

C6L5 Notes
Linear Inequalities

\leq AND \geq : SOLID
 $<$ AND $>$: DOTTED

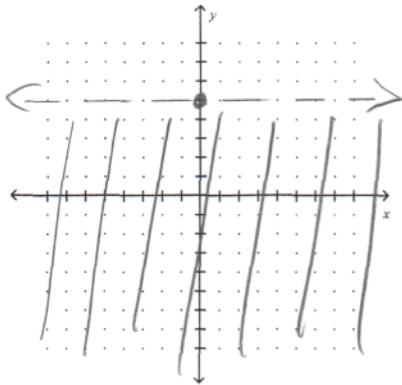
Solve for y if necessary, state the slope and the y -intercept, then graph.

1. $y < 5$

$m = 0$

$b = (0, 5)$

DOTTED

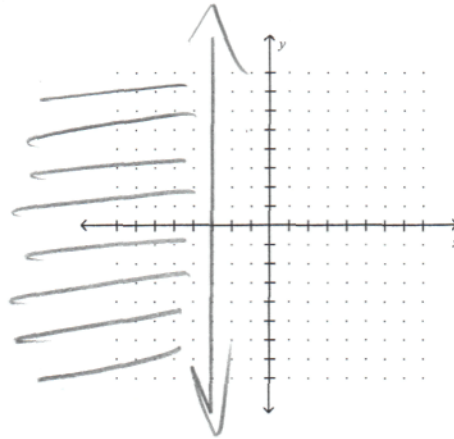


2. $x \leq -3$

$m = \text{UNDEFINED}$

$b = \text{NONE}$

SOLID



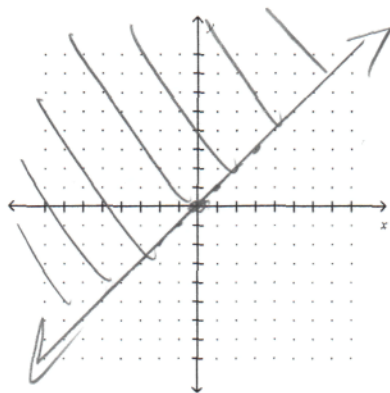
3. $y \geq x$

$y \geq 1x + 0$

$m = 1$

$b = (0, 0)$

SOLID

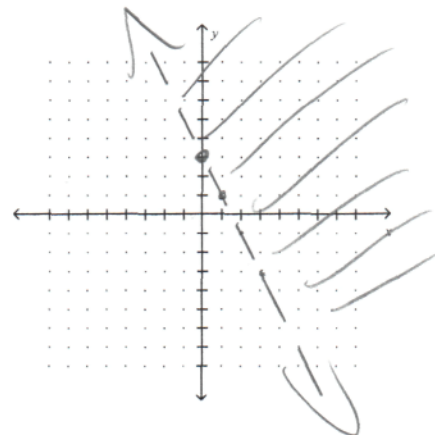


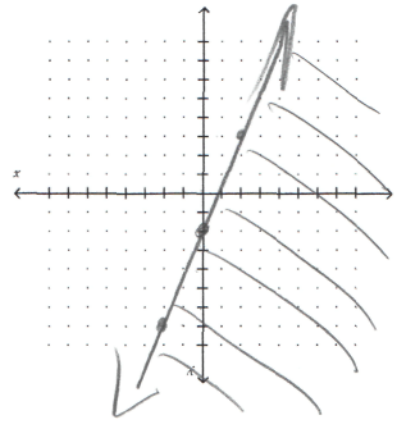
4. $y > -2x + 3$

$m = -\frac{2}{1}$

$b = (0, 3)$

DOTTED





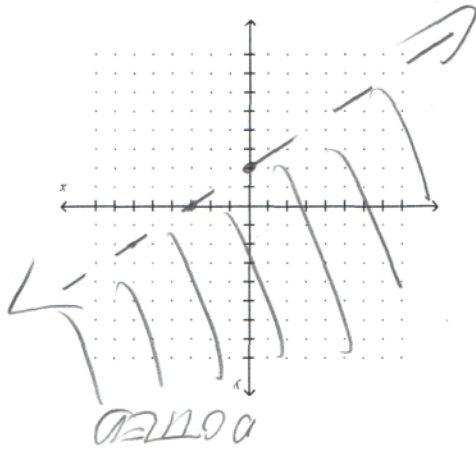
$$m = \frac{2}{5} \quad b = (0, 2)$$

$$y \geq \frac{2}{5}x + 2$$

$$\frac{-2}{-2}y \leq \frac{-5x-4}{-2} \quad \frac{-2}{-2}$$

$$\frac{-5x}{-5x} \quad \frac{-2y}{-2y} \leq -4$$

$$7. \quad 5x - 2y \leq -4$$

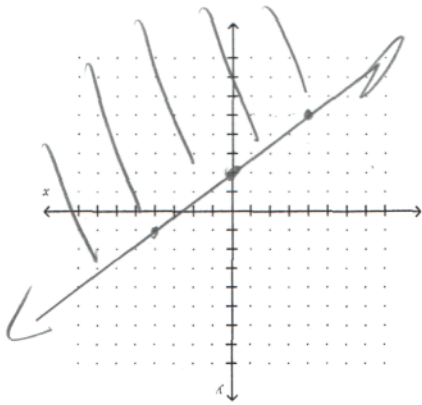


$$m = \frac{3}{2} \quad b = (0, -2)$$

$$y > \frac{3}{2}x - 2$$

$$\frac{3}{3}y > \frac{3}{3}x - \frac{6}{3}$$

$$\frac{+2x}{+2x} \quad \frac{+2x}{+2x} \quad 8. \quad -2x + 3y > -6$$

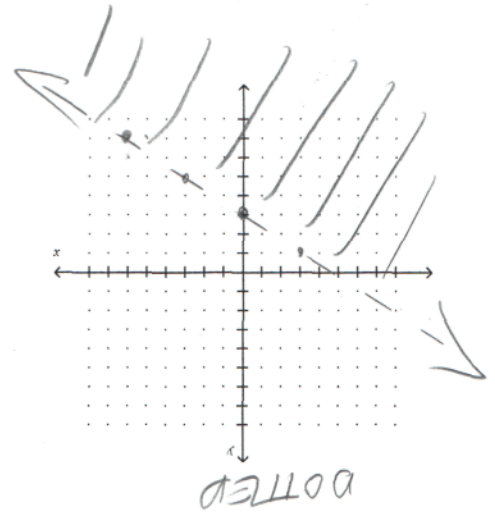


$$m = \frac{4}{3} \quad b = (0, 8)$$

$$y \leq \frac{4}{3}x + 8$$

$$\frac{-4}{-4}y \geq \frac{-3x+8}{-4} \quad \frac{-4}{-4}$$

$$\frac{-3x}{-3x} \quad \frac{-3x}{-3x} \quad 6. \quad 3x - 4y \geq 8$$



$$b = (0, -3)$$

$$m = -\frac{2}{3}$$

$$y < -\frac{2}{3}x - 3$$

$$3y < -2x - 9$$

$$\frac{-2x}{-2x} \quad \frac{-2x}{-2x} \quad 5. \quad 2x + 3y < -9$$

$$5. \quad 2x + 3y < -9$$