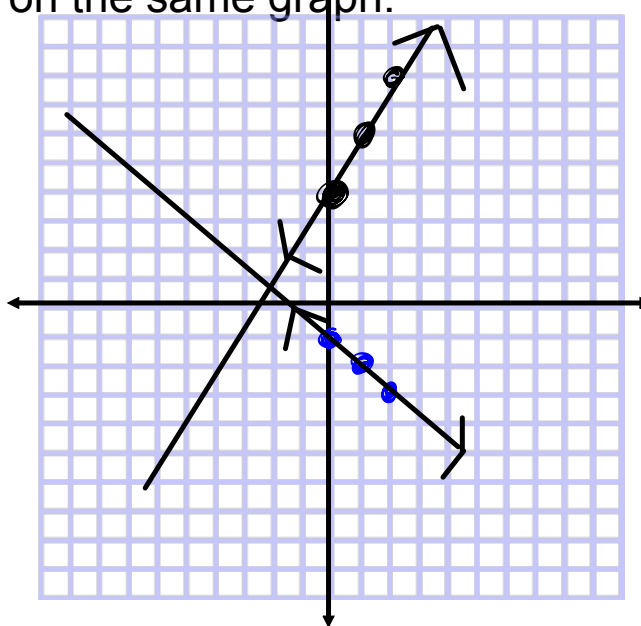


Graph the following lines on the same graph:

$$y = 2x + 4$$

$$y = -x - 1$$

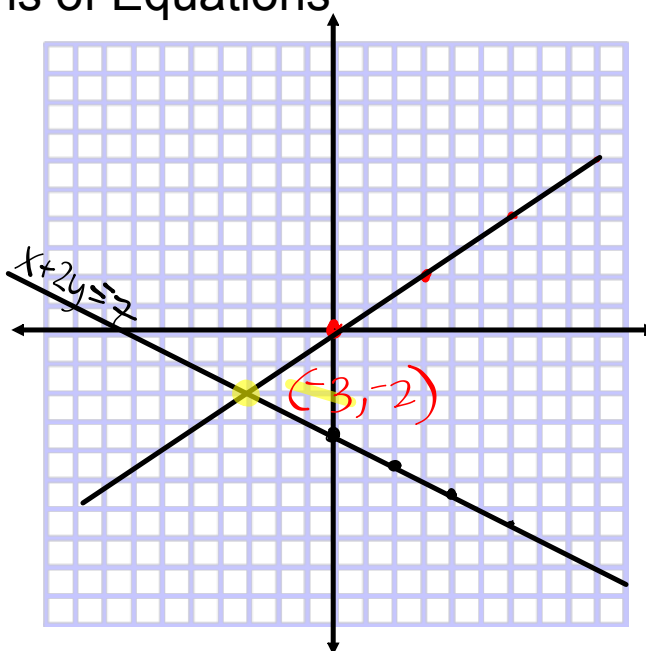


3.1: Graphing systems of Equations

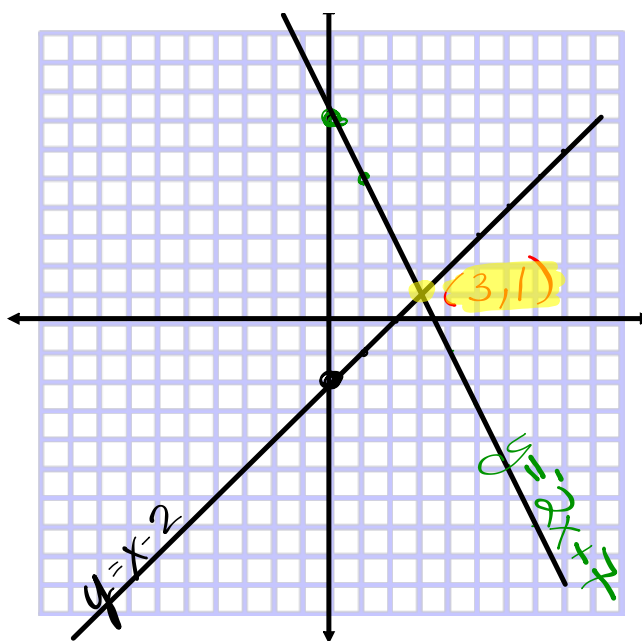
$$\begin{cases} x+2y=7 \\ 2x-3y=0 \end{cases}$$

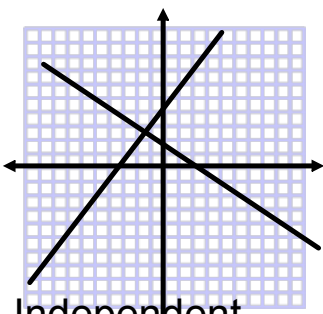
$$\begin{aligned} 2x-3y &= 0 \\ -3y &= -2x \\ y &= \frac{2}{3}x \end{aligned}$$

$$\begin{aligned} x+2y &= 7 \\ 2y &= -x+7 \\ y &= \frac{1}{2}x - \frac{7}{2} = -3.5 \end{aligned}$$

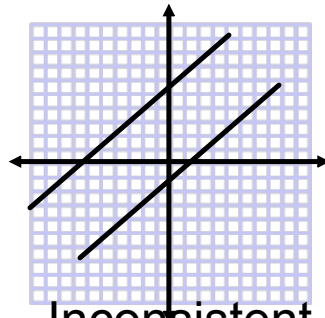


$$\begin{cases} y = x - 2 \\ y = -2x + 7 \end{cases} \quad (3, 1)$$

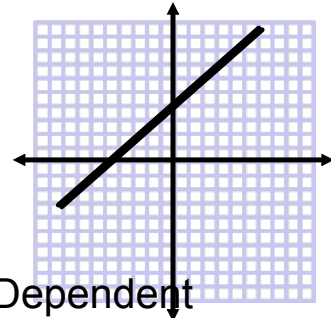




Independent
one unique solution



Inconsistent
no solutions



Dependent
no unique solution
"infinitely many solutions"

different slopes

$$\begin{cases} y = 3x + 2 \\ y = 4x + 3 \end{cases}$$

same slope but different y - intercepts

$$\begin{cases} y = 3x + 2 \\ y = 3x + 4 \end{cases}$$

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

$$\begin{aligned} 2y &= 6x + 4 \\ \frac{2y}{2} &= \frac{6x}{2} + \frac{4}{2} \\ y &= 3x + 2 \end{aligned}$$

Classwork/Homework

page 118 #(2-8)even and (13-23) odd