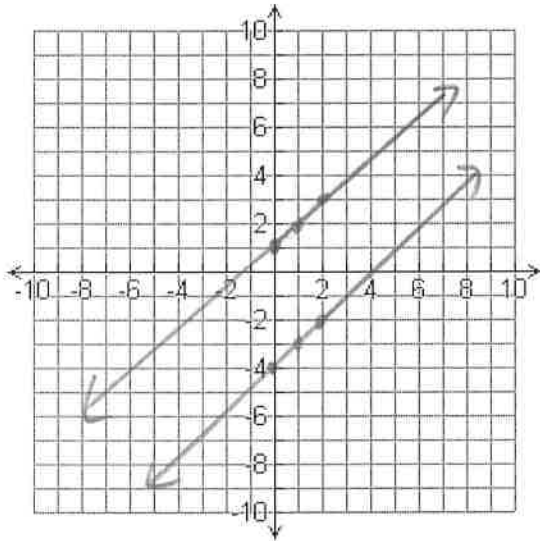


1. $y = x + 1$
 $-x + y = -4$

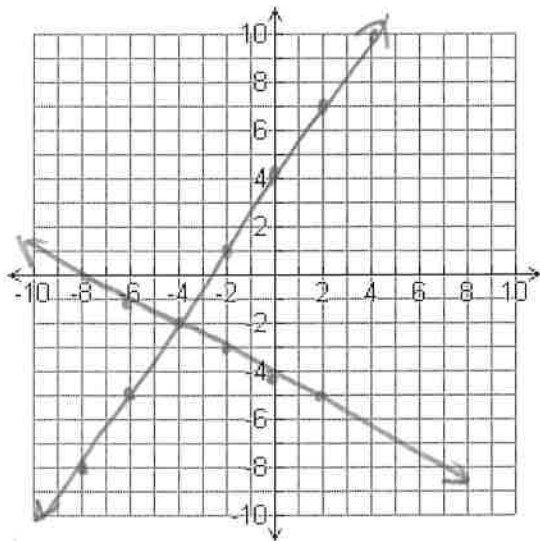
$$y = x - 4$$

no solution



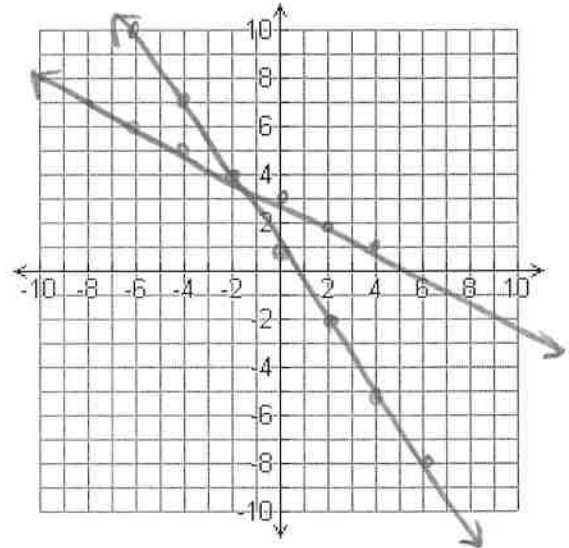
2. $y = \frac{3}{2}x + 4$
 $y = -\frac{1}{2}x - 4$

$(-4, -2)$



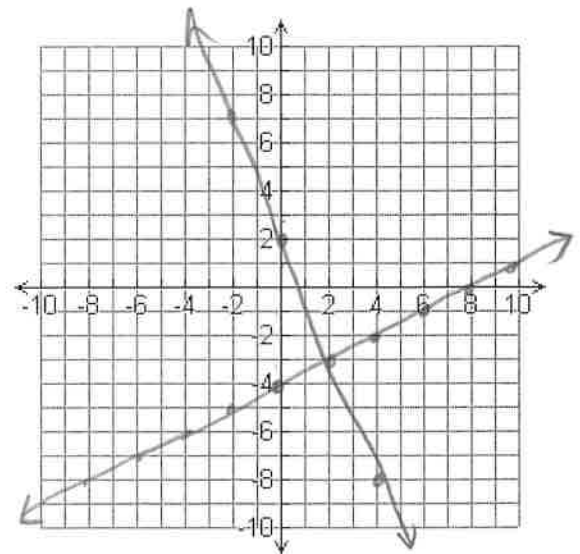
3. $y = -\frac{3}{2}x + 1$
 $y = -\frac{1}{2}x + 3$

