

MDI - Is the ordered pair a solution to the system?

NO

$(2, -3)$

$$\begin{aligned} 2x + y &= 1 \\ x + y &= 5 \end{aligned}$$

$$2(2) + (-3) = 1$$

$$4 - 3 = 1$$

$$1 = 1$$

$$2 + (-3) = 5$$

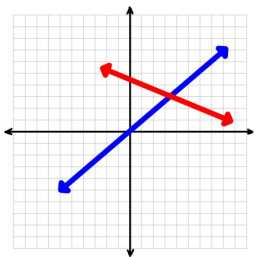
$$-1 = 5$$

Solving Systems of Equations: GRAPHING

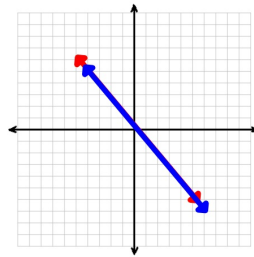
Learning Intentions - To understand the graphical interpretations of a system of equations.

Success Criteria - I can solve a system of linear equations by graphing.

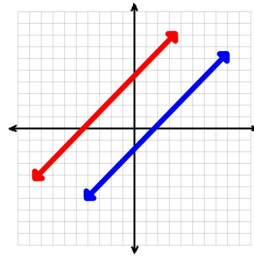
Graphical Interpretation



Exactly 1 solution



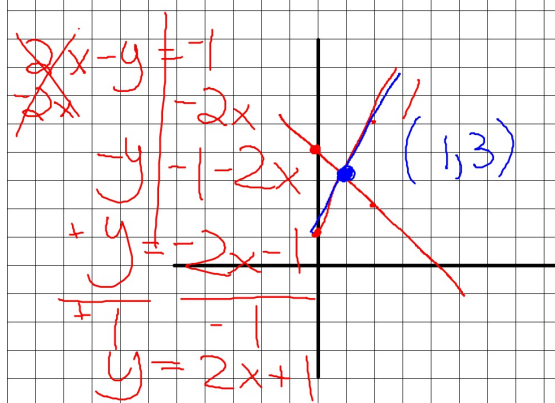
Infinitely many solutions



No solution

Example 1

Solve the system by graphing: $x + y = 4$
 $2x - y = -1$



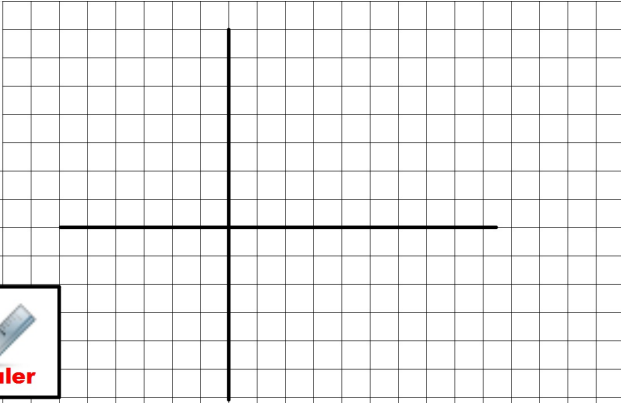
$$\begin{aligned} x + y &= 4 \\ -x &= -x \\ \hline y &= 4 - x \\ y &= -\frac{1}{1}x + 4 \end{aligned}$$



Pen Eraser Ruler

Example 2

$$3x + y = 9$$
$$-x + y = 5$$



$$\begin{array}{r} 3x + y = 9 \\ -3x \quad \quad \\ \hline y = -3x + 9 \end{array}$$
$$\begin{array}{r} -x + y = 5 \\ +x \quad \quad \\ \hline (1, 6) \end{array}$$

Start Graphing worksheet (will also work on tomorrow!)