Linear Equations:

Method #1

Sept. 5, 2014

Sept. 7, 2017

Question:

Graph the equation to determine if the point (1,-2) falls on the line ?

$4x + 2y = -6$

$y = mx + b$

$x \quad y$

$4(1) + 2(-2) = -6$

$-4x$

$\dfrac{2y}{2} = \dfrac{-4x}{2} - \dfrac{6}{2}$

$S \leq 100$

$4 - 4 = -6$?

No

1) slope-intercept form

$y = \dfrac{-2}{1}x - 3 \quad \dfrac{+2}{-1}$

2) x & y intercepts

3) table of values

$x \quad y$

-2
-1
0
-1
-2

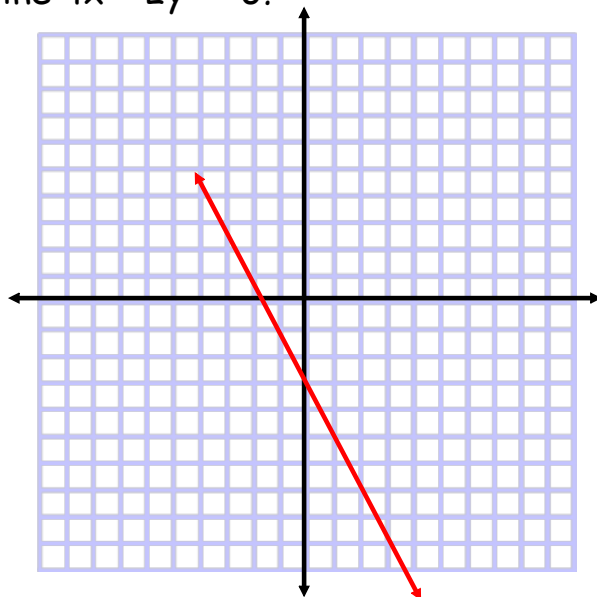1) Graphing

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Does the point (2,-2) fall on the line 4x + 2y = -6?

$4(2) + 2(-2) = -6$

$8 - 4 = -6$?

$4 \neq -6$?

No

Does the point (-2,1) fall on the line 4x + 2y = -6?

Other examples

1

"Systems of Linear Equations"

--a System is a set of 2 or more linear equations
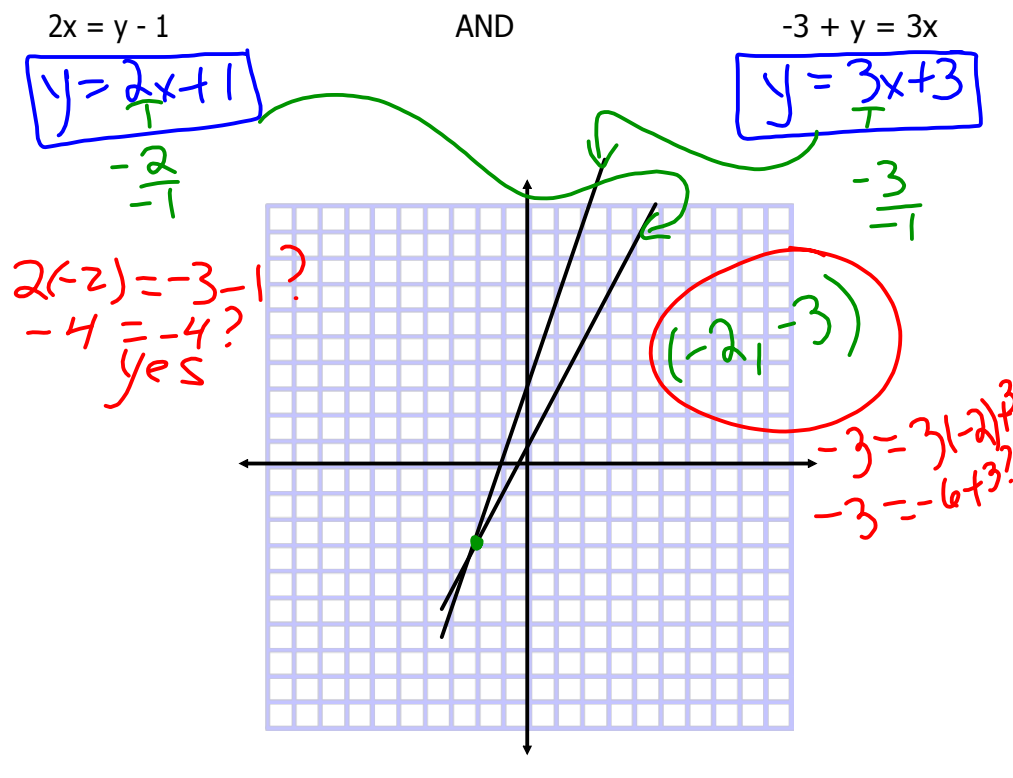
Solving a system of equations:

(x,y)

Calculate where the two equations are equal (the point where they would intersect).

There are 3 ways to determine this point:

a. The Graphing Method

b. The Substitution Method

c. The Elimination Method

May 6-11:35 AM

EXAMPLE 1- Solve the following system of linear equations by graphing!

$2x = y - 1$ AND $-3 + y = 3x$

$y = 2x + 1$

$\dfrac{-2}{-1}$

$y = 3x + 3$

$\dfrac{-3}{-1}$

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

$-4 = -4?$

yes

$(-2, -3)$

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

$-3 = -6 + 3$

Apr 11-9:53 AM