Warm Up
3/6/19

1. Given the points (10, 4) and (14, -3)

A. Find the midpoint

$(12, \frac{1}{2})$

B. Find the distance

16.4 $\sqrt{65}$

$d = \sqrt{(14-10)^2 + (-3-4)^2}$

$\sqrt{(4)^2 + (-7)^2} = \sqrt{16+49}$

$\sqrt{65}$

8.06

2. ~~Andre scored the following on his science tests thus far:~~ 73, 90, and 84. He wants to have an average of 85%, what does he need to score on the next test to reach his goal?

$73+90+84$

$(4)\frac{247+x}{4} = 85(4)$

$247+x = 340$

$-247 \quad -247$

$x = 93\%$

WHAT IS IT

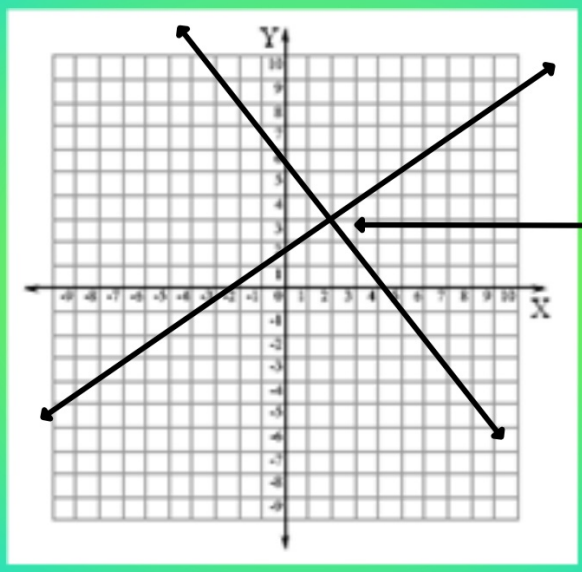
Two or more linear equations involving the same variables form a system of equations.

A solution of the system of equations is an ordered pair that satisfies *both* equations.

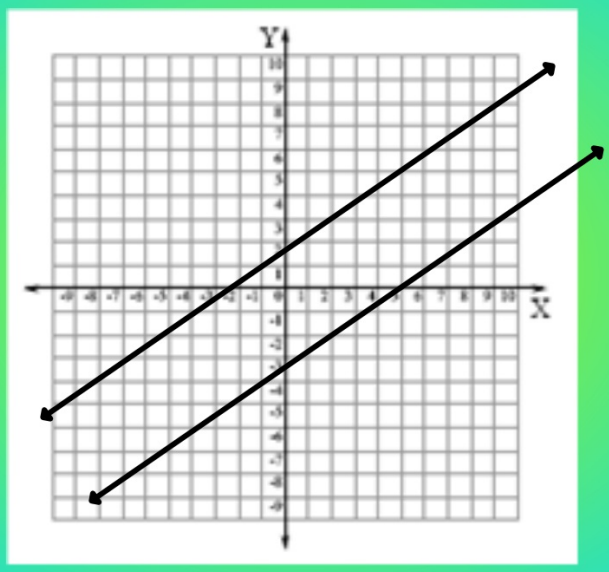
Systems of Equations

TYPES of SOLUTIONS

Two intersecting lines will have 1 solution.

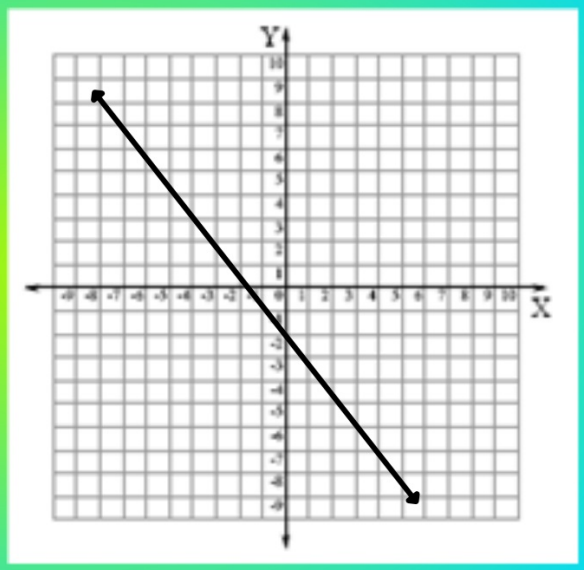


Two parallel lines will have <u>no solution.</u>



(They never intersect)