$(-2, 4)$



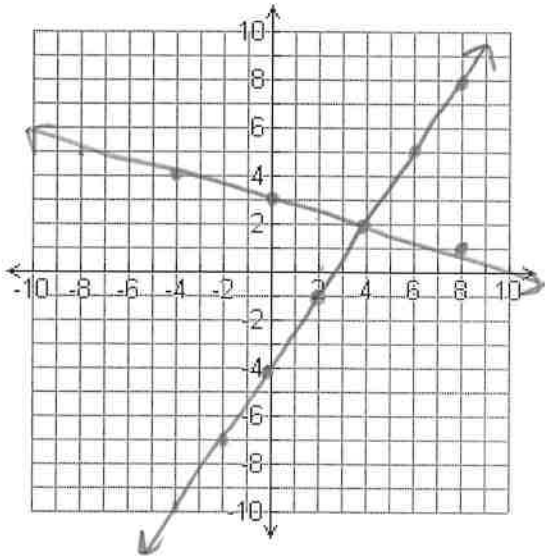
4. $y = \frac{1}{2}x - 4$
 $y = -\frac{5}{2}x + 2$

$(2, -3)$



5. $y = \frac{3}{2}x - 4$
 $y = -\frac{1}{4}x + 3$

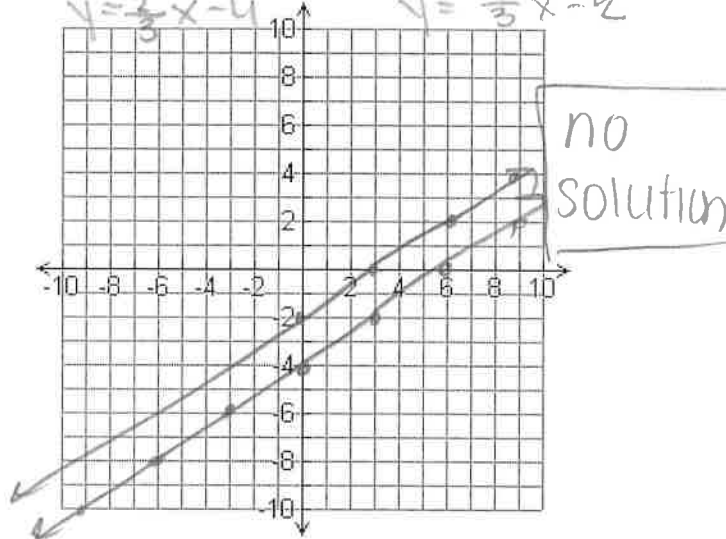
(4, 2)



7. $-2x + 3y = -12$
 $2x - 3y = -6$

$$\begin{array}{r} -2x + 3y = -12 \\ +2x = -6 \\ \hline 3y = -2x - 12 \\ \frac{3y}{3} = \frac{-2x - 12}{3} \\ y = \frac{2}{3}x - 4 \end{array}$$

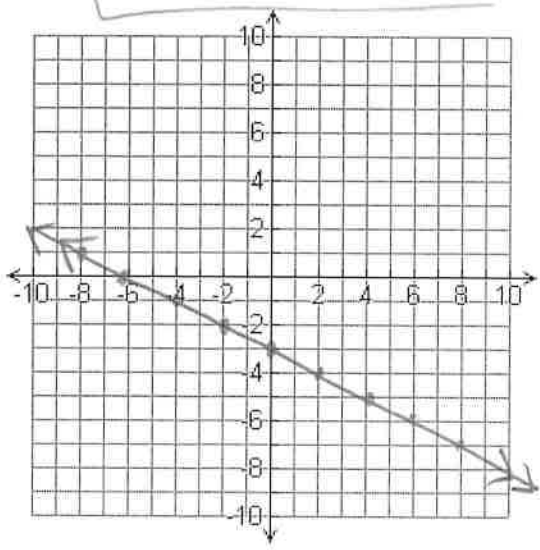
$$\begin{array}{r} 2x - 3y = -6 \\ -2x = -6 \\ \hline -3y = -2x - 6 \\ \frac{-3y}{-3} = \frac{-2x - 6}{-3} \\ y = \frac{2}{3}x - 2 \end{array}$$



