

Name: \_\_\_\_\_

## Solving Linear Systems by Substitution

1) Use an algebraic method to solve the following pairs of simultaneous equations:

1) 
$$\begin{cases} 2x - y = 17 \\ x + 3y = 12 \end{cases}$$

2) 
$$\begin{cases} 2x + y = 16 \\ x + 2y = 11 \end{cases}$$

3) 
$$\begin{cases} x + y = 12 \\ x - y = 2 \end{cases}$$

4) 
$$\begin{cases} 2x + 3y = 7 \\ 4x - 3y = 5 \end{cases}$$

5) 
$$\begin{cases} 5x + y = 19 \\ 2x + 4y = 22 \end{cases}$$

2) Use substitution to solve each system of equations.

1) 
$$\begin{cases} y = -x \\ x - y = -12 \end{cases}$$

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

3) 
$$\begin{cases} y = 4x \\ x + y = 3 \end{cases}$$

4) 
$$\begin{cases} x = 3y \\ x + 3y = 4 \end{cases}$$

5) 
$$\begin{cases} y = 6x - 7 \\ -2x - y = 3 \end{cases}$$

6) 
$$\begin{cases} x - 7y = 0 \\ 2x + y = 0 \end{cases}$$

7) 
$$\begin{cases} y = x + 1 \\ -x + 3y = -15 \end{cases}$$

8) 
$$\begin{cases} y = 2x \\ 2x - y = -1 \end{cases}$$

9) 
$$\begin{cases} x + 4y = -8 \\ 3x - 6y = 0 \end{cases}$$

10) 
$$\begin{cases} 6x - 3y = -2 \\ y + 1 = x \end{cases}$$

11) 
$$\begin{cases} y = x + 2 \\ 2x - y = 1 \end{cases}$$

12) 
$$\begin{cases} y = 3x - 1 \\ x + y = 4 \end{cases}$$

13) 
$$\begin{cases} x = 3 + y \\ 3y + 2 = x \end{cases}$$