Two lines that are the same will have <u>infinitely many solutions</u>.



(The lines are
on top of eachother)

Graphing Method

WHEN TO USE??

...when both equations are in slope-intercept form (y=mx+b)

Ex: $y = x + 3$
$y = x - 1$

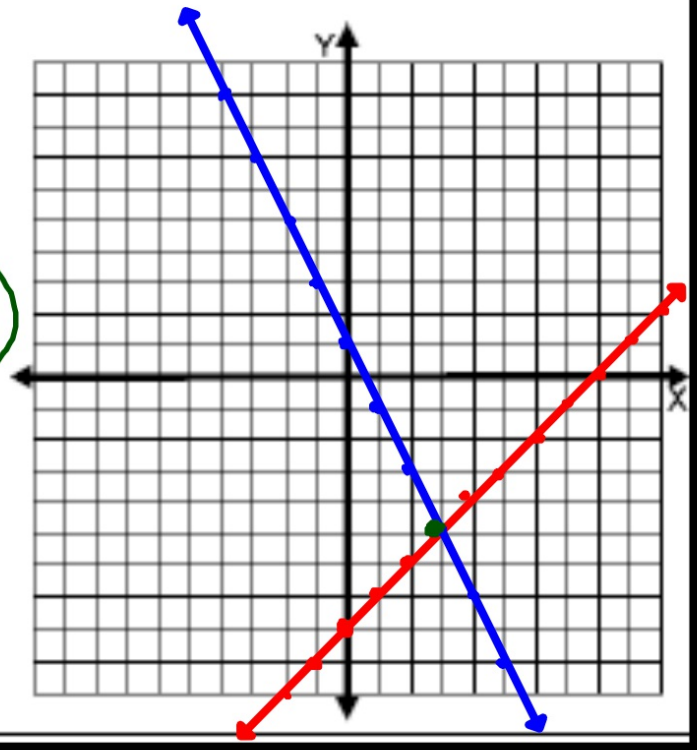
Solving by Graphing

Note: Make sure equations are in Slope-incpt form!

1. $y = x - 8$

$y = -2x + 1$

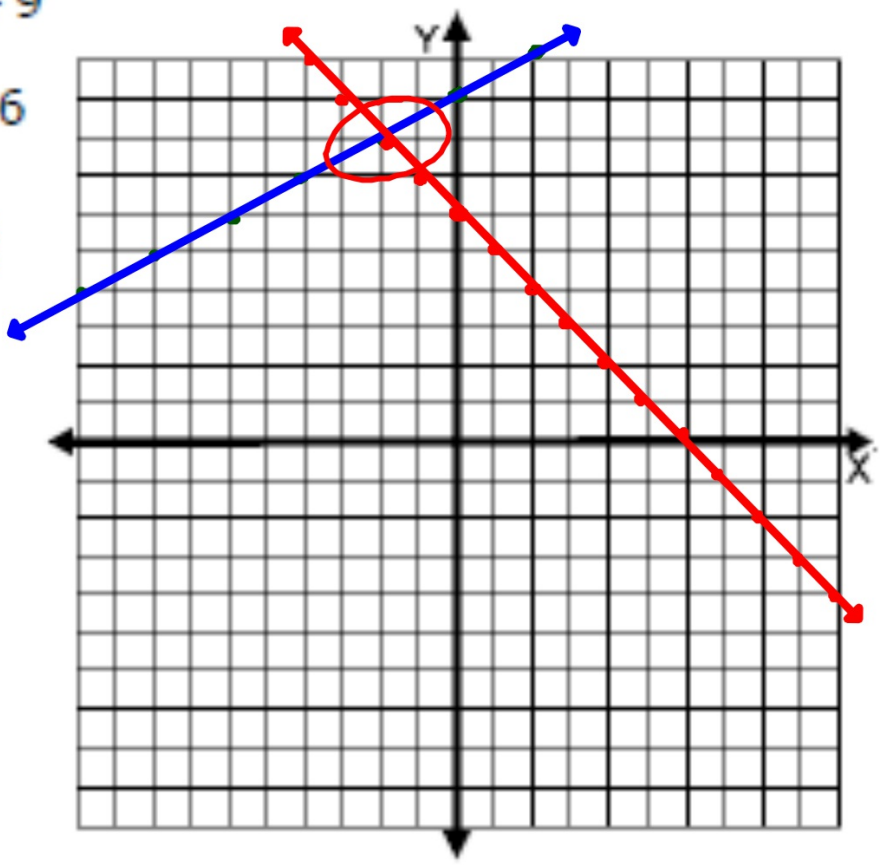
(3, -5)



