

Algebra Quick Quiz10102023

Name.....

Periods.....

1.

Multiply $(4x + 2)(2x - 3)$.

- A $8x^2 - 6$
- B $8x^2 + 4x - 6$
- C $8x^2 - 8x - 6$
- D $8x^2 - 12x - 6$

2.

Mandy works part-time to earn money for a trip. The amount she saves after working x hours is given by the equation $y = 7.5x + 40$. How much does Mandy earn per hour?

- A \$7.50
- B \$32.50
- C \$40
- D \$47.50

3.

Express the following sentence in equation form.

Five times the difference of a number and 2 is equal to the quotient of the same number and 6.

- A $5x - 2 = \frac{x}{6}$
- B $5(x - 2) = \frac{x}{6}$
- C $5(2 - x) = \frac{x}{6}$
- D $5(x - 2) = \frac{6}{x}$

4.

What is the solution of the system

$$\begin{cases} y = 2x + 3 \\ y = -x + 6 \end{cases} ?$$

- A (1, 5)
- B (0, -1)
- C (1, 2)
- D (2, 0)

5.

What type of function is

$$f(x) = x^2 + 3x - 2?$$

- A exponential
- B linear
- C quadratic
- D none of the above

6.

Solve the equation $2x^2 + 3x = 2$.

- A $-2, -\frac{1}{2}$
- B $-2, \frac{1}{2}$
- C $2, -\frac{1}{2}$
- D $2, \frac{1}{2}$

7.

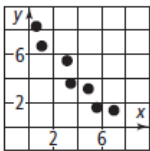
What is the solution to the equation

$$\frac{x + 4}{2} = 9 - 3x?$$

- A -7
- B -2
- C 1
- D 2

8.

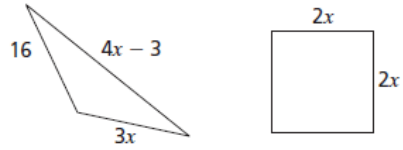
Which of the following is the best estimate of an equation of a line of best fit for the scatter plot below?



- A $y = x + 4$
- B $y = -x + 4$
- C $y = x + 8$
- D $y = -x + 8$

9.

If the perimeter of the triangle is equal to the perimeter of the square, then the length of a side of the square is ?.



- A 7
- B 13
- C 26
- D 52

10.

Find b if $\frac{2b}{3} = 12$.

- A 9
- B 16
- C 18
- D 45

11.

Bonus

Factor $18x^2 - 2$ completely.