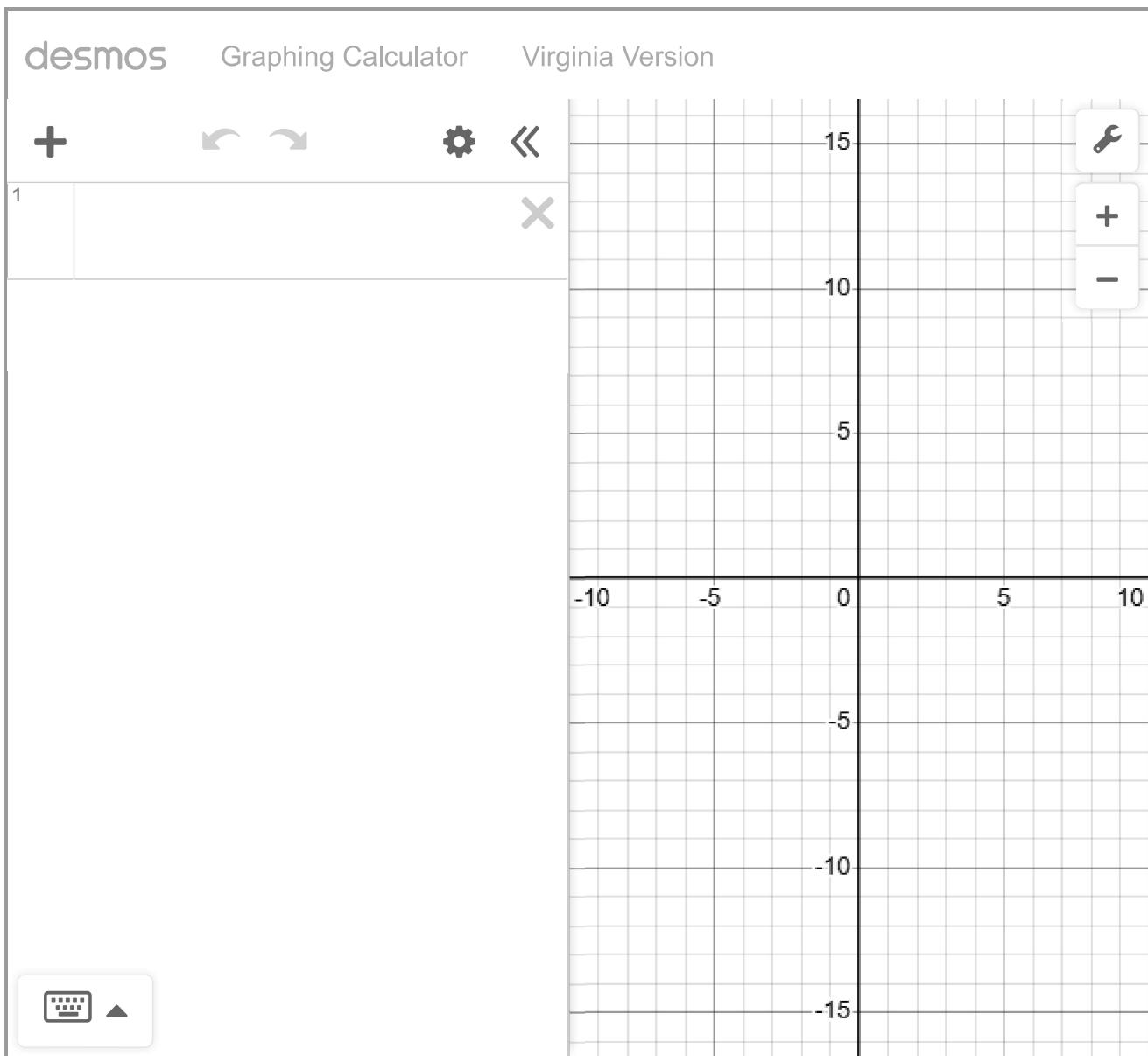
Name:**Class:****Date:****Question #1****What are all of the possible solutions for the equation $3|g - 9| - 6 = 18$?**

A 1 and 17

B 5 and 13

C 13

D 17



Question #2

Which graph shows the solution set for $|2x + 1| = 9$?

