

Alg. 2.

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Name Key

ID: 1

Graphing Linear Inequalities

Date _____ Period _____

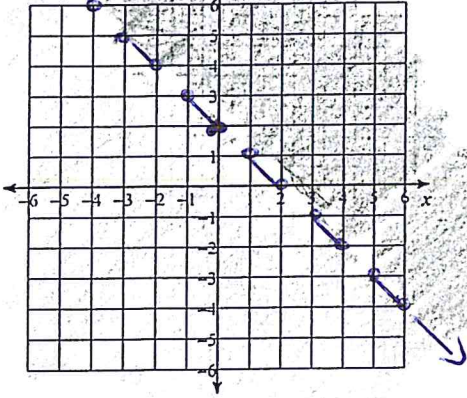
Sketch the graph of each linear inequality.

1) $y > -x + 2$ $m = -1$ $b = 2$ dashed

(0,0)

$0 > -0 + 2$
 $0 > 2$

False



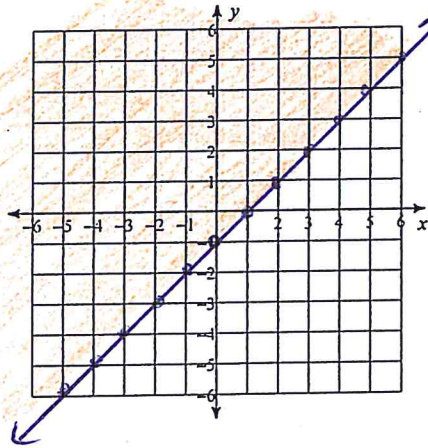
2) $y \geq x - 1$ $m = 1$ $b = -1$ Solid

(0,0)

$0 \geq 0 - 1$

$0 \geq -1$

True



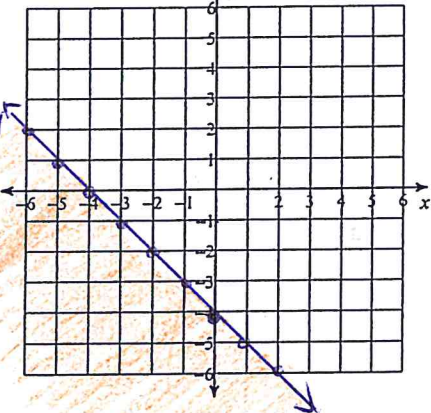
3) $y \leq -x - 4$ $m = -1$ $b = -4$ solid

(0,0)

$0 \leq -0 - 4$

$0 \leq -4$

False

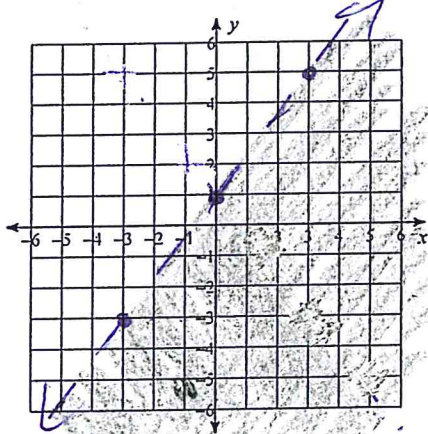


4) $y < \frac{4}{3}x + 1$ $m = \frac{4}{3}$ $b = 1$ dashed

(0,0)

$0 < \frac{4}{3}(0) + 1$

$0 < 1$ True



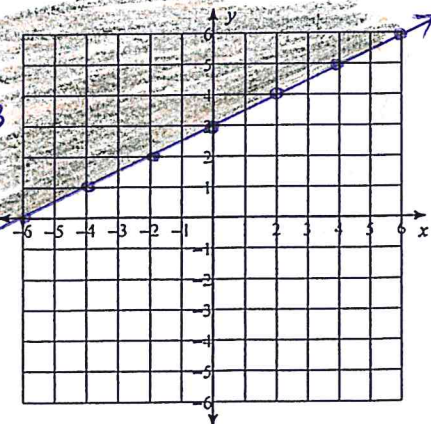
5) $y \geq \frac{1}{2}x + 3$ $m = \frac{1}{2}$ $b = 3$ solid

(0,0)

$0 \geq \frac{1}{2}(0) + 3$

$0 \geq 3$

False

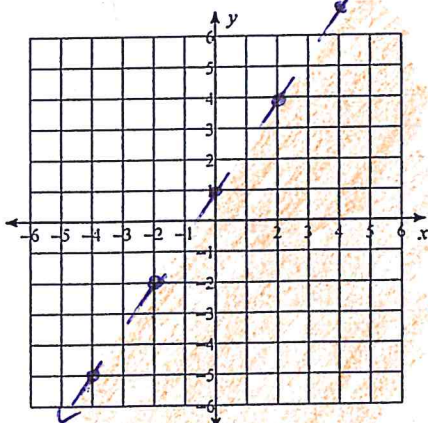


6) $y < \frac{3}{2}x + 1$ $m = \frac{3}{2}$ $b = 1$ dashed

(0,0)