2. $y = \frac{1}{2}x + 9$

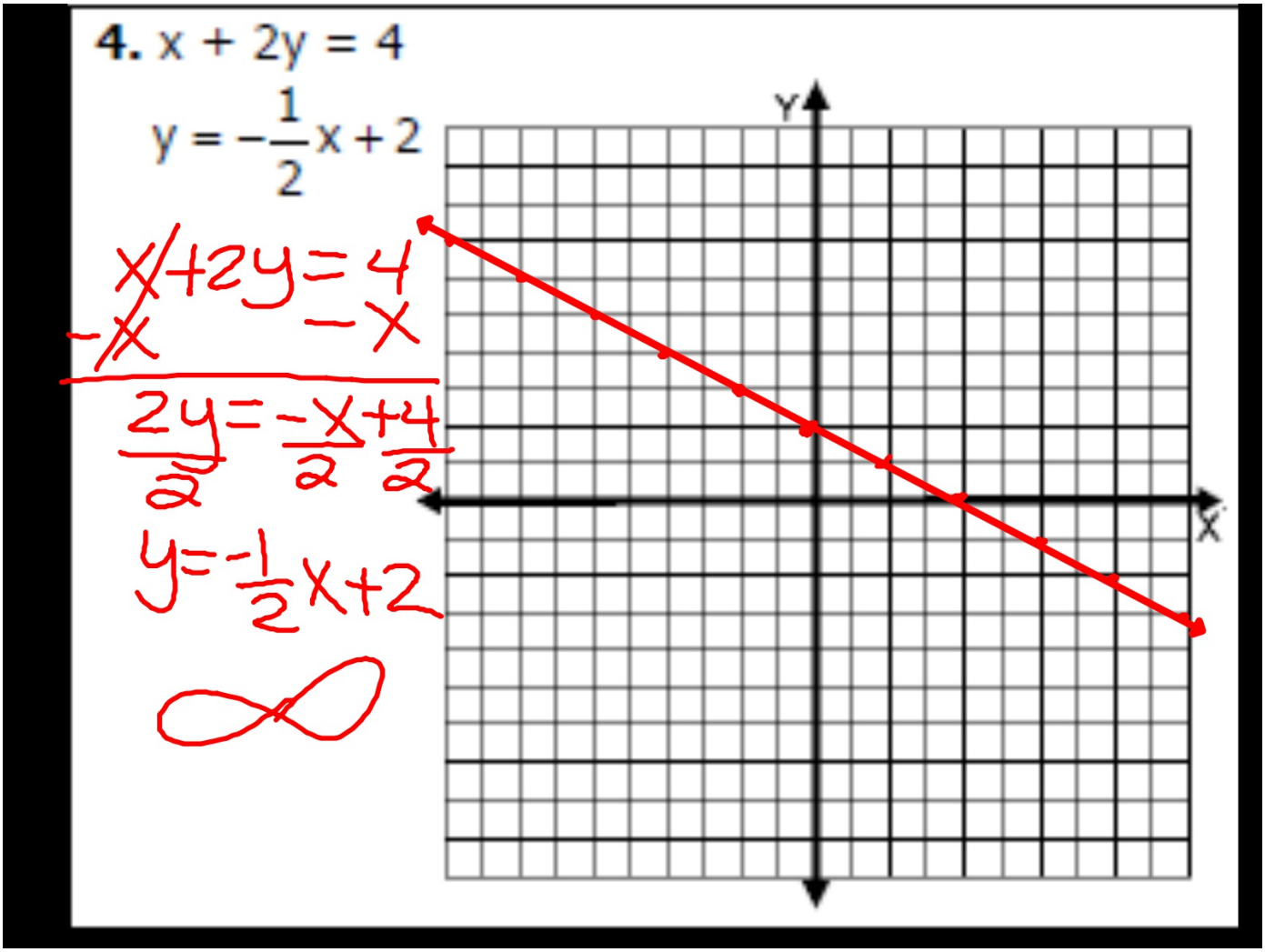
$y = -x + 6$

(-2, 8)



