

# Algebra 1 – Homework

## Unit 4- Solving Systems of Equations Graphically

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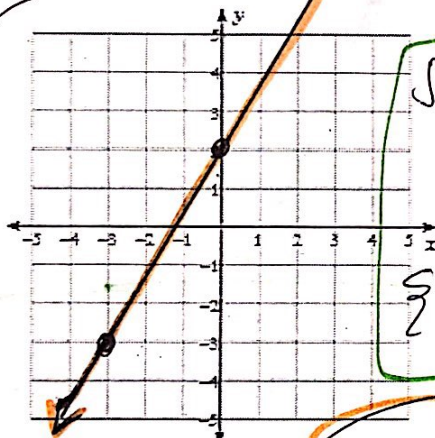
Period: 3 8

Date: 1/10/18

Solve each system by graphing.

1)  $y = 2 + \frac{5}{3}x$   $m = \frac{5}{3}$   $y\text{-int: } (0, 2)$

$5x - 3y = -6$



same line

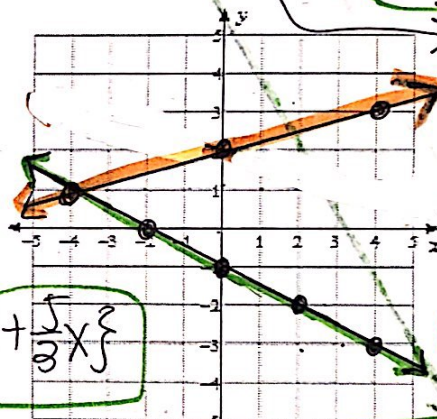
solution:

$\{(x, y) | y = 2 + \frac{5}{3}x\}$

$y = \frac{5}{3}x + 2$

$$\begin{array}{r} 5x - 3y = -6 \\ -5x \phantom{- 3y} = -5x \\ \hline -3y = -5x - 6 \end{array}$$

2)  $x + 2y = -2$   
 $x + 8 - 4y = 0$



$$\begin{array}{r} x + 2y = -2 \\ -x \phantom{+ 2y} = -x \\ \hline 2y = -x - 2 \\ \frac{2y}{2} = \frac{-x - 2}{2} \\ y = -\frac{1}{2}x - 1 \end{array}$$

$$\begin{array}{r} x + 8 - 4y = 0 \\ +4y \phantom{+ 8} = +4y \\ \hline x + 8 = 4y \end{array}$$

$$\frac{x + 8}{4} = \frac{4y}{4}$$

$y = \frac{1}{4}x + 2$

intersecting lines,  
not  $\perp$   
solution:  $(4, 1)$