

Homework 2.7 Solving System of Equations Algebraically

Solving each system using the **substitution** method.

1.
$$\begin{cases} y = 6x - 11 \\ -2x - 3y = -7 \end{cases}$$

2.
$$\begin{cases} 2x - 3y = -1 \\ y = x - 1 \end{cases}$$

3.
$$\begin{cases} -7x - 2y = -13 \\ x = 2y + 11 \end{cases}$$

4.
$$\begin{cases} y = -2 \\ 4x - 3y = 18 \end{cases}$$

5.
$$\begin{cases} y = 5x - 7 \\ -3x - 2y = -12 \end{cases}$$

6.
$$\begin{cases} -3x - 3y = -15 \\ x = -3y + 1 \end{cases}$$

7.
$$\begin{cases} -3x + 3y = 4 \\ x = 3 - y \end{cases}$$

8.
$$\begin{cases} 6x + 6y = -6 \\ y = -13 - 5x \end{cases}$$

9.
$$\begin{cases} y = -2x + 20 \\ 6x - 5y = 12 \end{cases}$$

Solving each system using the *elimination* method.

$$10. \begin{cases} -4x - 2y = -12 \\ 4x + 8y = -24 \end{cases}$$

$$11. \begin{cases} x - y = 11 \\ 2x + y = 19 \end{cases}$$

$$12. \begin{cases} -2x - 9y = -25 \\ -4x - 9y = -23 \end{cases}$$

$$13. \begin{cases} 5x + y = 9 \\ 10x - 7y = -18 \end{cases}$$

$$14. \begin{cases} -4x + 9y = 9 \\ x - 3y = -6 \end{cases}$$

$$15. \begin{cases} -3x + 7y = -16 \\ -9x + 5y = 16 \end{cases}$$

$$16. \begin{cases} -7x - 8y = 9 \\ -4x + 9y = -22 \end{cases}$$

$$17. \begin{cases} 5x + 4y = -30 \\ 3x - 9y = -18 \end{cases}$$

$$18. \begin{cases} 2x + 8y = 6 \\ -5x - 20y = -15 \end{cases}$$