4. $x + 2y = 4$

$y = -\frac{1}{2}x + 2$



$x + 2y = 4$

$-x \quad -x$

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

$y = -\frac{1}{2}x + 2$

∞

6. $y = x + 5$

$x - y = 2$

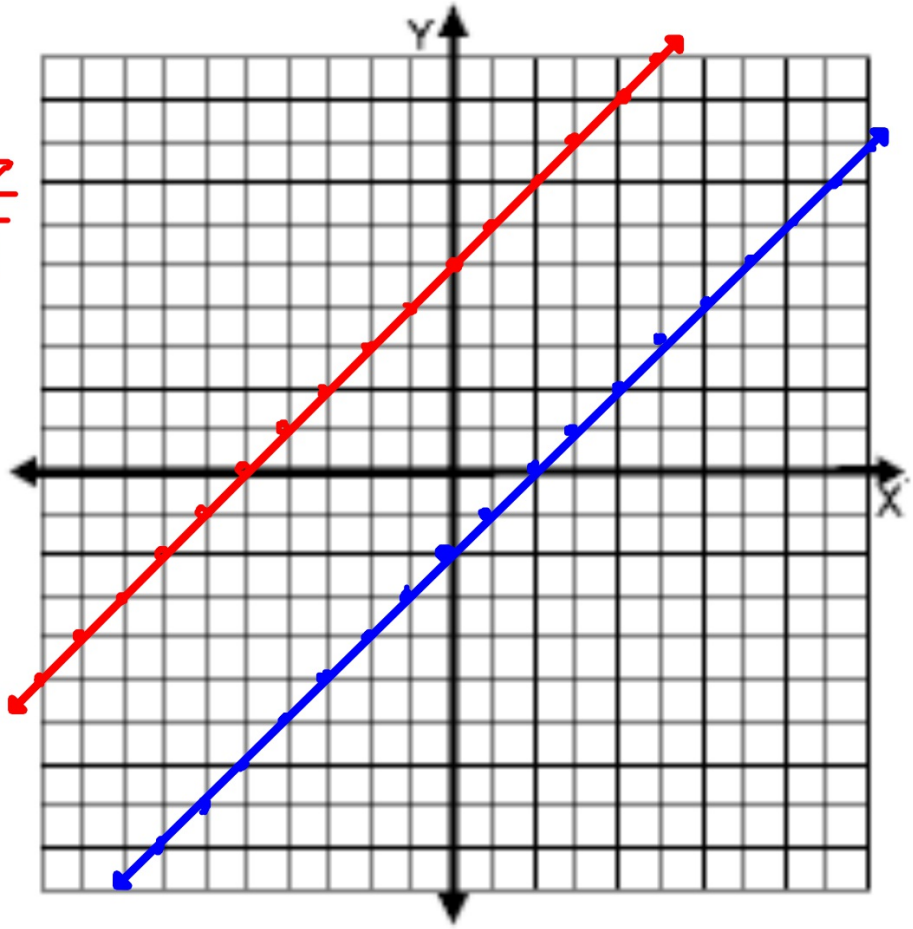
$-x \quad -x$

