

Algebra Quick Quiz10132023

Name.....

Periods.....

1.

Which function does the table represent?

x	-2	-1	0	1	2
y	4	5	6	7	8

- A $y = -2x$
- B $y = -5x$
- C $y = x + 6$
- D $y = -x + 2$

2.

How does the graph of $y = 3x - 1$ differ from that of $y = 3x$?

- A The graph is translated 1 unit left.
- B The graph is translated 1 unit down.
- C The graph is reflected across the x -axis.
- D The graph is reflected across the y -axis.

3.

What is the solution of the system

$$\begin{cases} y = 4x - 1 \\ y = 3x + 2 \end{cases}?$$

- A (1, 3)
- B (1, 5)
- C (3, 1)
- D (3, 11)

4.

What is the solution to the equation

$$\frac{x}{3} + 1 = -2?$$

- A -9
- B -7
- C -3
- D -1

5.

Solve the equation $x^2 - 4 = x + 8$.

- A 3, 4
- B 3, -4
- C -3, 4
- D -3, -4

6.

What is the vertex of the graph of the function $f(x) = x^2 + 4x - 5$?

- A (-4, -5)
- B (-2, 7)
- C (-2, -9)
- D (7, -2)

7.

What are the zeros of the function $f(x) = 6x^2 - 4x - 2$? Show or explain your work.

8.

The length of a rectangle is 3 more than twice its width. The perimeter of the rectangle is 42 centimeters. What is the length of the rectangle?

- A 6 cm
- B 13 cm
- C 15 cm
- D 29 cm

9.a.

A ball is thrown directly upward from a height of 30 feet with an initial velocity of 64 feet per second. The equation $h = -16t^2 + 64t + 30$ gives the height h after t seconds.

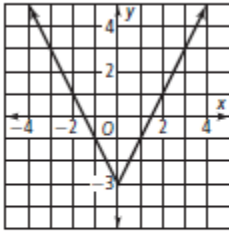
Part A How long does it take for the ball to reach its maximum height? Show or explain your work.

9. b.

Part B What is the maximum height of the ball? Show or explain your work.

10.

The graph of which equation is shown?



- A $y = -|2x| + 3$
- B $y = |2x| - 3$
- C $y = |2x - 3|$
- D $y = 2|x - 3|$

11.

Bonus

The value of a car t years after purchase is given by $V(t) = 28\,000 - 4000t$ dollars.

- a Find $V(4)$ and state what this value means.
- b Find t when $V(t) = 8000$ and explain what this represents.
- c Find the original purchase price of the car.
- d Do you think this formula is valid for all $t > 0$?

