

Feb. 5, 2018

Sect. 4-1

Solving Systems of Eqns  
Graphing

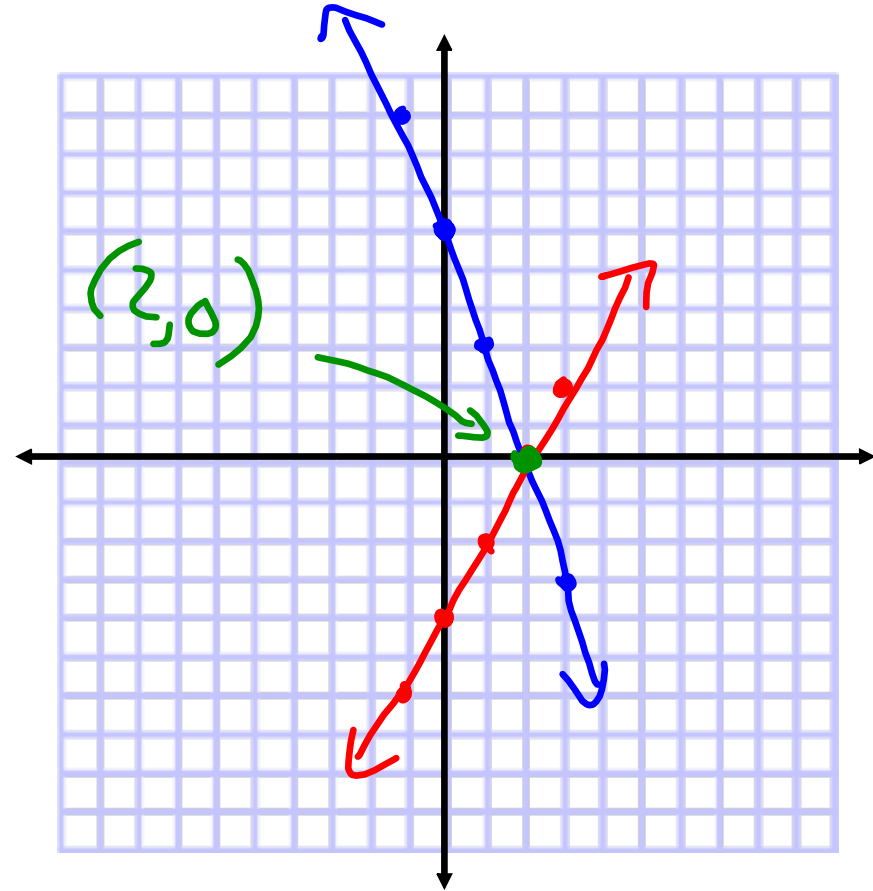
$$y = -3x + 6$$

$$y = 2x - 4$$

$$(0, 6) \quad m = -\frac{3}{1}$$

$$(0, -4) \quad m = \frac{2}{1}$$

$$(2, 0)$$

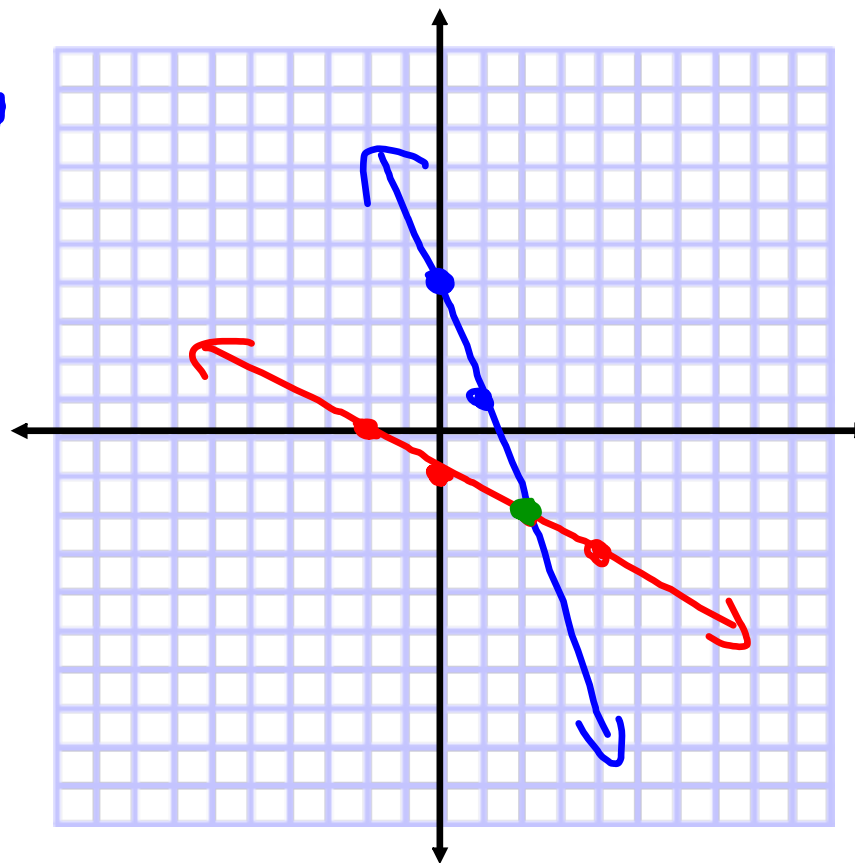


$$y = 4 - 3x$$
$$\Rightarrow y = -3x + 4$$

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