A A



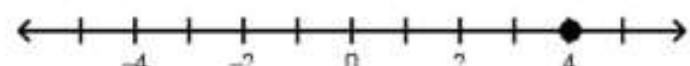
B B



C C



D D

**Question #3**

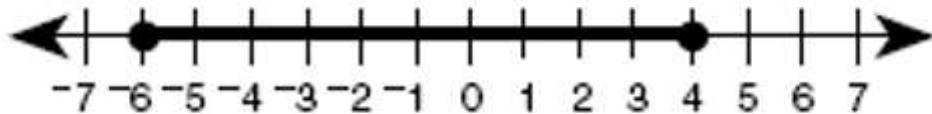
Use the dropdown menu to choose the solution set to the following inequality.

$$|3x - 15| \leq 6$$

-

Question #4

Which inequality describes the solution set of this graph?



A A $|x - 2| \geq -5$

B B $|x + 1| \leq 5$

C C $|4x - 1| \leq 1$

D D $|3x - 2| \geq -5$

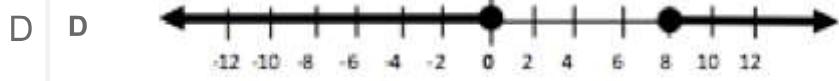
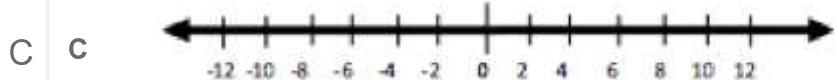
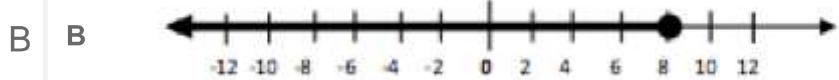
Question #5**Which answer choice shows the solution set for $8|x - 2| + 3 \geq 19$?**

