Algebra 1 Quick-Quiz-11062023

Question 1.

Which function is NOT linear?

A $x + 2 = y$

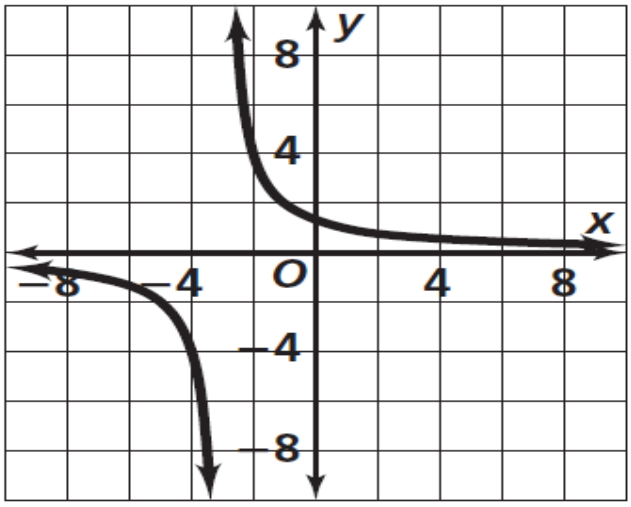
B $\frac{x}{4} = y$

C $x + y - 30 = 3x$

D $y = 25 - x^2$

Question 2

The function $y = \frac{4}{x + 3}$ is graphed below.



For which values is the function positive?

A $x \leq 0$

B $x > -3$

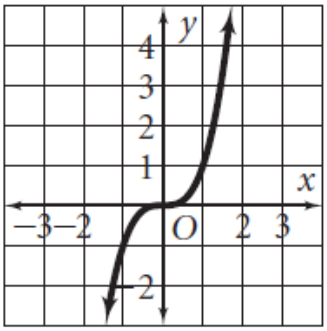
C $x < -3$

D $x \geq -7$

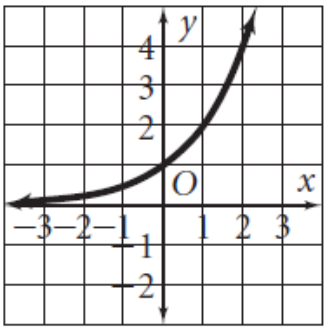
Question 3.

Which of the following is a graph of a quadratic function?

A



B



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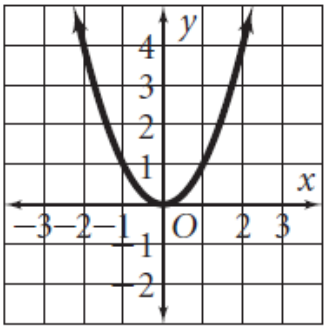

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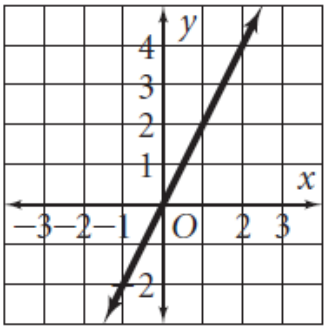
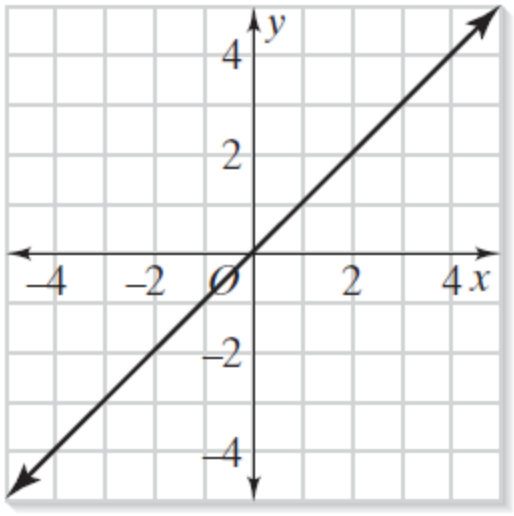


Question 4.

Which equation represents the function graphed below?



A $y = x$

B $y = -x$

C $y = 2x$

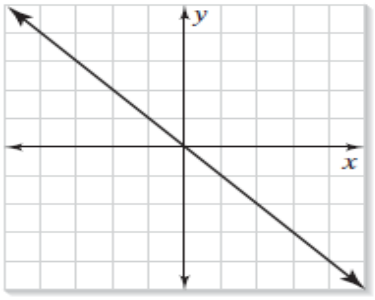
D $y = 1 - x$

Question 5.