6. $y = -\frac{1}{2}x - 3$
 $x + 2y = -6$

$y = -\frac{1}{2}x - 3$

Infinitely many solutions

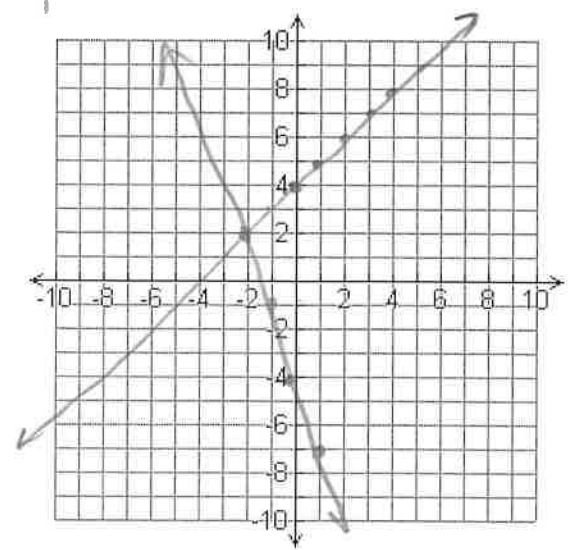


8. $x - y = -4$
 $3x + y = -4$

(-2, 2)

$$\begin{array}{r} x - y = -4 \\ -x = -4 \\ \hline -y = -x - 4 \\ \frac{-y}{-1} = \frac{-x - 4}{-1} \\ y = x + 4 \end{array}$$

$$\begin{array}{r} 3x + y = -4 \\ -3x = -4 \\ \hline y = -3x - 4 \end{array}$$



9. $3x - 2y = -2$
 $x - 2y = -6$

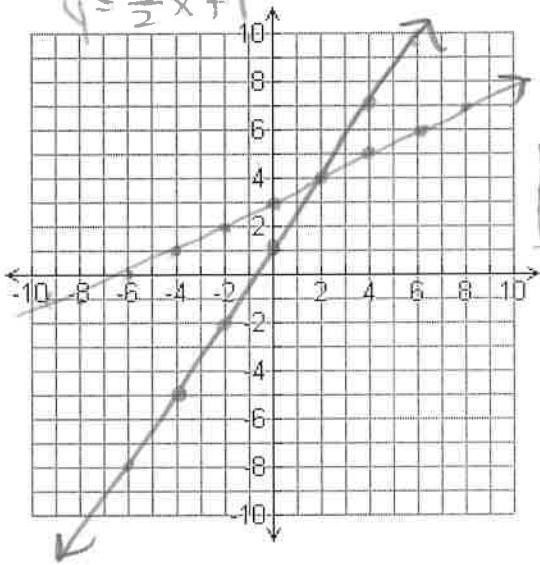
$$\begin{array}{r} 3x - 2y = -2 \\ -3x \quad -3x \\ \hline \end{array}$$

$$\frac{-2y}{-2} = \frac{-3x - 2}{-2} \Rightarrow y = \frac{3}{2}x + 1$$

$$\begin{array}{r} x - 2y = -6 \\ -x \quad -x \\ \hline \end{array}$$

$$\frac{-2y}{-2} = \frac{-x - 6}{-2} \Rightarrow y = \frac{1}{2}x + 3$$

$$y = \frac{1}{2}x + 3$$



(2, 4)

11. $x + 2y = 6$
 $3x - 2y = 2$

(2, 2)