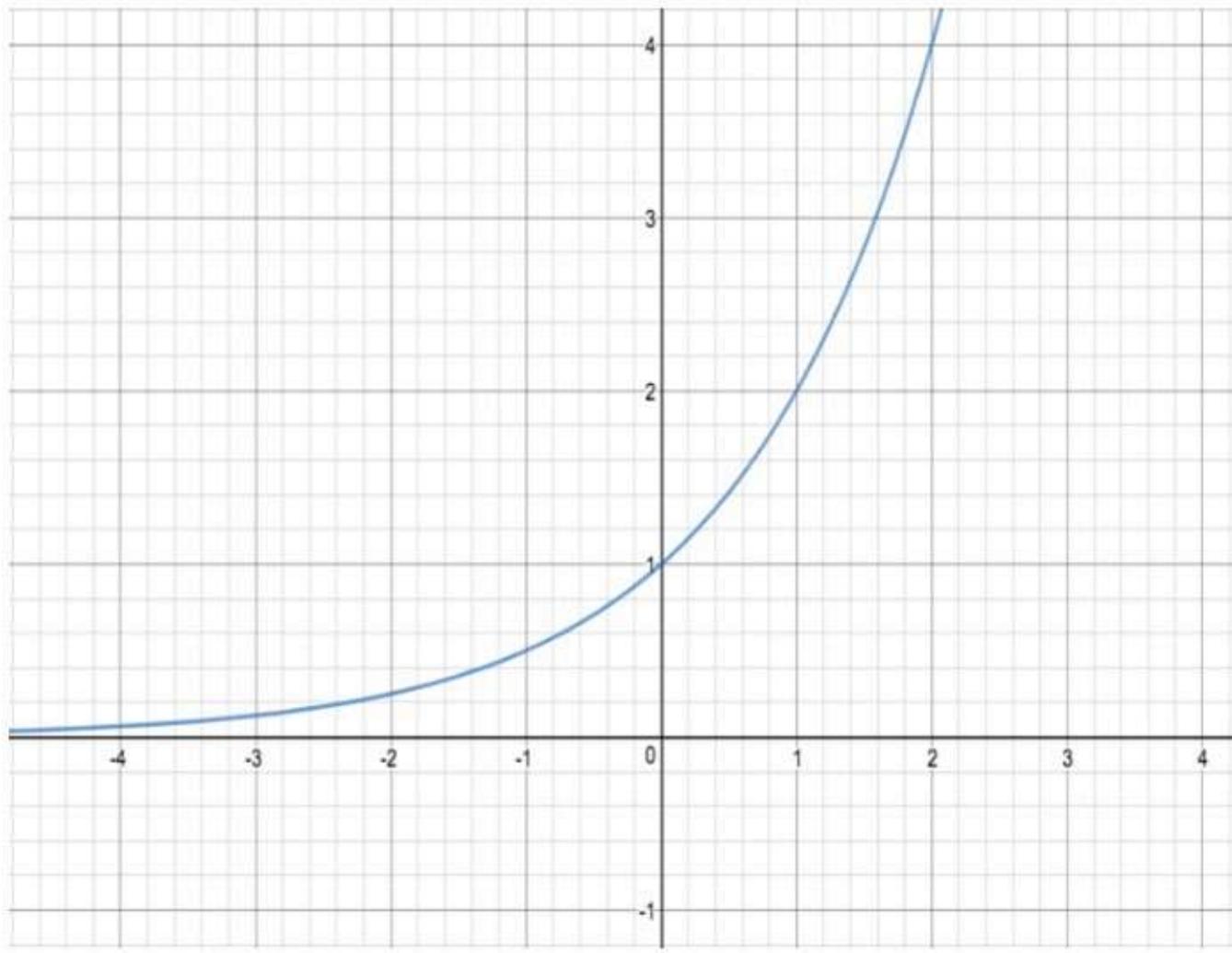
A A $x \leq -6 \text{ or } x \geq 10$

B B $x \leq 8$

C C $x \geq 4$

D D $x \leq 0 \text{ or } x \geq 4$

Question #6**Which is the solution of $|\frac{3}{4}x - 3| - 8 \geq -5$??**

Question #7**What is the parent function for this graph?**

A A $y = 3(2^x)$

B B $y = 2^x$

C C $y = 2^x + 3$

D D $y = 3(2^x) - 3$

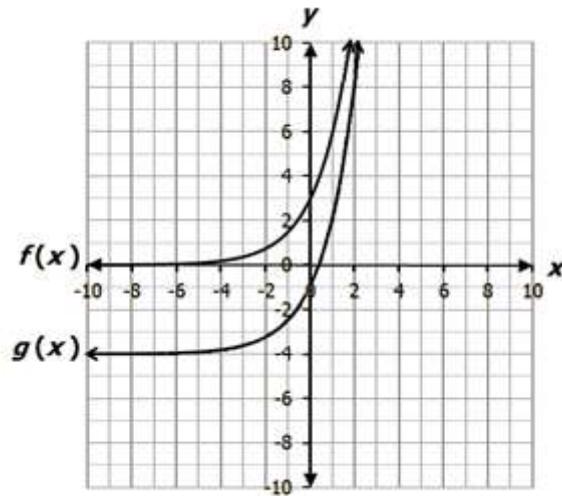
Question #8

How does $y = \sqrt{x} - 1$ affect the parent function $y = \sqrt{x}$?

- A A It shifts the parent function left 1 unit.
- B B It shifts the parent function right 1 unit.
- C C It shifts the parent function up 1 unit.
- D D It shifts the parent function down 1 unit.

Question #9

Two functions are shown on the coordinate grid.



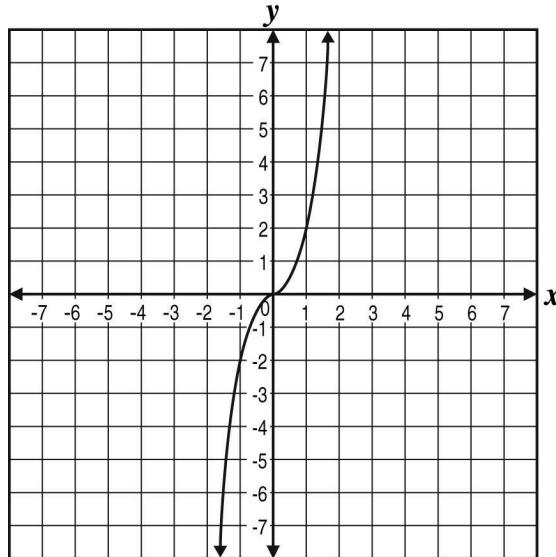
The functions can be written as shown.

$$\begin{aligned}f(x) &= 3(2)^x \\g(x) &= 3(2)^x + k\end{aligned}$$

What is the value of k ?

Question #10

Which equation *best* represents this graph?