$0 < \frac{3}{2}(0) + 1$

$0 < 1$ True



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

$$7) 4x + 3y > 0$$

$$y > -\frac{4}{3}x \quad m = -\frac{4}{3}$$

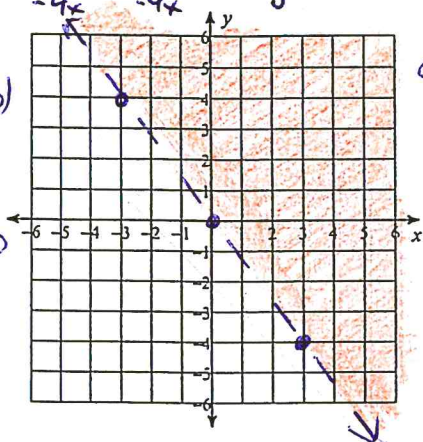
$b = 0$
dashed

can't
use (0,0)
(5,0)

$$4(5) + 3(0) > 0$$

$$20 > 0$$

True



$$\frac{2x - 3y \geq 6}{-2x} \quad \frac{-2x}{-2x}$$

$$-3y \geq -2x + 6$$

$$-3y \geq -2x + 6$$

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

$$8) 2x - 3y \geq 6$$

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

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

$$b = -2$$

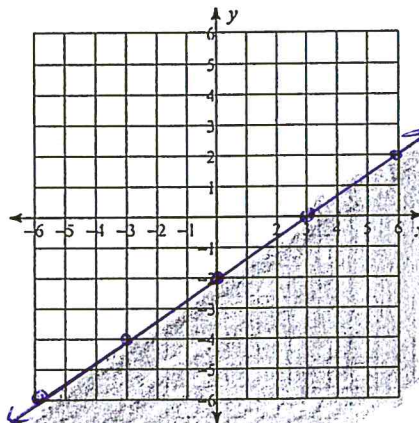
Solid

$$(0,0)$$

$$2(0) - 3(0) \geq 6$$

$$0 \geq 6$$

True

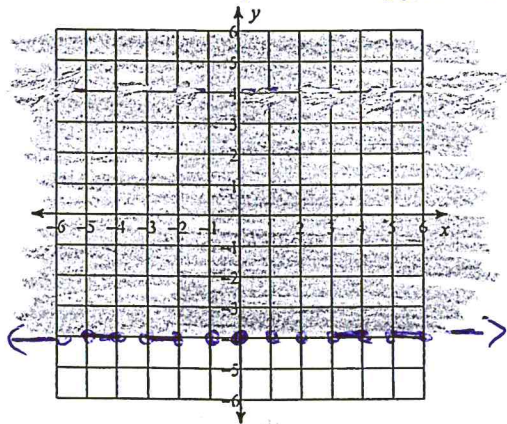


$$9) y > -4 \quad m = 0 \quad b = -4 \quad \text{dashed}$$

(0,0)

$$0 > -4$$

True



$$10) 9x + 2y \leq -8$$

$$\frac{9x + 2y \leq -8}{-9x} \quad \frac{-9x}{-9x}$$

$$2y \leq -9x - 8$$

$$y \leq -\frac{9}{2}x - 4$$

$$m = -\frac{9}{2} \quad b = -4$$

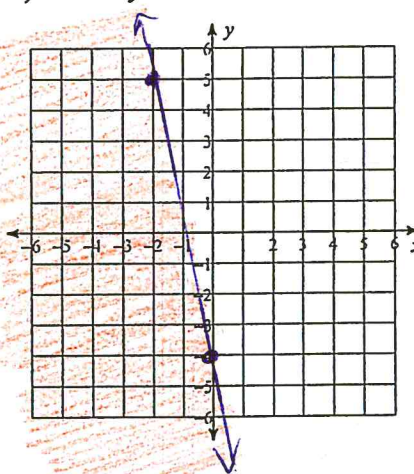
Solid

(0,0)

$$9(0) + 2(0) \leq -8$$

$$0 \leq -8$$

False



$$11) 7x - 4y < -8$$

$$\frac{-4y < -7x - 8}{-4} \quad \frac{-4}{-4}$$

$$y > \frac{7}{4}x + 2$$

$$m = \frac{7}{4}$$

$$b = 2$$

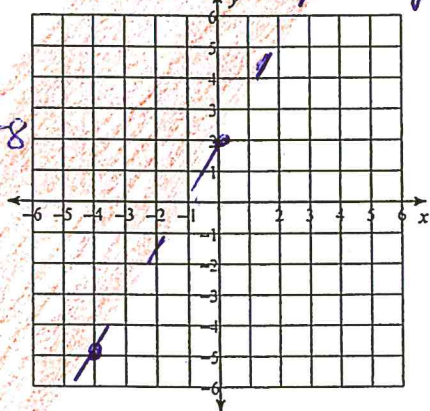
Dashed

(0,0)

$$7(0) - 4(0) < -8$$

$$0 < -8$$

False



$$12) 2x + y < -1$$

$$y < -2x - 1$$

$$m = -2 \quad b = -1$$

dashed

(0,0)

$$2(0) + 0 < -1$$

$$0 < -1$$

False