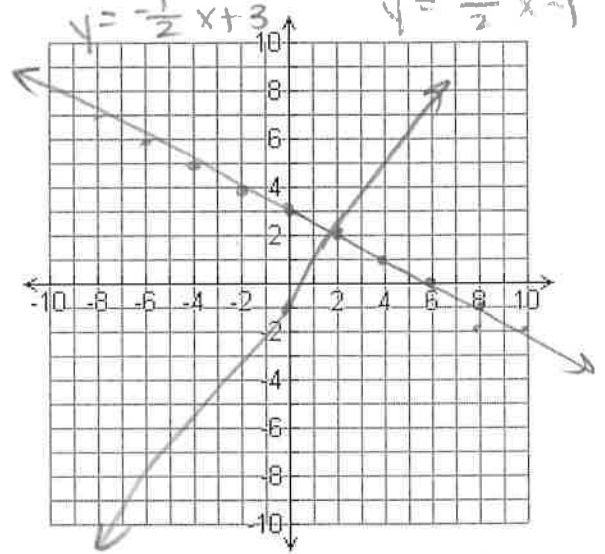
$$\begin{array}{r} x + 2y = 6 \\ -x \quad -x \\ \hline \end{array}$$

$$\frac{2y}{2} = \frac{-x + 6}{2} \Rightarrow y = -\frac{1}{2}x + 3$$

$$\begin{array}{r} 3x - 2y = 2 \\ -3x \quad -3x \\ \hline \end{array}$$

$$\frac{-2y}{-2} = \frac{-3x + 2}{-2} \Rightarrow y = \frac{3}{2}x - 1$$

$$y = \frac{3}{2}x - 1$$



10. $x + 2y = -8$
 $x - 4y = 4$

(-4, -2)

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

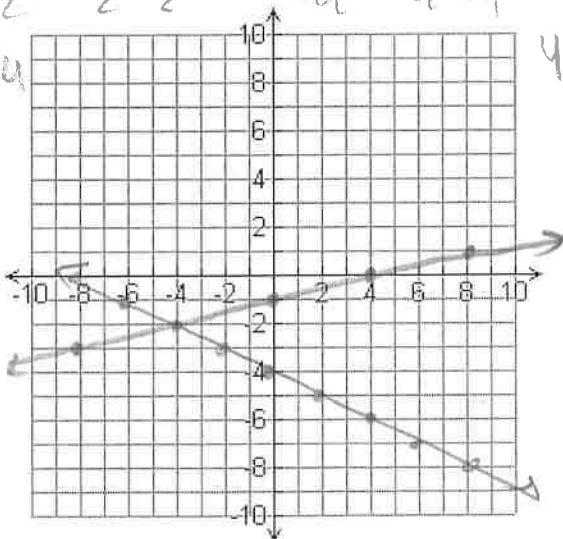
$$\frac{2y}{2} = \frac{-x - 8}{2} \Rightarrow y = -\frac{1}{2}x - 4$$

$$\begin{array}{r} x - 4y = 4 \\ -x \quad -x \\ \hline \end{array}$$

$$\frac{-4y}{-4} = \frac{-x + 4}{-4} \Rightarrow y = \frac{1}{4}x - 1$$

$$y = \frac{1}{4}x - 1$$

$$y = -\frac{1}{2}x - 4$$



12. $-4x + 3y = 3$
 $8x - 6y = -6$

Infinitely many sol

$$\begin{array}{r} -4x + 3y = 3 \\ +4x \quad +4x \\ \hline \end{array}$$

$$\frac{3y}{3} = \frac{4x + 3}{3} \Rightarrow y = \frac{4}{3}x + 1$$

$$y = \frac{4}{3}x + 1$$

$$\begin{array}{r} 8x - 6y = -6 \\ -8x \quad -8x \\ \hline \end{array}$$

$$\frac{-6y}{-6} = \frac{-8x - 6}{-6} \Rightarrow y = \frac{4}{3}x + 1$$

$$y = \frac{4}{3}x + 1$$