You should be able to do this question without the use of a graphing calculator.

Which is the graph of the function $y = -x^2$?

A



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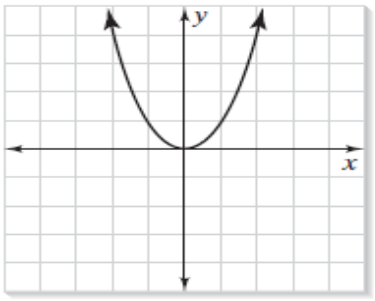

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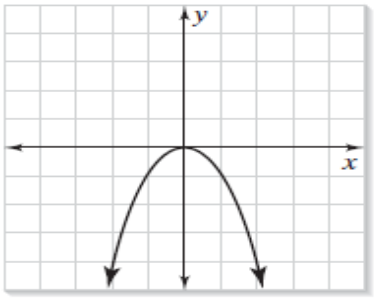

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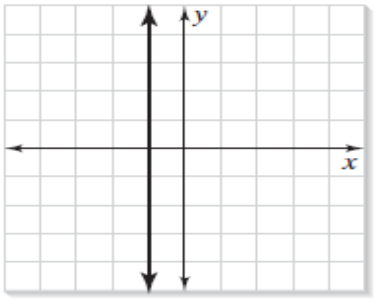


Question 6.

Which function does the table of values represent?

x	-2	-1	0	1	2
y	-3	0	1	0	-3

A $y = -x^2 + 1$
B $y = x^3 - 5$
C $y = -2x^2 - 2$
D $y = 2x^3 + 9$

Question 7.

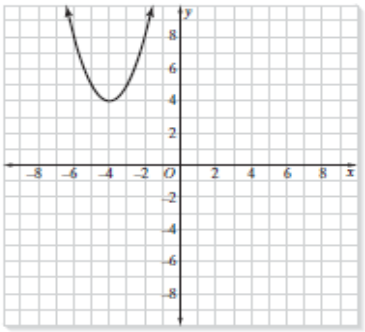
The solutions of a quadratic equation appear on the graph of the function as the _____?

A x-intercepts
B y-intercepts
C x-coordinates of the vertex
D y-coordinates of the vertex

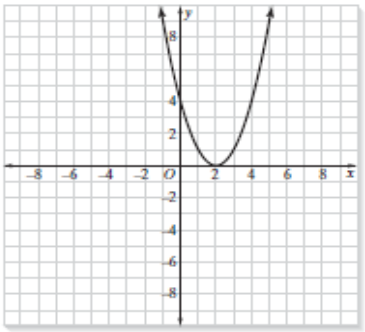
Question 8.

Which of the following represents a graph of a quadratic function with no real-number solution?

A



B



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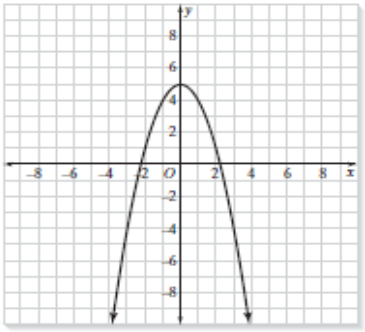
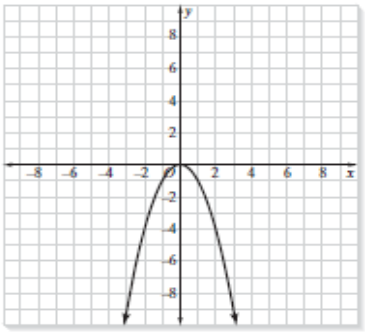


D



Question 9.

How many real solutions does the equation $4x^2 - 20x + 25 = 0$ have?

A none
C two
B one
D three

Question 10.

Try to solve this equation without using graphing software. You can then use graphs to check your answer.

Solve the equation $(x + 3)(2x - 4) = 0$.

A $x = -3$ or $x = \frac{1}{2}$
B $x = 2$ or $x = 3$
C $x = -3$ or $x = 2$
D $x = \frac{1}{2}$ or $x = 3$

Bonus Question

Question 11

After finding the zeros of the equation using either graphs or factoring you may want to draw a rectangle to help. Just a suggestion.

A rectangle has dimensions that are zeros of the equation $2x^2 - 17x + 21 = 0$. What is the perimeter of the rectangle?

A 1.5

B 7

C 8.5

D 17