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

$$(2, -2)$$

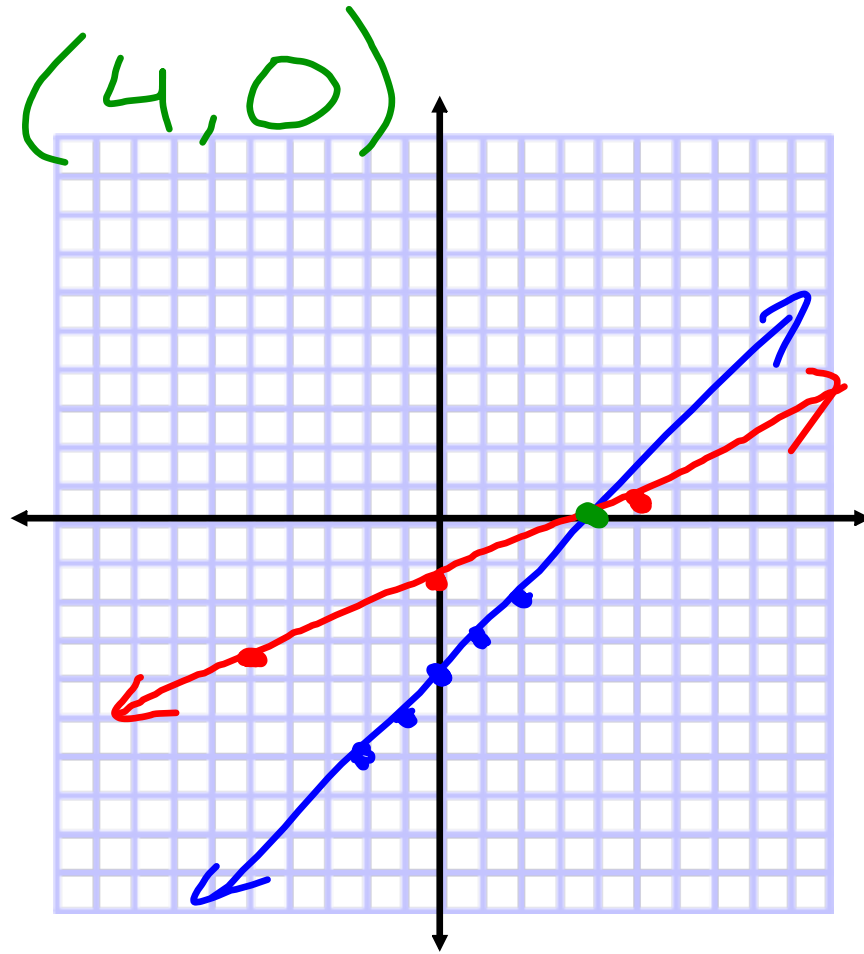


$$x - y = 4$$

$$2x - 5y = -8$$

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

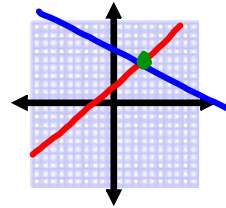
$$\begin{array}{r} 2x - 5y = -8 \\ -2x \quad -2x \\ \hline -5y = -2x + 8 \\ \frac{-5y}{-5} = \frac{-2x}{-5} + \frac{8}{-5} \\ y = \frac{2}{5}x - \frac{8}{5} \end{array}$$



