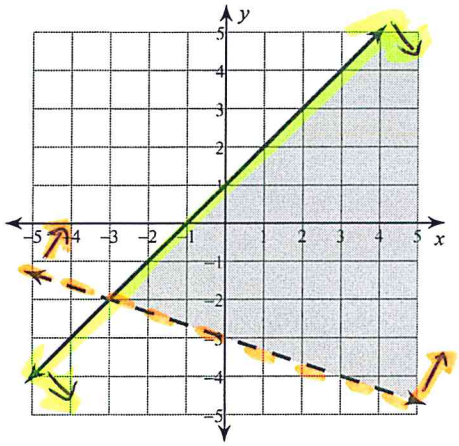
Algebra 2 Name_____ ID: 1

Unit 1 / Ch 3 Date_____ Period____

Graph each system of inequalities. You MUST show work changing to slope intercept form on 4-6 to receive credit.

1) $y > -\frac{1}{3}x - 3$

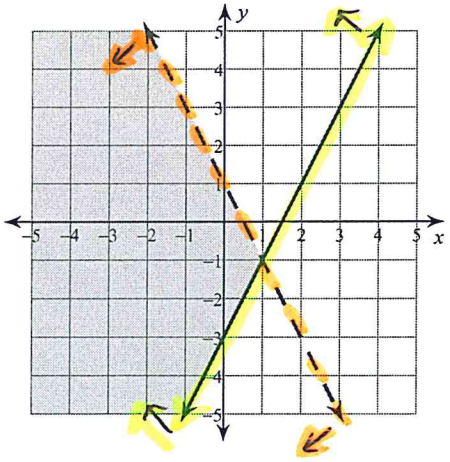
$y \leq x + 1$



The grey shaded region is where orange & yellow overlap.

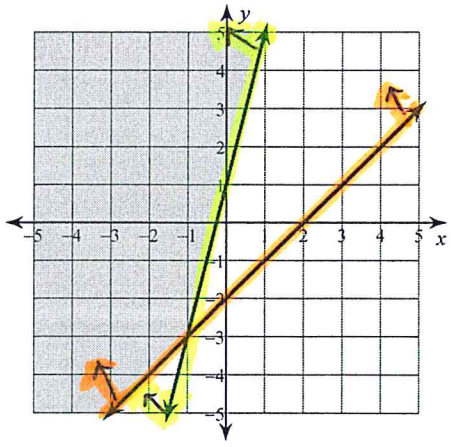
2) $y < -2x + 1$

$y \geq 2x - 3$

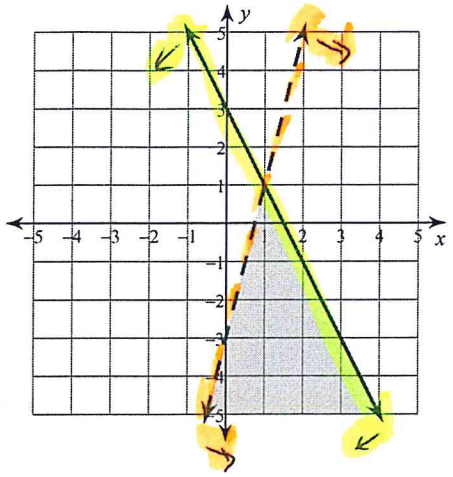


3) $y \geq x - 2$

$y \geq 4x + 1$



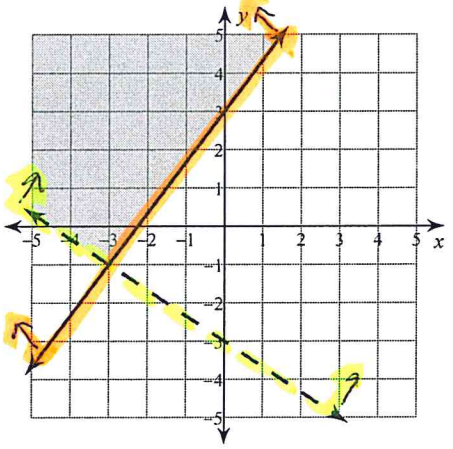
4) $4x - y > 3$
$2x + y \leq 3$



$4x - y > 3$
$-4x \quad -4x$
$-y > -4x + 3$
$-1 \quad -1$
$y < 4x - 3$

$2x + y \leq 3$
$-2x \quad -2x$
$y \leq -2x + 3$

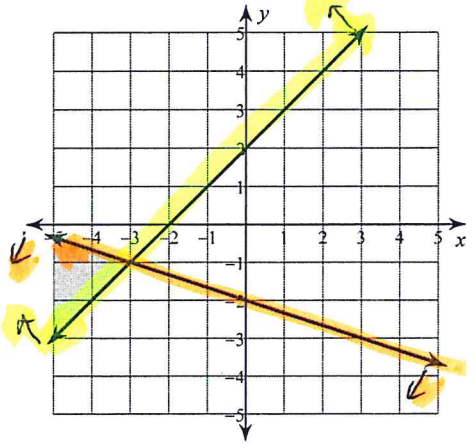
5) $4x - 3y \leq -9$
$2x + 3y > -9$



$4x - 3y \leq -9$
$-4x \quad -4x$
$\frac{-3y}{-3} \leq \frac{-4x - 9}{-3}$
$y \geq \frac{4}{3}x + 3$

$2x + 3y > -9$
$-2x \quad -2x$
$\frac{3y}{3} > \frac{-2x - 9}{3}$
$y > -\frac{2}{3}x - 3$

6) $x + 3y \leq -6$
$x - y \leq -2$



$x + 3y \leq -6$
$-x \quad -x$
$\frac{3y}{3} \leq \frac{-x - 6}{3}$
$y \leq -\frac{1}{3}x - 2$

$x - y \leq -2$
$-x \quad -x$
$\frac{-y}{-1} \leq \frac{-x - 2}{-1}$
$y \geq x + 2$