- A $y = -2x^3$
- B $y = \frac{1}{8}x^3$
- C $y = -\frac{1}{2}x^3$
- D $y = 2x^3$

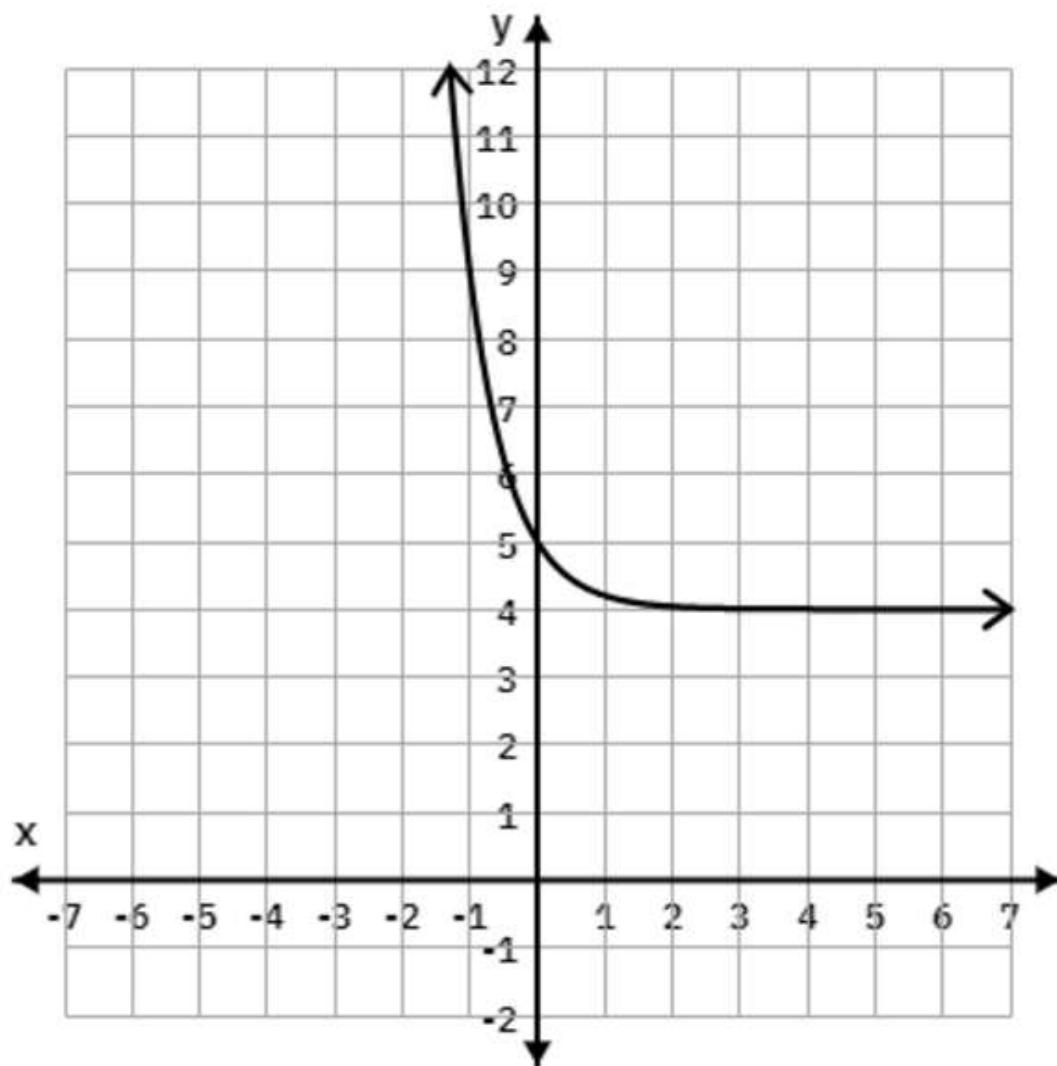
Question #11

Which of the following is an x-intercept of $f(x) = \log(3x - 8)$?

- A $(\frac{3}{8}, 0)$
- B $(\frac{1}{3}, 0)$
- C $(3, 0)$
- D $(6, 0)$

Question #12

The exponential function, $f(x) = \left(\frac{1}{5}\right)^x + 4$, is graphed below.