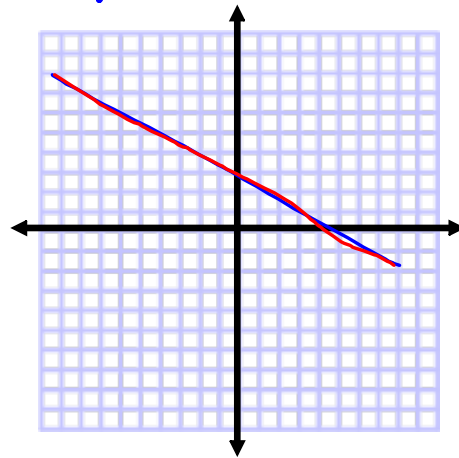
# Independent

Def: Lines cross at exactly one point.

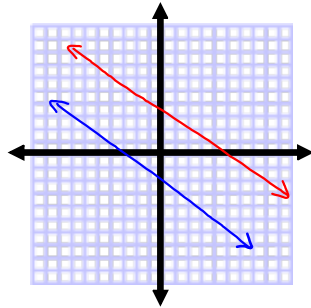
(All of the graphs, so far.)



Dependent  
Def.: Both lines are on  
top of each other

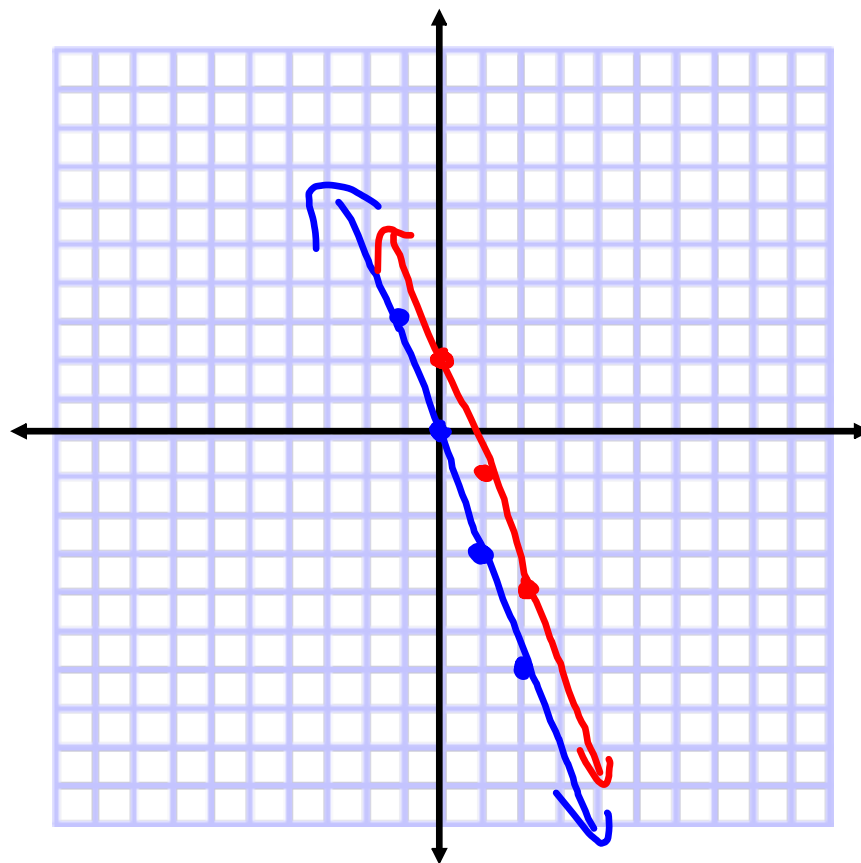


Inconsistent  
Def: The lines never  
touch.  
(Parallel lines)



$$y = -3x + 0$$
$$y = -3x + 2$$

Inconsistent





$$y = x - 5$$
$$-2x + 2y = -10$$
$$\begin{array}{r} +2x \qquad \qquad +2x \\ \hline 2y = 2x - 10 \\ \frac{2y}{2} = \frac{2x}{2} - \frac{10}{2} \\ y = x - 5 \end{array}$$

Dep.

