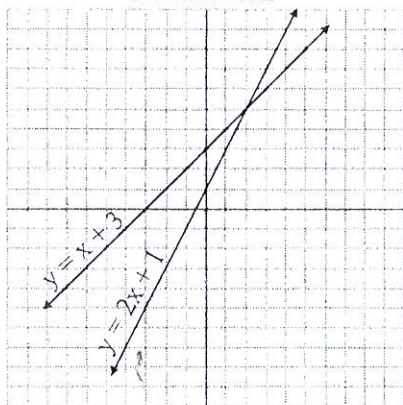


Analyzing Graphs to "see" the number of solutions equations have

Big Ideas:

**A "solution" on a graph is a point where linear equations intersect (where they are the same value).

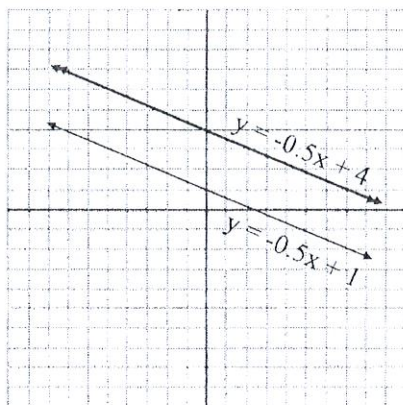
One Solution



$$\begin{cases} y = x + 3 \\ y = 2x + 1 \end{cases}$$

1 Solution
• Different R.o.C.

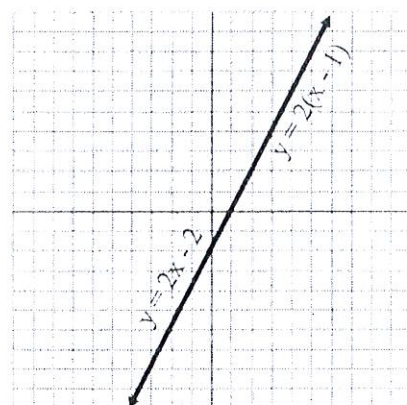
No Solution



$$\begin{cases} y = -0.5x + 4 \\ y = -0.5x + 1 \end{cases}$$

No Solution
• Same R.o.C.
• Different I.V.

Infinite Solutions



$$\begin{cases} y = 2x - 2 \\ y = 2(x - 1) \end{cases}$$

Infinite Solutions
• Same R.o.C.
• Same I.V.