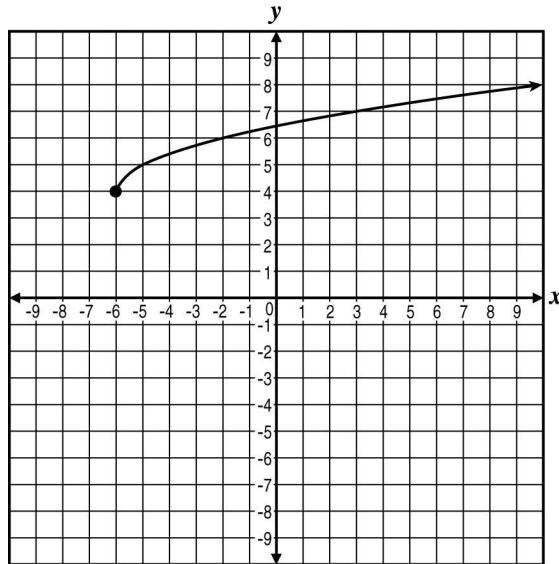


What is the range of $f(x)$?

- A [4, ∞)
- B (∞ , 4)
- C (4, ∞)
- D [∞ , 4)

Question #13

The graph of a function is shown.

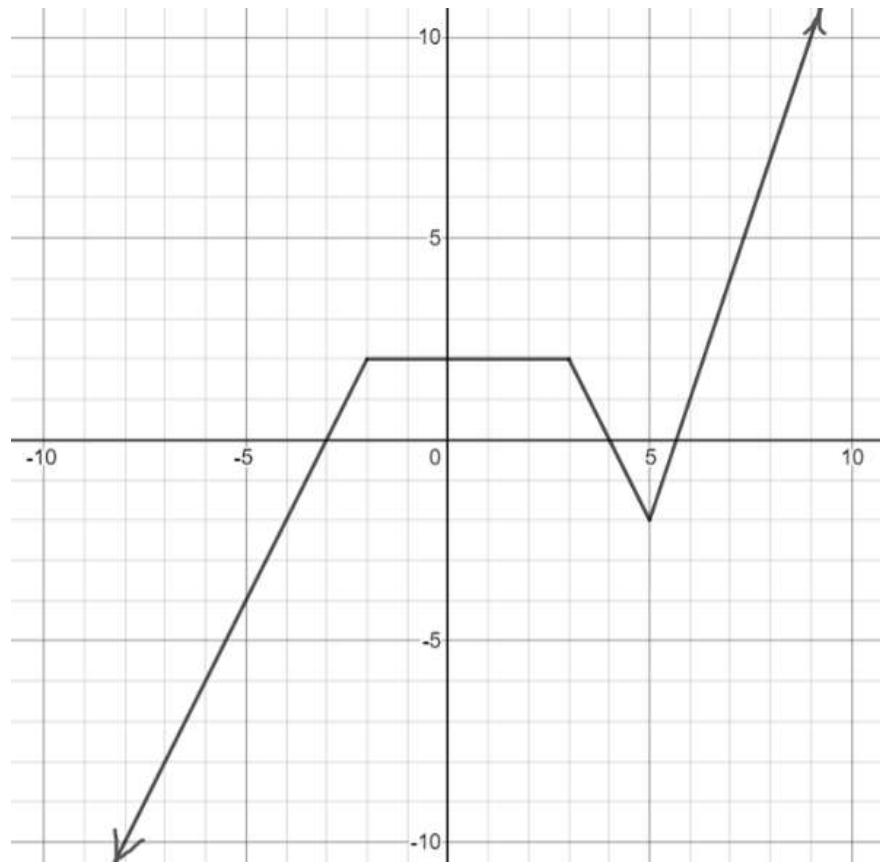


Which inequality represents the domain of the function?

- A $x \geq -6$
- B $y \geq 4$
- C $-6 \leq x \leq 10$
- D $4 \leq y \leq 8$

Question #14

Given the graph below, identify the decreasing interval(s), increasing interval(s), and constant interval(s).



