

Lesson 5 Practice Problems

1. Solve each of these equations. Explain or show your reasoning.

$$2(x + 5) = 3x + 1$$

$$3y - 4 = 6 - 2y$$

$$3(n + 2) = 9(6 - n)$$

2. Clare was solving an equation, but when she checked her answer she saw her solution was incorrect. She knows she made a mistake, but she can't find it. Where is Clare's mistake and what is the solution to the equation?

$$12(5 + 2y) = 4y - (5 - 9y)$$

$$72 + 24y = 4y - 5 - 9y$$

$$72 + 24y = -5y - 5$$

$$24y = -5y - 77$$

$$29y = -77$$

$$y = \frac{-77}{29}$$

3. Solve each equation, and check your solution.

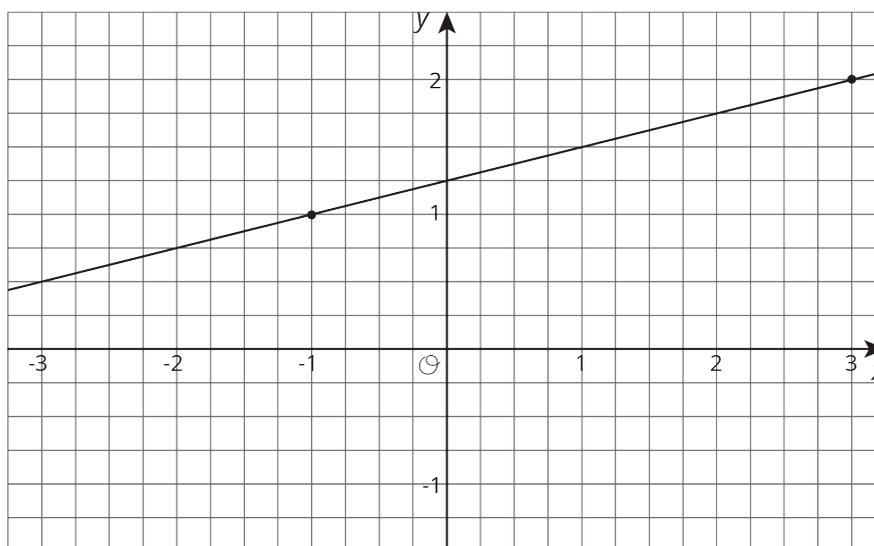
$$\frac{1}{9}(2m - 16) = \frac{1}{3}(2m + 4)$$

$$-4(r + 2) = 4(2 - 2r)$$

$$12(5 + 2y) = 4y - (6 - 9y)$$

4. Here is the graph of a linear equation.

Select **all** true statements about the line and its equation.



- A. One solution of the equation is $(3, 2)$.
- B. One solution of the equation is $(-1, 1)$.
- C. One solution of the equation is $(1, \frac{3}{2})$.
- D. There are 2 solutions.
- E. There are infinitely many solutions.
- F. The equation of the line is $y = \frac{1}{4}x + \frac{5}{4}$.
- G. The equation of the line is $y = \frac{5}{4}x + \frac{1}{4}$.

(From Unit 3, Lesson 13.)

5. A participant in a 21-mile walkathon walks at a steady rate of 3 miles per hour. He thinks, "The relationship between the number of miles left to walk and the number of hours I already walked can be represented by a line with slope -3 ." Do you agree with his claim? Explain your reasoning.

(From Unit 3, Lesson 9.)