

Name: _____

Solving Linear Systems by Linear Combinations

Exercise 1: Use elimination to solve each system of equations.

1)
$$\begin{cases} 2y + 2x = 4 \\ 3x + 2y = 2 \end{cases}$$

2)
$$\begin{cases} 3x - y = 11 \\ 7x - y = 16 \end{cases}$$

3)
$$\begin{cases} x - 2y = 101 \\ 4x + 2y = 15 \end{cases}$$

4)
$$\begin{cases} 3x - 7y = 12 \\ -3x - 2y = 4 \end{cases}$$

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

6)
$$\begin{cases} y = x + 7 \\ x + y = 1 \end{cases}$$

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

8)
$$\begin{cases} y + 3x = 18 \\ 3x - y = 12 \end{cases}$$

9)
$$\begin{cases} 4x - 3y = -6 \\ x + 5y = 10 \end{cases}$$

10)
$$\begin{cases} y = 3x \\ x + 2y = -21 \end{cases}$$

11)
$$\begin{cases} 4y = -3x + 8 \\ 3x + 4y = 6 \end{cases}$$

12)
$$\begin{cases} x - 3y = 3 \\ 2x + 9y = 11 \end{cases}$$

13)
$$\begin{cases} x = 2y + 5 \\ 3x - 6y = 15 \end{cases}$$

14)
$$\begin{cases} x - 9y = 0 \\ 3x + 3y = 15 \end{cases}$$

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

16)
$$\begin{cases} x - y = 5 \\ 3x - y = 4 \end{cases}$$

17)
$$\begin{cases} 4x - y = -3 \\ y + 2 = x \end{cases}$$

18)
$$\begin{cases} x - 6y = 5 \\ 2x - 12y = 10 \end{cases}$$

Exercise 2: Tell whether addition, subtraction, or substitution would be most convenient to solve the system of equations. Then solve the system.

$$\begin{cases} 1.72x - 2.14y = -5.34 \\ 1.18x + 2.14y = 8.97 \end{cases}$$