Decreasing Interval(s)



Increasing Interval(s)



Constant Interval(s)



$$\{x \mid x > -2 \text{ and } x < 5\}$$

$$\{x \mid -5 < x < 5\}$$

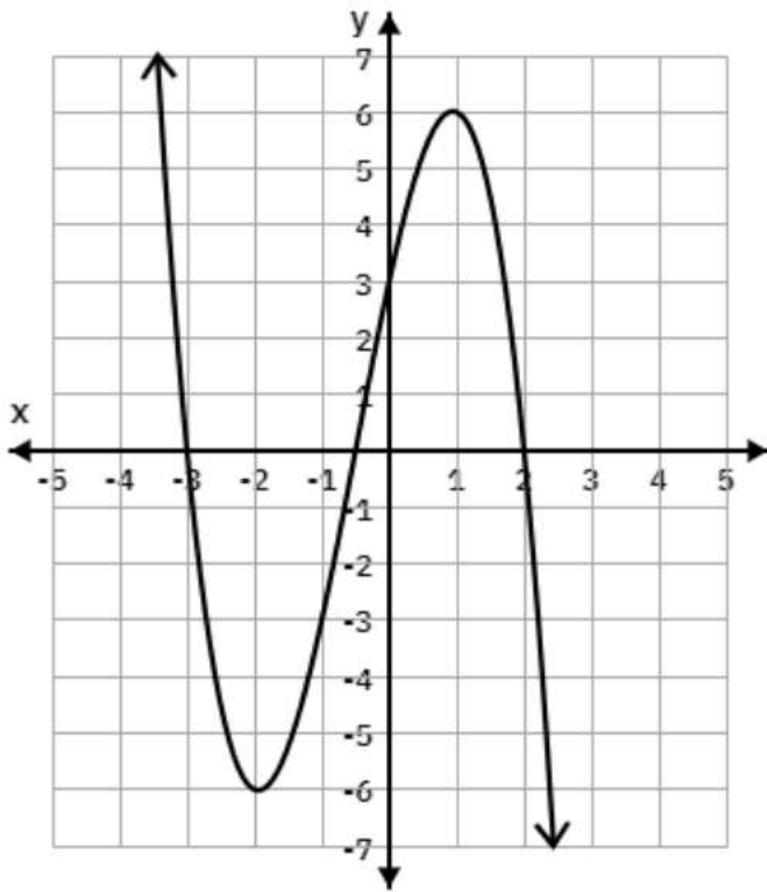
$$\{x \mid x < -2 \text{ and } x > 5\}$$

$$\{x \mid 3 < x < 5\}$$

$$\{x \mid -2 < x < 3\}$$

Question #15

The polynomial function $f(x)$ is graphed below.

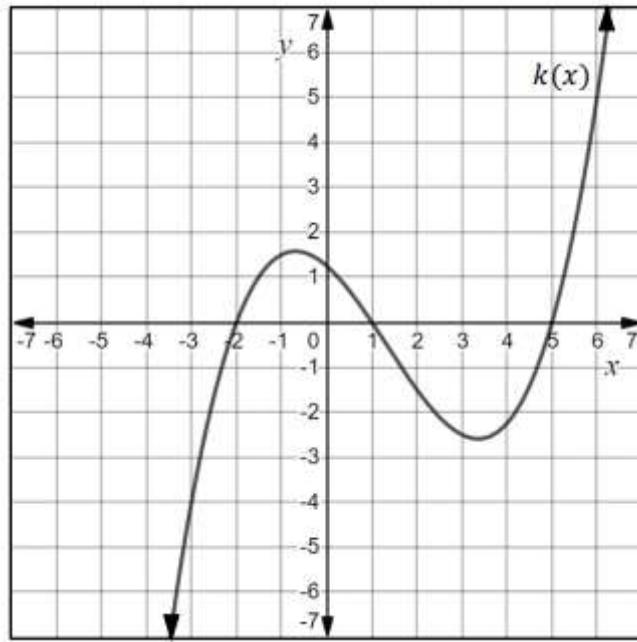


Which of the following best describes the extrema for the function $f(x)$?

- A $f(x)$ has a relative minimum where $f(-6) = -2$ and a relative maximum where $f(6) = 1$.
- B $f(x)$ has a relative minimum where $f(1) = 6$ and a relative maximum where $f(-2) = -6$.
- C $f(x)$ has a relative maximum where $f(1) = 6$ and a relative minimum where $f(-2) = -6$.
- D $f(x)$ has an absolute maximum where $f(1) = 6$ and an absolute minimum where $f(-2) = -6$.

Question #16

The graph of the function $k(x)$ is shown.



For each input x select all values of $k(x)$ that appear to be positive.

$k(-4)$	$k(-2)$	$k(-1)$
$k(2)$	$k(5)$	$k(6)$