

Solving Systems of Equations by Elimination Practice Worksheet B

Name Key Class Period _____

Solve each of the following using the method of elimination:

$$\begin{array}{r}
 1. \quad -1(2x + y = 11) \\
 \quad \quad x + y = 9 \\
 + \quad -2x - y = -11 \\
 \hline
 \quad -x = -2 \\
 \quad \quad x = 2 \\
 \quad \quad 2 + y = 9 \\
 \quad \quad \quad y = 7
 \end{array}$$

$(2, 7)$

$$\begin{array}{r}
 2. \quad x - y = 7 \\
 \quad \quad + \quad 2x + y = -10 \\
 \hline
 \quad \quad 3x = -3 \\
 \quad \quad \quad x = -1 \\
 \quad \quad -1 - y = 7 \\
 \quad \quad \quad -y = 8 \\
 \quad \quad \quad \quad y = -8
 \end{array}$$

$(-1, -8)$

$$\begin{array}{r}
 3. \quad -3(3x + y = 1) \\
 \quad \quad 2x + 3y = -11 \\
 + \quad -9x - 3y = -3 \\
 \hline
 \quad -7x = -14 \\
 \quad \quad x = 2 \\
 \quad \quad 6 + y = 1 \\
 \quad \quad \quad y = -5
 \end{array}$$

$(2, -5)$

$$\begin{array}{r}
 4. \quad x + y = 1 \\
 \quad \quad + \quad 3x - y = 11 \\
 \hline
 \quad \quad 4x = 12 \\
 \quad \quad \quad x = 3 \\
 \quad \quad 3 + y = 1 \\
 \quad \quad \quad y = -2
 \end{array}$$

$(3, -2)$

$$\begin{array}{r}
 5. \quad 9x + 2y = 2 \\
 \quad \quad -2(4x + y = 1) \\
 \hline
 \quad \quad 9x + 2y = 2 \\
 + \quad -8x - 2y = -2 \\
 \hline
 \quad \quad x = 0
 \end{array}$$

$$0 + y = 1$$

$y = 1$

$(0, 1)$

$$\begin{array}{r}
 6. \quad 2x + 3y = 8 \\
 \quad \quad 3(5x - y = 3) \\
 \hline
 \quad \quad 2x + 3y = 8 \\
 + \quad 15x - 3y = 9 \\
 \hline
 \quad 17x = 17 \\
 \quad \quad x = 1
 \end{array}$$

$(1, 2)$

$$\begin{array}{r}
 2 + 3y = 8 \\
 3y = 6 \\
 y = 2
 \end{array}$$

$$\begin{array}{r}
 7. \quad 2(5x - 3y = -14) \\
 \quad \quad 3(3x + 2y = 3) \\
 \hline
 \quad 10x - 6y = -28 \\
 + \quad 9x + 6y = 9 \\
 \hline
 \quad 19x = -19
 \end{array}$$

$$x = -1$$

$$-3 + 2y = 3$$

$$2y = 6$$

$$y = 3$$

$(-1, 3)$

$$\begin{array}{r}
 8. \quad 9x + 6y = 12 \\
 \quad \quad -2(8x + 3y = 13) \\
 \hline
 \quad 9x + 6y = 12 \\
 + \quad -16x - 6y = -26 \\
 \hline
 \quad -7x = -14
 \end{array}$$

$$-7x = -14$$

$$x = 2$$

$$18 + 6y = 12$$

$$6y = -6$$

$$y = -1$$

$(2, -1)$

$$\begin{array}{r}
 9. \quad 3(3x + 2y = 6) \\
 \quad \quad 2(2x - 3y = 17) \\
 \hline
 \quad 9x + 6y = 18 \\
 + \quad 4x - 6y = 34 \\
 \hline
 \quad 13x = 52
 \end{array}$$

$$13x = 52$$

$$x = 4$$

$$12 + 2y = 6$$

$$2y = -6$$

$$y = -3$$

$(4, -3)$

$$10. \begin{cases} 2(2x + 5y = -2) \\ 5(5x - 2y = 24) \end{cases}$$

$$+ \begin{array}{r} 4x + 10y = -4 \\ 25x - 10y = 120 \\ \hline \end{array}$$

$$29x = 116$$

$$x = 4$$

$$8 + 5y = -2$$

$$5y = -10$$

$$y = -2$$

$$\boxed{(4, -2)}$$

$$11. \begin{cases} 3(5x + 3y = 5) \\ -5(3x + 2y = 4) \end{cases}$$

$$+ \begin{array}{r} 15x + 9y = 15 \\ -15x - 10y = -20 \\ \hline \end{array}$$

$$-y = -5$$

$$y = 5$$

$$3x + 10 = 4$$

$$3x = -6$$

$$x = -2$$

$$\boxed{(-2, 5)}$$

$$12. \begin{cases} 2x + 8y = 24 \\ -2(x - 2y = 0) \end{cases}$$

$$+ \begin{array}{r} 2x + 8y = 24 \\ -2x + 4y = 0 \\ \hline \end{array}$$

$$12y = 24$$

$$y = 2$$

$$x - 4 = 0$$

$$x = 4$$

$$\boxed{(4, 2)}$$

Find the error and rework the problem correctly.

13.

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

$$8y + 8y = 16y$$

not 0

$$-2(1) + 8y = -6$$

$$-2 + 8y = -6$$

$$\frac{8y}{8} = \frac{-4}{8}$$

$$y = -\frac{1}{2}$$

$$\boxed{(1, -\frac{1}{2})}$$

$$+ \begin{array}{r} 5x + 8y = 1 \\ 2x - 8y = 6 \\ \hline \end{array}$$

$$7x = 7$$

$$x = 1$$

$$5 + 8y = 1$$

$$8y = -4$$

$$y = -\frac{1}{2}$$

$$\boxed{(1, -\frac{1}{2})}$$

14.

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

$$-4y - 6y = -10y$$

not $-2y$

$$3x - 4(5) = -5$$

$$3x - 20 = -5$$

$$\frac{3x}{3} = \frac{15}{3}$$

$$\boxed{(5, 5)}$$

$$x = 5$$

$$-10y = -10$$

$$y = 1$$

$$3x - 4 = -5$$

$$3x = -1$$

$$x = -\frac{1}{3}$$

$$\boxed{(-\frac{1}{3}, 1)}$$