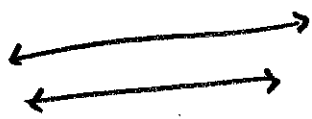
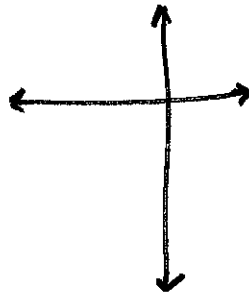


Unit 8 5.1 Linear Systems of Equations



parallel
 \emptyset No solution



1 solution



Coincide
 ∞ solutions
 Infinite

Ex 1

Solve the system

$$\begin{array}{r} 3x + 2y = 11 \\ -x + y = 3 \\ \hline +x \qquad \qquad +x \\ \hline y = x + 3 \end{array}$$

$$3x + 2(x + 3) = 11$$

$$3x + 2x + 6 = 11$$

$$\begin{array}{r} 5x + 6 = 11 \\ \hline -6 \qquad -6 \\ \hline 5x = 5 \end{array}$$

$$\frac{5x}{5} = \frac{5}{5}$$

$$x = 1$$

Solve for x
 Distribute
 CLT

Plug $x = 1$ into either equation

Answer

$$(1, 4)$$

$$\begin{array}{r} -x + y = 3 \\ -1 + y = 3 \\ \hline +1 \qquad +1 \\ \hline y = 4 \end{array}$$