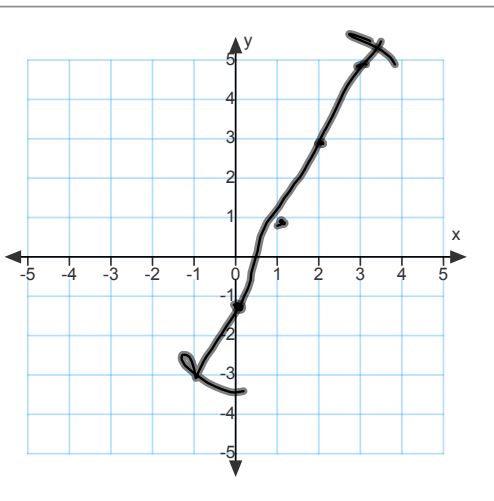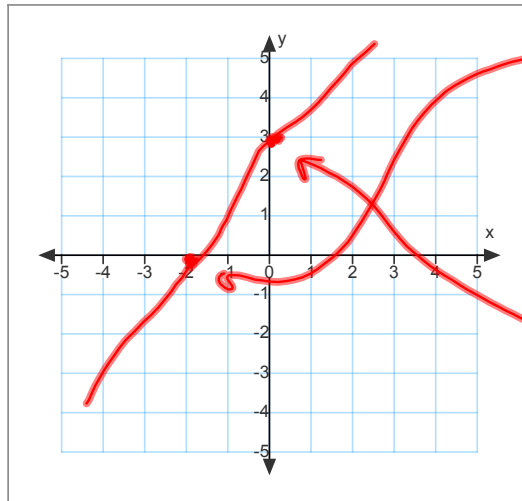# WARM UP:

Graph the following lines (on a coordinate plane):

a. $y = 2x - 1$ b. $3x - 2y = -6$

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

$$X = -2$$

$$\frac{-2y}{-2} = \frac{-6}{-2}$$

$$y = 3$$

Sep 3-12:13 PM

Learning Target 1.1 I can demonstrate understanding of how to represent a region on a graph with an inequality.

1.1C Graphing Linear Inequalities in

Standard Form and Slope-Intercept Form

Section

1.1C

There are a couple of options when plotting inequalities that have related equations in standard form ($ax + by = c$). One method is to identify the x- and y-intercepts to graph the boundary line or, another method would be to solve the equation for y, rewriting the equation into slope-intercept form. Sometimes, the related equation for the inequality may be in the slope-intercept form ($y = mx + b$) to start and the y-intercept and slope can then be used to plot points to graph the boundary line. Once we graph the boundary line, determine which region to shade by testing some ordered pairs within each half-plane or, in many cases, by looking at the inequality.

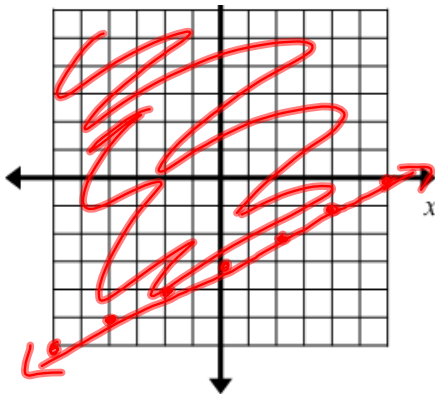4) Graph the following inequalities.

a) $y \geq -x + 4$

x, y
$(0, 0)$
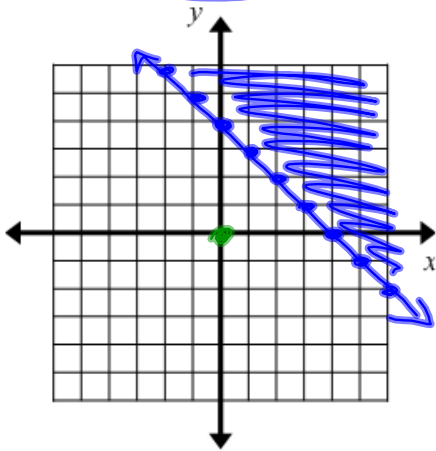
slope = $\frac{-1}{1}$

$y^i = 4$

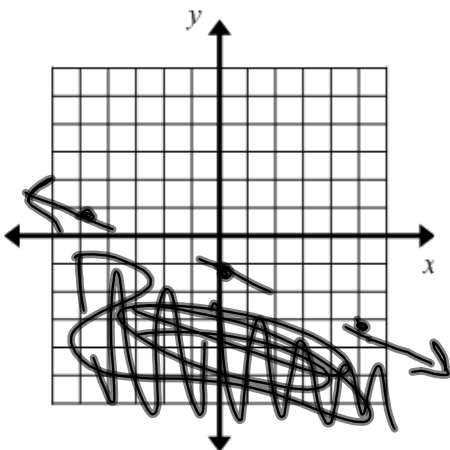$0 \geq -1(0) + 4$
$0 \geq 4$

b) $\frac{1}{2}x - 3 \leq y$

$(0, 0)$
$\frac{1}{2}(0) - 3 \leq 0$
$0 - 3 \leq 0$
$-3 \leq 0$
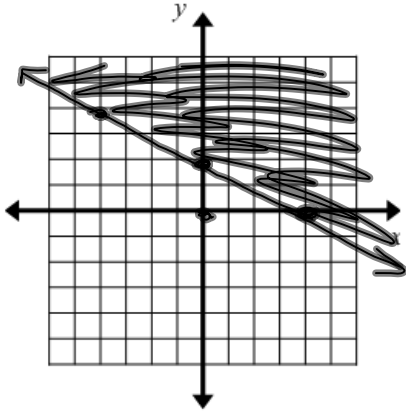
c) $y < -\frac{2}{5}x - 1$

$(0, 0)$

$0 < -\frac{2}{5}(0) - 1$
$0 < 0 - 1$
$0 < -1$

Sep 3-1:40 PM

6) Graph the following inequalities.

a) $x + 2y \geq 4$

$x_i = 4$

$x + 2y = 4$

$y_i = 2$

$(0,0)$

$0 + 2(0) \geq 4$

$0 \geq 4$

b) $-6 < -x - 3y$
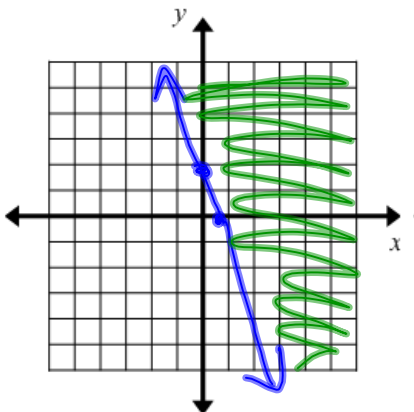

$\dfrac{-6}{-1} = \dfrac{-x}{-1}$　　$x = 6$

$-6 < -(0) - 3(0)$

$-6 < 0 - 0$

$\dfrac{-6}{-3} = \dfrac{-3y}{-3}$

$2 = y$

$5(0) + 2(0) \geq 4$

$0 \geq 4$

c) $5x + 2y \geq 4$

$\dfrac{5x}{5} = \dfrac{4}{5}$

$x = \dfrac{4}{5} = .8$

$\dfrac{2y}{2} = \dfrac{4}{2}$

$y = 2$

Learning Target 1.1   I can demonstrate understanding of how to represent a region on a graph with an inequality.

Sep 3-10:48 AM