

## Graphing Linear Inequalities

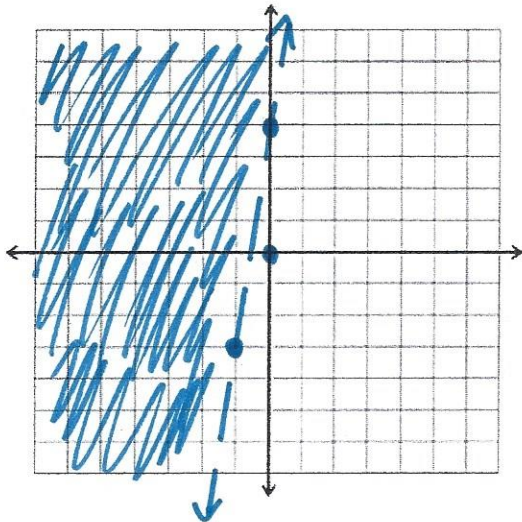
\*\*Graph like a regular linear equation, except

- Your line will be either solid or dashed
- You will shade on one side of the line.

Solid Line:  $\geq, \leq$  Dashed Line:  $>, <$

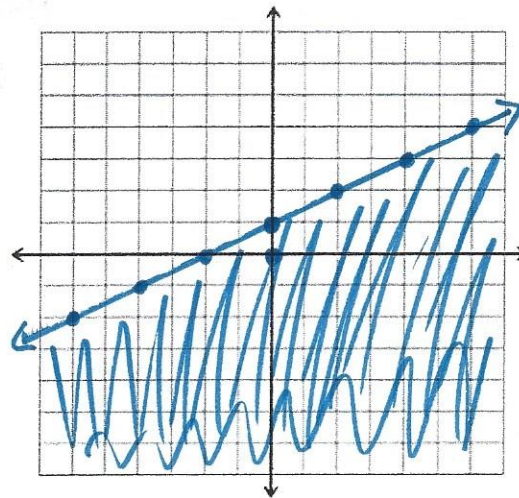
To determine shading: Choose point not on line, plug it in, determine True or false. Shade where it's true

$y > 7x + 4$      $m=7$      $b=4$      $(0,4)$



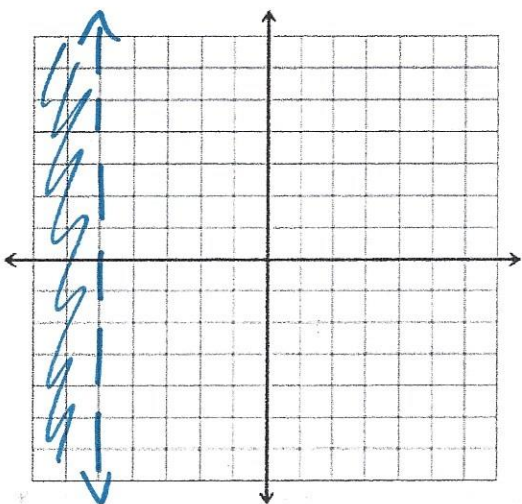
$x, y$   
 $(0,0)$   
 $0 > 7(0) + 4$   
 $0 > 4$   
**F**

$y \leq \frac{1}{2}x + 1$      $m=\frac{1}{2}$      $b=1$      $(0,1)$

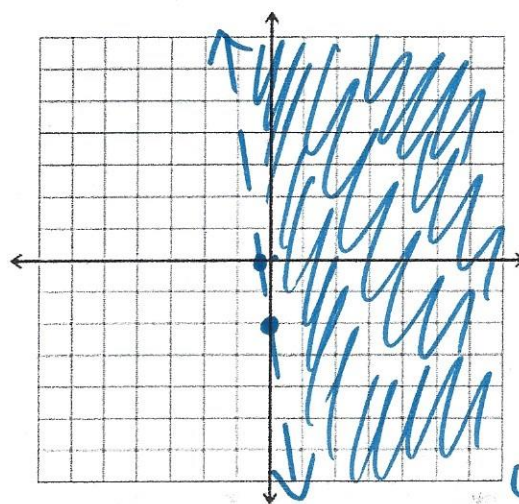


$x, y$   
 $(0,0)$   
 $0 \leq \frac{1}{2}(0) + 1$   
 $0 \leq 1$   
**T**

$x = -5$   
 $x < -5$

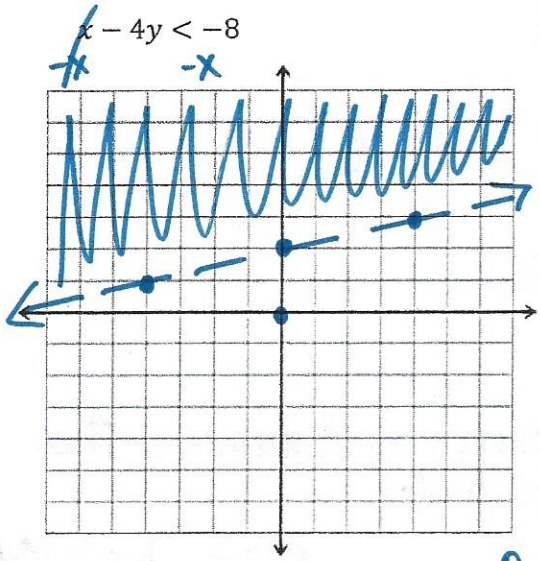


$6x + y > -2$



$6x = -\frac{2}{6}$   
 $x = -\frac{1}{3}$   
 $(-\frac{1}{3}, 0)$   
 $y = -2$   
 $(0, -2)$   
 $x, y$   
 $(0,0)$   
 $6(0) + 0 > -2$   
 $0 > -2$   
**T**

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

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

$$m = \frac{1}{4}$$

$$b = 2$$

$$(0, 2)$$

$(x, y)$   
 $(0, b)$

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

$$0 < -8$$

F

$$y \geq -x + 1$$

