Algebra Quick Quiz

November 30,2021

1

Which of the following is **not** a solution of the equation below?

$$3x(x-1)(x-2)=0$$

A. $x=0$
B. $x=1$
C. $x=2$
D. $x=3$

2.

What are the solutions of the equation below?

$$5x(x+8)=0$$

A. $x=-5;\ x=-8$
B. $x=0;\ x=-8$
C. $x=0;\ x=8$
D. $x=5;\ x=8$

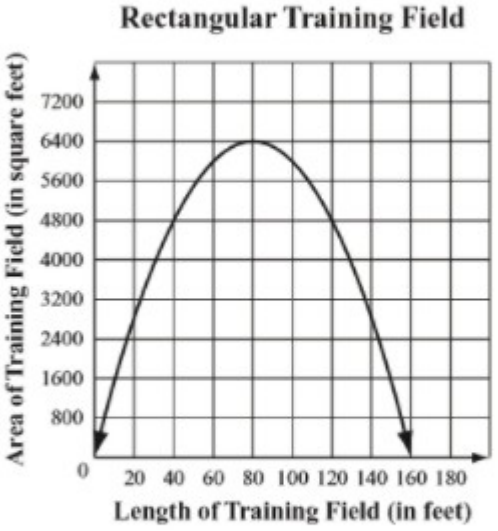
3.

The math department needs to buy new textbooks and laptops for the computer science classroom. The textbooks cost $116.00 each, and the laptops cost $439.00 each. If the math department has $6500 to spend and purchases 30 textbooks, how many laptops can they buy?

(1) 6
(2) 7
(3) 11
(4) 12

4.

40 A dog trainer will use 320 feet of fence to create a rectangular training field. The graph below displays the relationship between the length, in feet, of the training field and the area, in square feet, of the training field.



What is the length of the rectangular training field that has the greatest area?

A. 40 feet
B. 80 feet
C. 160 feet
D. 180 feet

5.

Given the parent function $f(x) = x^3$, the function $g(x) = (x - 1)^3 - 2$ is the result of a shift of $f(x)$

(1) 1 unit left and 2 units down

(2) 1 unit left and 2 units up

(3) 1 unit right and 2 units down

(4) 1 unit right and 2 units up

6.

Nicci's sister is 7 years less than twice Nicci's age, a. The sum of Nicci's age and her sister's age is 41. Which equation represents this relationship?

(1) $a + (7 - 2a) = 41$

(2) $a + (2a - 7) = 41$

(3) $2a - 7 = 41$

(4) $a = 2a - 7$

7.

The height of a ball Doreen tossed into the air can be modeled by the function $h(x) = -4.9x^2 + 6x + 5$, where x is the time elapsed in seconds, and $h(x)$ is the height in meters. The number 5 in the function represents

(1) the initial height of the ball

(2) the time at which the ball reaches the ground

(3) the time at which the ball was at its highest point

(4) the maximum height the ball attained when thrown in the air

8.

Which equation has the same solution as $x^2 + 8x - 33 = 0$?

(1) $(x + 4)^2 = 49$

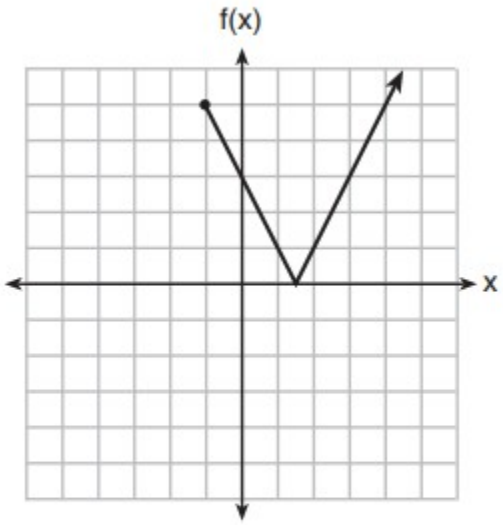
(2) $(x - 4)^2 = 49$

(3) $(x + 4)^2 = 17$

(4) $(x - 4)^2 = 17$

9.

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



The domain of this function is

(1) all positive real numbers

(2) all positive integers

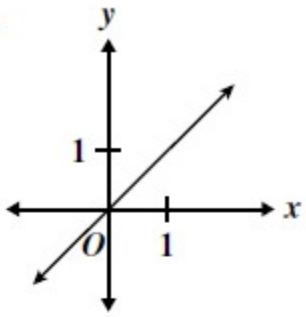
(3) $x \geq 0$

(4) $x \geq -1$

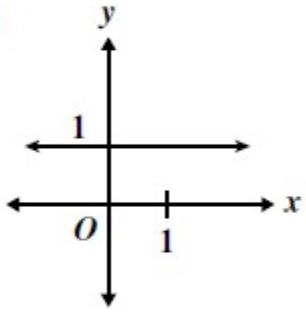
10.

Which of the following is the graph of a line with a slope of 1?

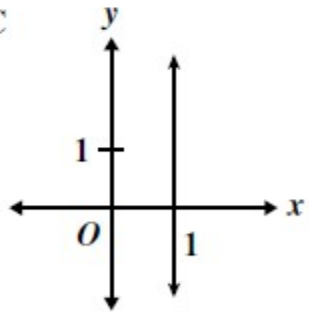
A



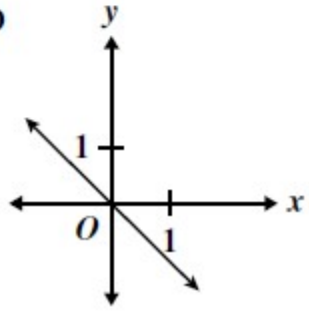
B



C



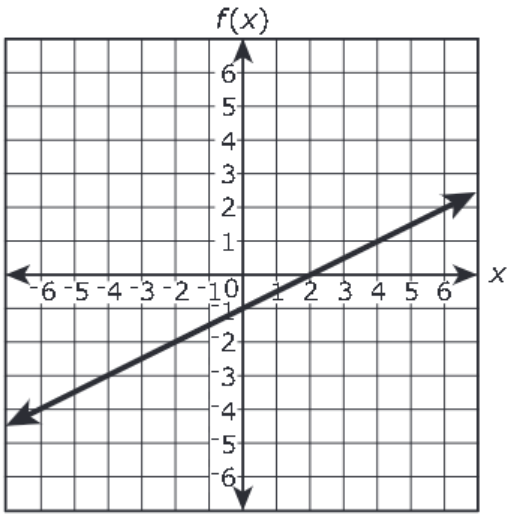
D



BONUS

11.

The graph of the function $f(x) = -1 + 0.5x$ is shown on the coordinate plane.
For what value of x does $f(x) = 0$?



Ans.....