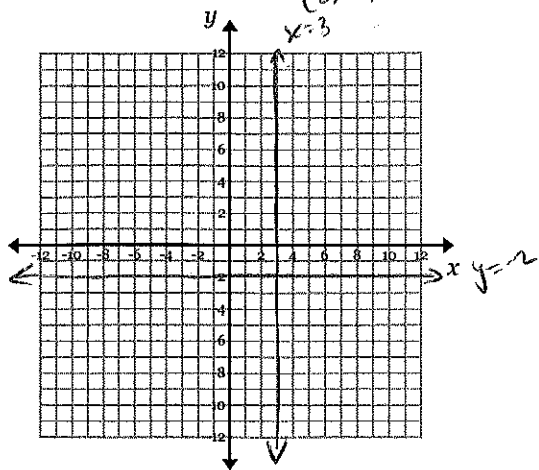


Practice Problems – Solve the Systems.

1. $\begin{cases} x = 3 \leftarrow \text{Vertical} \\ y = -2 \leftarrow \text{Horizontal} \end{cases}$
 (3, -2)



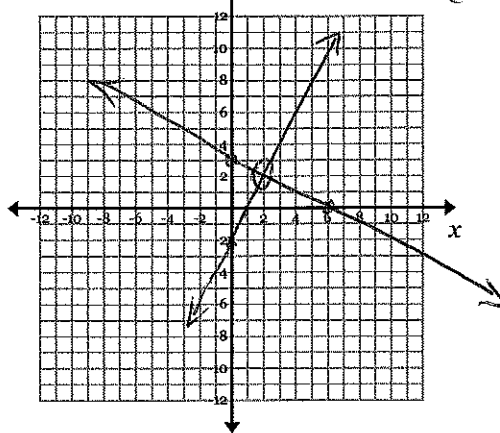
By Graphing

2. $\begin{cases} x + 2y = 6 \\ 2x - y = 2 \end{cases}$

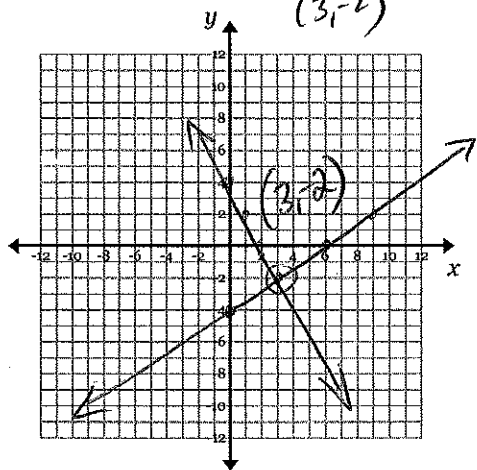
x	y
0	3
6	0

x	y
0	-2
1	0

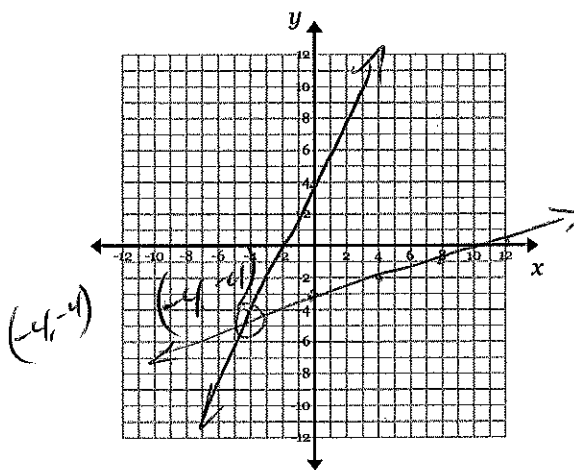
(2, 2)



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



4. $\begin{cases} y = \frac{1}{4}x - 3 \\ y = 2x + 4 \end{cases}$



By Substitution

5. $\begin{cases} y = -2x - 3 \\ y = -\frac{2}{3}x + 1 \end{cases}$

$$\begin{array}{r} -2x - 3 = -\frac{2}{3}x + 1 \\ +2x - 1 \quad +2x - 1 \\ \hline \frac{3}{4}(-4) = \frac{4}{3}x - \frac{3}{4} \\ -3 = x \\ y = -2(-3) - 3 \\ y = 3 \end{array}$$

(-3, 3)

6. $\begin{cases} y = x + 4 \\ x + y = 10 \end{cases}$

$$\begin{array}{l} x + x + 4 = 10 \\ 2x + 4 = 10 \\ 2x = 6 \\ x = 3 \\ y = 3 + 4 \\ y = 7 \end{array}$$

(3, 7)

$$7. \begin{cases} y = 2x + 3 \\ 2x + 3y = 17 \end{cases}$$

$$2x + 3(2x + 3) = 17$$

$$2x + 6x + 9 = 17$$

$$\frac{8x}{8} = \frac{8}{8}$$

$$x = 1$$

$$y = 2(1) + 3$$

$$y = 5$$

$$\boxed{(1, 5)}$$

$$8. \begin{cases} x = 15y + 1 \\ x = 3y - 11 \end{cases}$$

$$15y + 1 = 3y - 11$$

$$\frac{-3y - 1 - 3y - 1}{12y} = \frac{-12}{12}$$

$$12y = -12$$

$$y = -1$$

$$x = 15(-1) + 1$$

$$x = -14$$

$$\boxed{(-14, -1)}$$

By Elimination

$$9. \begin{cases} -2x + 5y = 12 \\ 2x - y = 8 \end{cases}$$

$$4y = 20$$

$$y = 5$$

$$2x - 5 = 8$$

$$2x = 13$$

$$x = 6\frac{1}{2}$$

$$\boxed{(6\frac{1}{2}, 5)}$$

$$10. \begin{cases} 5x - 10y = 66 \\ -2x + 10y = -45 \end{cases}$$

$$3x = 21$$

$$x = 7$$

$$-2(7) + 10y = -45$$

$$+14 \qquad +14$$

$$\frac{10y = -31}{10} = \frac{-31}{10}$$

$$y = -3.1$$

$$\boxed{(7, -3.1)}$$

$$11. 2 \times \begin{cases} x + 2y = -8 \\ 2x - 4y = -4 \end{cases}$$

$$2x + 4y = -16$$

$$4x = -20$$

$$x = -5$$

$$12. \begin{cases} 2(4x - 5y = 2) \rightarrow 8x - 10y = 4 \\ 5(3x + 2y = 13) \rightarrow 15x + 10y = 65 \end{cases}$$

$$\frac{23x = 69}{23} = \frac{69}{23}$$

$$x = 3$$

$$-5 + 2y = -8$$

$$2y = -3$$

$$y = -\frac{3}{2}$$

$$3(8) + 2y = 13$$

$$-9$$

$$2y = 4$$

$$y = 2$$

$$\boxed{(2, 3)}$$

$$\boxed{(-5, -\frac{3}{2})}$$