DO NOW

Is the point (-2, 7) a solution to the equation
2y - 3x = 18?

$$2y - 3x = 18$$
$$2(7) - 3(-2) = 18$$
$$14 + 6 = 18$$
$$20 \neq 18$$

Not a
Solution

Mar 5-5:46 AM

Graphing Systems of Equations
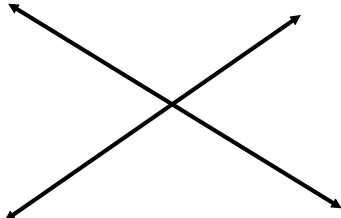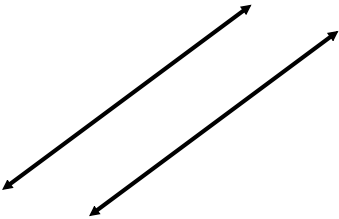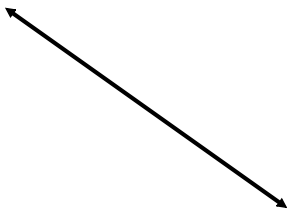
A <u>system of linear equations</u> is 2 linear
equations with the same variables

Example: y = 4x - 1
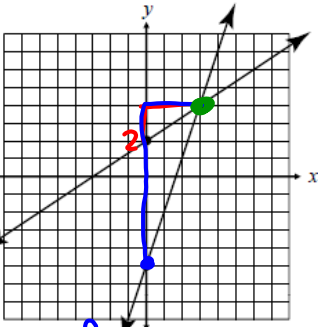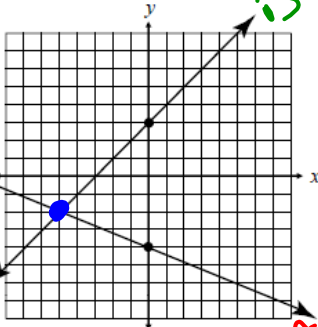   2y - 4x = 8

The <u>solution</u> to a system of linear equations is
the ordered pair (x,y) that is a solution to BOTH
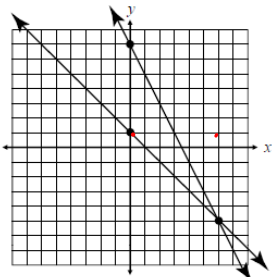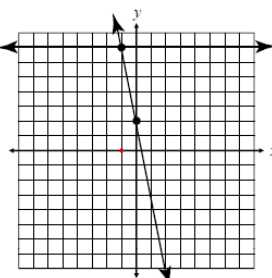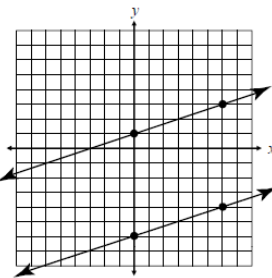equations in the system

Feb 8-9:51 PM

Three types of solutions to a system of linear equations:

ONE SOLUTION
The lines intersect at one point

NO SOLUTION
The lines NEVER intersect
Lines are PARALLEL
Same Slope

INFINITE SOLUTIONS
Same line
Same slope AND y-intercept

May 28-1:21 PM

❶

System of Equations:

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

B $y = 3x - 5$

Solution: $(3, 4)$

$m = \frac{2}{3}$
$b = 2$
$m = \frac{9}{3} = 3$
$b = -5$

❷

System of Equations:

$y = \frac{-2}{5}x - 4$

$y = x + 3$ or $y = 1x + 3$

Solution: $(-5, -2)$

Nov 21-1:31 PM

2

③

System of Equations:

A $y = 2x + 7$

B $y = -1x + 1$

Solution $(6, -5)$

④

System of Equations:

$y = -5x + 2$

$y = 7$

Solution: $(-1, 7)$

Substitute
$y = 5x + 2$
$7 = 5(-1) + 2$
$7 = +5 + 2$
$7 = 7$ ✓

⑤

System of Equations:

$y = \frac{1}{3}x + 1$

$y = \frac{1}{3}x - 6$

Solution: NO

Nov 21-1:33 PM