

(16)

Linear Inequalities

A Linear Inequality is an inequality in the form of slope-intercept form, but instead of an equal sign, an inequality symbol is used.

- also many values are part of the solution to linear inequalities.

Steps:

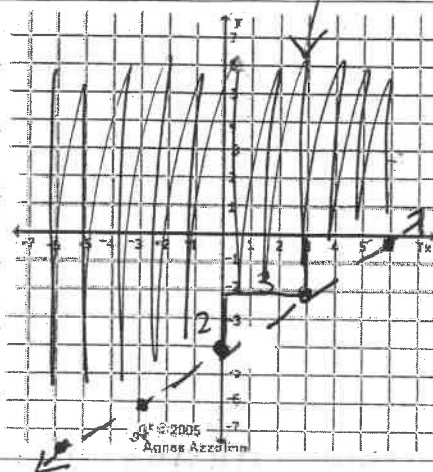
- ① Make sure the inequality is in slope-intercept form.
- ② Graph the y-intercept on the coordinate plane.
- ③ Use the slope to "rise over run" to find the next point (starting from the y-intercept).
- ④ Connect points w/ a solid or a dashed line.
- ⑤ Shade above or below.

<u>Solid Line</u>	<u>Dashed Line</u>
$> <$ "equal bar"	$> <$ "No equal bar"
<u>Shade Above</u>	<u>Shade Below</u>
$> \geq$ Greater	$< \leq$ less.

Ex 1) $y > \frac{2}{3}x - 4$

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

$b = -4$



Ex 2) $-4x + 2y \geq 10$

$\frac{2y}{2} \geq \frac{4x+10}{2}$

Solid line
Shade above
 $y \geq 2x + 5$

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

$b = 5$

