

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

$$\overset{x}{(2,1)} \overset{y}{}$$

$$x + 2y = 4 \quad 2 + 2(1) = 4$$

$$3x - y = 5 \quad 2 + 2 = 4$$

$$4 = 4 \checkmark$$

$$3(2) - 1 = 5$$

$$6 - 1 = 5$$

$$5 = 5 \checkmark$$

Solving Systems of Equations: GRAPHING

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

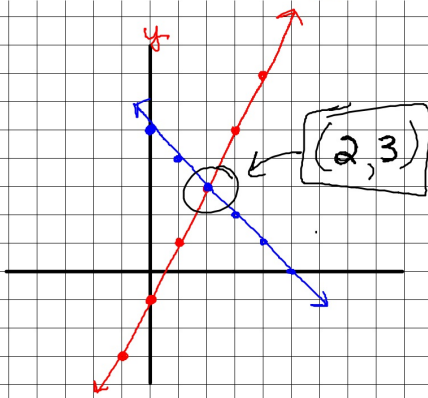
Success Criteria - I can solve a system of linear equations by graphing.

Example 1

Solve the system by graphing:

$$y = 2x - 1$$

$$y = -x + 5$$



$y = mx + b$
 slope y-intercept

$y = 2x - 1$
 Slope: 2
 y-int: -1

$y = -x + 5$
 Slope: -1
 y-int: 5

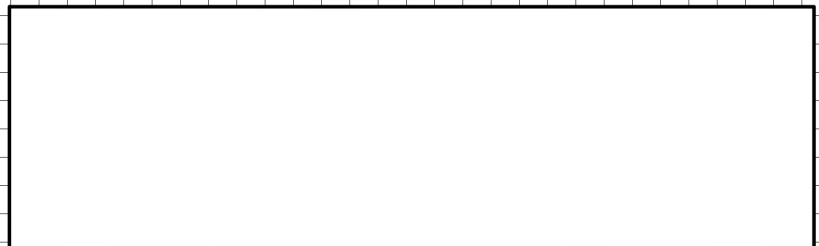
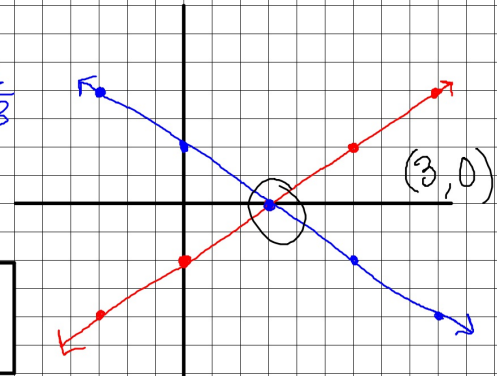


Example 2

$$y = \frac{2}{3}x - 2$$

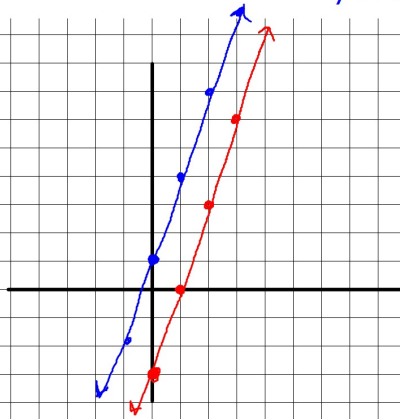
$$y = -\frac{2}{3}x + 2$$

$$-\frac{2}{3} = \frac{2}{-3}$$



Example 3

Solve the system by graphing: $y = 3x - 3$
 $y = 3x + 1$

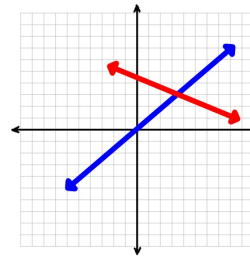


No solution

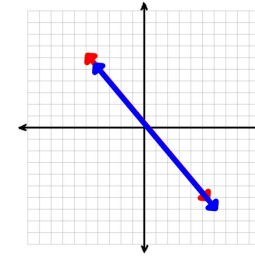


Pen Eraser Ruler

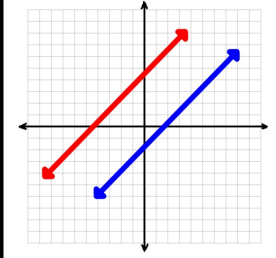
Graphical Interpretation



Exactly 1 solution



Infinitely many solutions



No solution