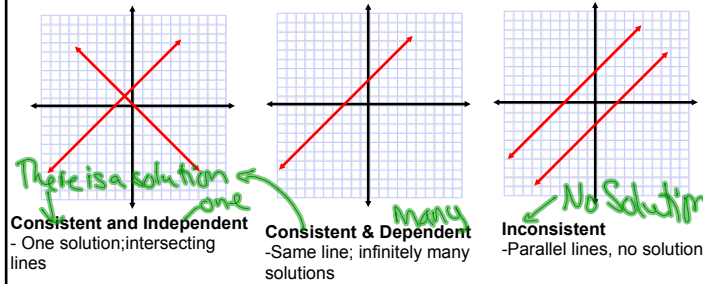


3-1 Solving Systems of Equations by Graphing

Objective: Solve linear systems by graphing. Determine whether the system is consistent and dependent, consistent and independent, or inconsistent



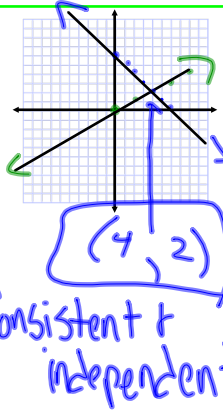
Solve the system by graphing.

Ex1)

$$\begin{aligned} x - 2y &= 0 \\ x + y &= 6 \end{aligned}$$

$$\begin{aligned} x - 2y &= 0 & \rightarrow & -2y = -x \\ x + y &= 6 & \rightarrow & -x = -x \\ \hline y &= \frac{1}{2}x + 0 \end{aligned}$$

$$\begin{aligned} x + y &= 6 \\ -x &= -x \\ \hline y &= -x + 6 \\ m &= -1 \end{aligned}$$



Solve the system by graphing

Ex2)

$$\begin{aligned} 9x - 6y &= 24 \\ 6x - 4y &= 16 \end{aligned}$$

$$\begin{aligned} 9x - 6y &= 24 & \rightarrow & 9x - 6y = 24 \\ 6x - 4y &= 16 & \rightarrow & -9x & -9x \\ \hline -4y &= -6x + 16 & \rightarrow & -6y & -9x \\ \hline y &= \frac{3}{2}x - 4 & \rightarrow & -6y & -9x + 24 \\ \hline y &= \frac{3}{2}x - 4 & \rightarrow & -6 & -6 & -6 \end{aligned}$$



Ex3)

$$\begin{aligned} 3x + 4y &= 12 \\ 6x + 8y &= -16 \end{aligned}$$

$$\begin{aligned} 3x + 4y &= 12 & \rightarrow & 3x + 4y = 12 \\ 6x + 8y &= -16 & \rightarrow & -3x & -3x \\ \hline 4y &= -3x + 12 & \rightarrow & -6x & -6x \\ \hline y &= -\frac{3}{4}x + 3 & \rightarrow & 8y & -6x - 16 \\ \hline y &= -\frac{3}{4}x + 3 & \rightarrow & 8 & 8 & 8 \end{aligned}$$