$-y = -x + 2$

$\frac{-y}{-1} = \frac{-x}{-1} + \frac{2}{-1}$

$y = x - 2$

∅

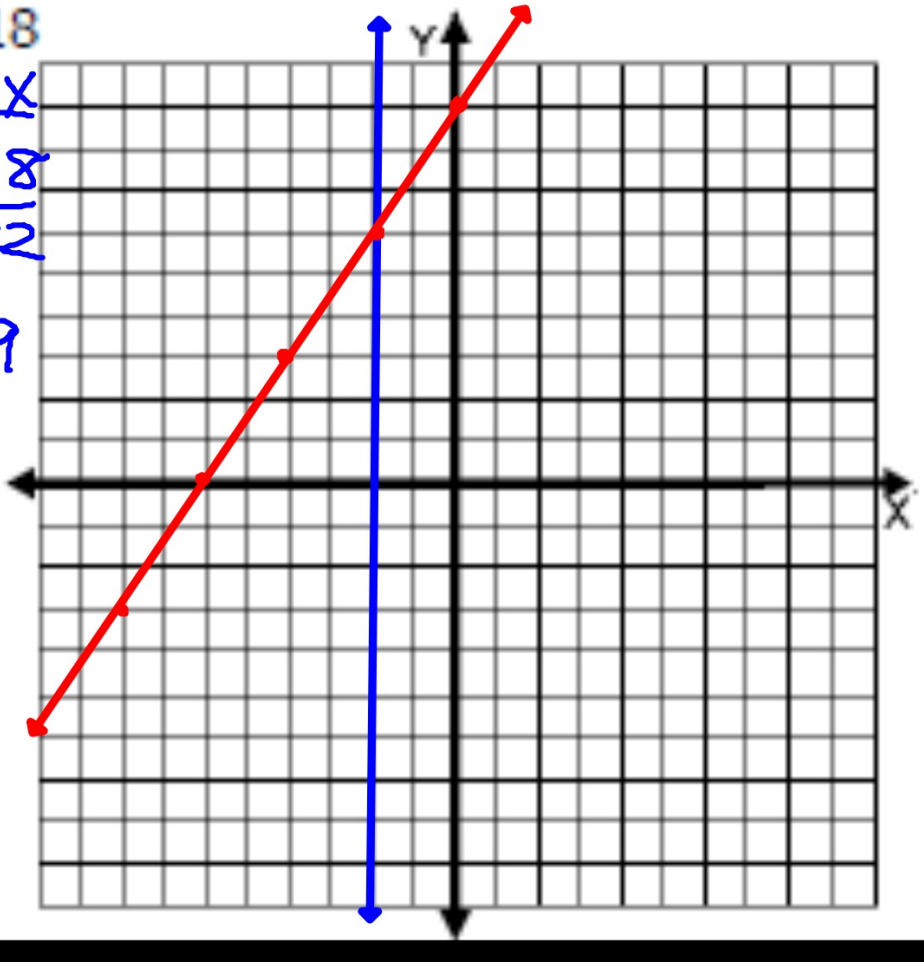


8. $x = -2$

$3x - 2y = -18$

$-3x \quad -3x$

$\frac{-2y}{-2} = \frac{-3x}{-2} - \frac{18}{-2}$

$y = \frac{3}{2}x + 9$

$(-2, 6)$