



NAME \_\_\_\_\_

**Module 10** Solving Systems of Linear Equations and Inequalities

**Lesson 1** Solving Systems of Linear Equations by Graphing

Determine whether the given point is a solution to the system.

1.  $(5, -3)$   $\begin{cases} x = 5 \\ y = -3 \end{cases}$

**Yes**

2.  $(0, 0)$   $\begin{cases} x + y = 0 \\ y = -7x \end{cases}$

**Yes**

3.  $(-2, -3)$   $\begin{cases} x - 2y = 7 \\ y = 2x + 1 \end{cases}$

**No**

4.  $(1, -2)$   $\begin{cases} 5x - 4y = 13 \\ y = x - 4 \end{cases}$

**No**

5.  $(3, -5)$   $\begin{cases} x = 5 - y \\ y = -3x + 1 \end{cases}$

**No**

6.  $(-2, -3)$   $\begin{cases} y = 2x + 1 \\ 2x - y = -1 \end{cases}$

**Yes**

7.  $(9, -1)$   $\begin{cases} 7x - 5y = 3 \\ 2x - 3y = 13 \end{cases}$

**No**

8.  $(\frac{1}{2}, -\frac{1}{2})$   $\begin{cases} 8x + 2y = 3 \\ 6x + 4y = 1 \end{cases}$

**Yes**

9.  $(2, -2)$   $\begin{cases} 5x = 2 - 4y \\ 3y = -4x + 2 \end{cases}$

**Yes**

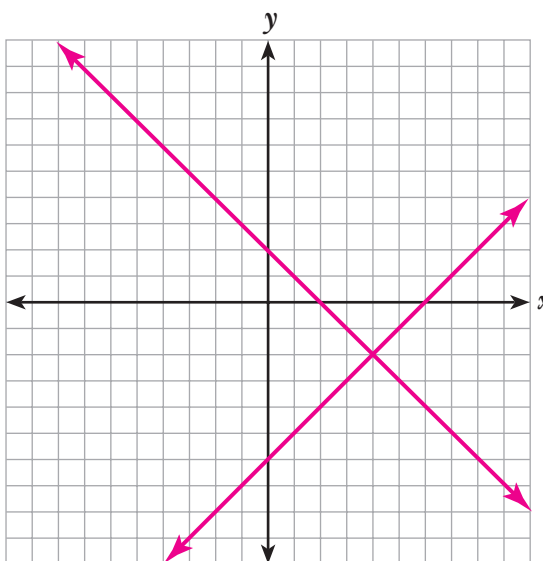
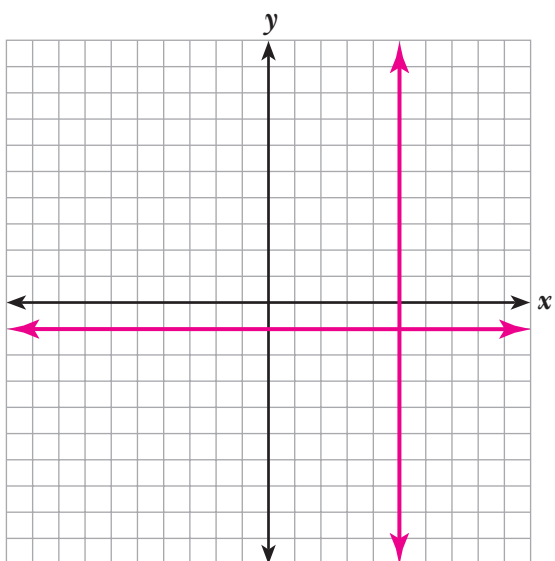
Solve each system by graphing.

10.  $\begin{cases} x = 5 \\ y = -1 \end{cases}$

**(5, -1)**

11.  $\begin{cases} y = -x + 2 \\ y = x - 6 \end{cases}$

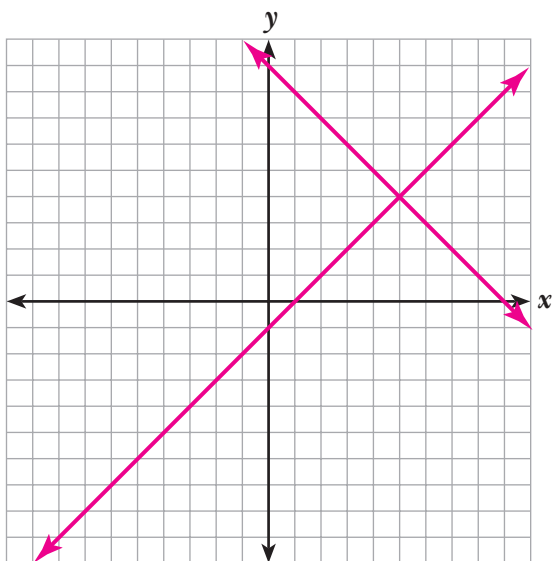
**(4, -2)**



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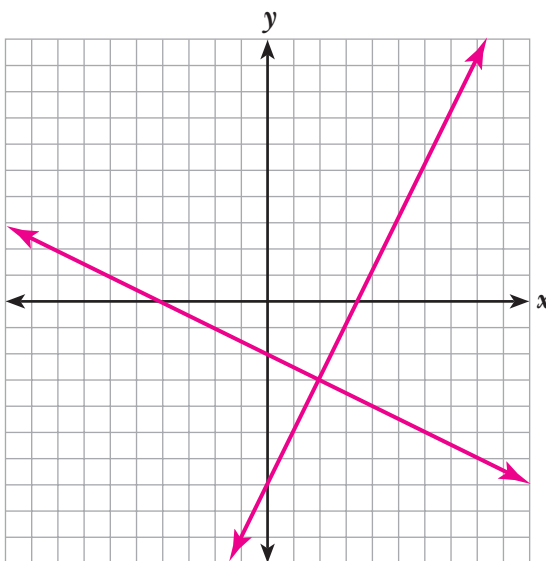
12. 
$$\begin{cases} x + y = 9 \\ x - y = 1 \end{cases}$$

**(5, 4)**



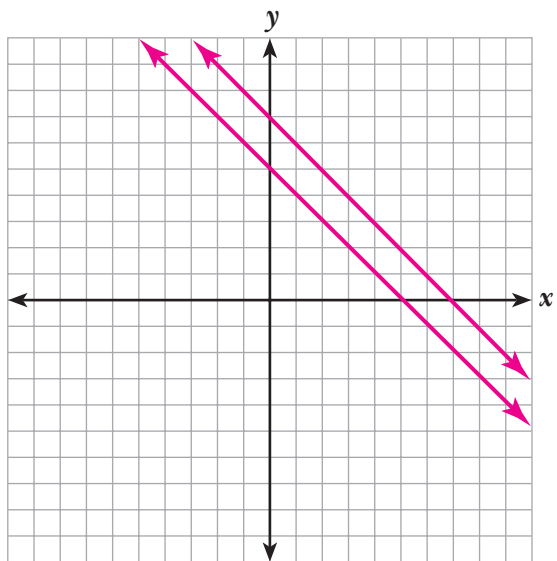
13. 
$$\begin{cases} y = -\frac{1}{2}x - 2 \\ y = 2x - 7 \end{cases}$$

**(2, -3)**



14. 
$$\begin{cases} x + y = 7 \\ x + y = 5 \end{cases}$$

**No solution; lines are parallel**



15. 
$$\begin{cases} y = 4x - 5 \\ 12x - 3y = 15 \end{cases}$$

**An infinite number of solutions. Any point on the line is a solution.**

