

2.5–2.7 Quiz



Solve the system of linear equations algebraically. (Section 2.5)

1. $y = 4 - x$
 $y = x - 4$

2. $y = \frac{x}{2} + 10$
 $y = 4x - 4$

Use the table to find the break-even point. Check your solution. (Section 2.5)

3. $C = 10x + 180$
 $R = 46x$

| | | | | | | | |
|----------|---|---|---|---|---|---|---|
| x | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| C | | | | | | | |
| R | | | | | | | |

Solve the system of linear equations using a graph. (Section 2.5)

4. $y = 3x + 2$
 $y = x + 4$

5. $y = -3x - 1$
 $y = -2x + 5$

Solve the system of linear equations using any method. (Section 2.6)

6. $y = 2x - 3$
 $y - 6x = -9$

7. $y = 4x + 8$
 $2y - 8x = 18$

Use a graph to solve the equation. Check your solution. (Section 2.7)

8. $\frac{1}{4}x - 4 = \frac{3}{4}x + 2$

9. $8x - 14 = -2x - 4$



10. **BASKETBALL** You score 24 points in a basketball game. You make 9 shots. How many three-point shots and two-point shots do you make? (Section 2.5)

$$\begin{array}{|c|} \hline \text{Number of three-} \\ \text{point shots, } x \\ \hline \end{array} + \begin{array}{|c|} \hline \text{Number of two-} \\ \text{point shots, } y \\ \hline \end{array} = 9$$

$$\begin{array}{|c|} \hline \text{Value of a three-} \\ \text{point shot} \\ \hline \end{array} \cdot \begin{array}{|c|} \hline \text{Number of three-} \\ \text{point shots, } x \\ \hline \end{array} + \begin{array}{|c|} \hline \text{Value of a two-} \\ \text{point shot} \\ \hline \end{array} \cdot \begin{array}{|c|} \hline \text{Number of two-} \\ \text{point shots, } y \\ \hline \end{array} = 24$$

11. **BICYCLE** One day, you ride $2x + 5$ kilometers on your bicycle. The next day, you ride $3x$ kilometers. Is it possible that you rode the same distance each day? Explain. (Section 2.7)

12. **TEMPERATURE** Two students write the expressions $\frac{1}{2}x + 49$ and $2x - 5$ to represent today's high temperature (in degrees Fahrenheit). What is today's high temperature? (Section 2.7)