

Graphing Linear Inequalities

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|------------------------------------|--|--|
| 1. Solve for y . | $y = mx + b$ | $m = \text{slope}$
$b = y\text{-intercept}$ |
| 2. Graph y -intercept and slope. | | |
| 3. Solid line or Dashed Line?? | | |
| 4. SHADE!! | Shaded area is where all answers are located | |
| *** | $y = \text{number} \longleftrightarrow$ | $x = \text{number} \updownarrow$ |

SOLID LINE

$$\geq \leq =$$

DASHED LINE

$$> <$$

SHADE ABOVE

$$> \geq$$

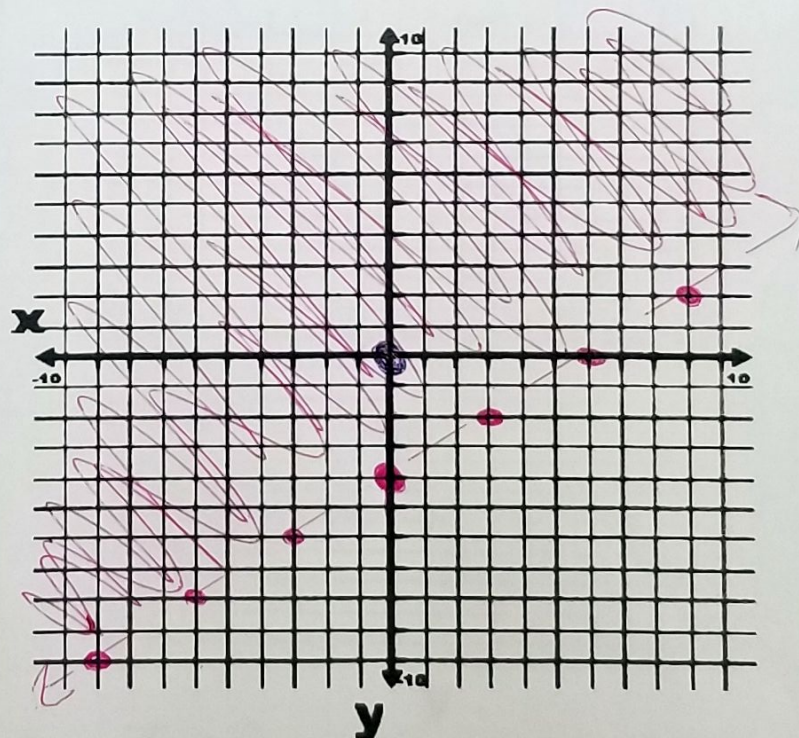
SHADE BELOW

$$< \leq$$

Example: Graph

$$y > \frac{2}{3}x - 4$$

$b = -4$
 $m = \frac{2}{3}$ up 2 right 3



Test: $(0, 0)$
 $y > \frac{2}{3}x - 4$
 $0 > \frac{2}{3}(0) - 4$
 $0 > -4$? TRUE

Test Point: Is it shaded correctly?
 Pick a point in shaded area. Plug into inequality. See if it's true.
 If it's true, it's shaded correctly.