

Solving Systems of Equations by Elimination

Name: _____ Date: _____

Solve each of the following using the method of elimination:

1.
$$\begin{aligned} 2x + y &= 11 \\ x + y &= 9 \end{aligned}$$

2.
$$\begin{aligned} x - y &= 7 \\ 2x + y &= -10 \end{aligned}$$

3.
$$\begin{aligned} 3x + y &= 1 \\ 2x + 3y &= -11 \end{aligned}$$

4.
$$\begin{aligned} x + y &= 1 \\ 3x - y &= 11 \end{aligned}$$

5.
$$\begin{aligned} 9x + 2y &= 2 \\ 4x + y &= 1 \end{aligned}$$

6.
$$\begin{aligned} 2x + 3y &= 8 \\ 5x - y &= 3 \end{aligned}$$

7.
$$\begin{aligned} 5x - 3y &= -14 \\ 3x + 2y &= 3 \end{aligned}$$

8.
$$\begin{aligned} 9x + 6y &= 12 \\ 8x + 3y &= 13 \end{aligned}$$

9.
$$\begin{aligned} 3x + 2y &= 6 \\ 2x - 3y &= 17 \end{aligned}$$

10.
$$\begin{aligned} 2x + 5y &= -2 \\ 5x - 2y &= 24 \end{aligned}$$

11.
$$\begin{aligned} 5x + 3y &= 5 \\ 3x + 2y &= 4 \end{aligned}$$

12.
$$\begin{aligned} 2x + 8y &= 24 \\ x - 2y &= 0 \end{aligned}$$

Find the error and rework the problem correctly.

13.

$$\begin{array}{r} 5x + 8y = 1 \\ -2x + 8y = -6 \\ \hline 7x = 7 \\ \frac{7x}{7} = \frac{7}{7} \\ x = 1 \\ -2(1) + 8y = -6 \\ 2 + 8y = -6 \\ -2 \quad -2 \\ \hline 8y = -8 \\ \frac{8y}{8} = \frac{-8}{8} \\ y = -1 \end{array}$$

(1, -1)

14.

$$\begin{array}{r} 8x - 4y = -5 \\ + \quad -3x - 6y = -5 \\ \hline -2y = -10 \\ \frac{-2y}{-2} = \frac{-10}{-2} \\ y = 5 \\ 3x - 4(5) = -5 \\ 3x - 20 = -5 \\ \quad +20 \quad +20 \\ \hline 3x = 15 \\ \frac{3x}{3} = \frac{15}{3} \quad x = 5 \end{array}$$

(5, 5)