

Systems of Equations: Lesson 3

Introduction to Elimination: Worksheet 1

Name: Answer Key!



Circle the variables that can be eliminated:

$$\begin{cases} 9x - y = 7 \\ -2x + y = -3 \end{cases}$$

$$\begin{cases} 4x + 6y = -2 \\ -4x - 5y = 0 \end{cases}$$

$$\begin{cases} x - 3y = 1 \\ 7x + 3y = 11 \end{cases}$$

Solve the systems of equations using elimination:

$$+ \begin{cases} 2x + 4y = 10 \\ -2x + y = 5 \end{cases}$$

$$5y = 15$$

$$y = 3$$

$$-2x + 3 = 5$$

$$-2x = 2$$

$$x = -1$$

(-1, 3)

$$+ \begin{cases} -x + 7y = -4 \\ 5x - 7y = 20 \end{cases}$$

$$4x = 16$$

$$x = 4$$

$$-4 + 7y = -4$$

$$7y = 0$$

$$y = 0$$

(4, 0)

$$\begin{cases} 6x - y = -7 \\ -4x + y = 3 \end{cases}$$

$$2x = -4$$

$$x = -2$$

$$-4(-2) + y = 3$$

$$8 + y = 3$$

$$y = -5$$

(-2, -5)

$$-1 \begin{cases} 3x + 4y = 10 \\ 5x + 4y = 22 \end{cases}$$

$$-3x - 4y = -10$$

$$2x = 12$$

$$x = 6$$

$$3(6) + 4y = 10$$

$$18 + 4y = 10$$

$$4y = -8$$

$$y = -2$$

(6, -2)

$$\begin{array}{l}
 -1 \begin{cases} x-6y=17 \\ x+y=-11 \end{cases} \\
 \hline
 -x+6y=-17 \\
 7y=-28 \\
 y=-4 \\
 x+\overset{-4}{y}=-11 \\
 x-4=-11 \\
 x=-7 \\
 \boxed{(-7, -4)}
 \end{array}$$

$$\begin{array}{l}
 -1 \begin{cases} 7x-3y=27 \\ 6x-3y=27 \end{cases} \\
 \hline
 -7x+3y=-27 \\
 -x=0 \\
 x=0 \\
 6\overset{0}{x}-3y=27 \\
 0-3y=27 \\
 y=-9 \\
 \boxed{(0, -9)}
 \end{array}$$