

LESSON

Practice B**3-2****Using Algebraic Methods to Solve Linear Systems**

Use substitution to solve each system of equations.

1.
$$\begin{cases} x = 7y - 4 \\ 2x - 3y = 14 \end{cases}$$

2.
$$\begin{cases} y - 3x = 5 \\ 2x = 3y + 6 \end{cases}$$

3.
$$\begin{cases} 3x - 4y = 20 \\ y - 2x = 0 \end{cases}$$

Use elimination to solve each system of equations.

4.
$$\begin{cases} x + 6y = 1 \\ 3x + 5y = -10 \end{cases}$$

5.
$$\begin{cases} 3x + 4y = 6 \\ 2x + 3y = 3 \end{cases}$$

6.
$$\begin{cases} 3x - 5y = 1 \\ 2x + 3y = -12 \end{cases}$$

Use substitution or elimination to solve each system of equations.

7.
$$\begin{cases} x + y = 13 \\ 2x - 3y = 1 \end{cases}$$

8.
$$\begin{cases} 9x + 2y = 5 \\ 3x - y = -10 \end{cases}$$

9.
$$\begin{cases} 2x + y = 1 \\ x = 5 + y \end{cases}$$

10.
$$\begin{cases} x = -8y \\ x + y = 14 \end{cases}$$

11.
$$\begin{cases} 2x + 4y = 12 \\ -3x + 3y = 63 \end{cases}$$

12.
$$\begin{cases} 5x - 2y = -1 \\ 3x - y = -2 \end{cases}$$

Solve.

13. Bill leaves his house for Makayla's house riding his bicycle at 8 miles per hour. At the same time, Makayla leaves her house heading toward Bill's house walking at 3 miles per hour.

- a. Write a system of equations to represent the distance, d , each is from Makayla's house in h hours. They live 8.25 miles apart.

- b. Solve the system to determine how long they travel before meeting.