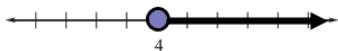# Chapter 6: Solving Linear Inequalities
Study Guide

6.1-6.3: Solve Inequalities by Multiplication and Division:

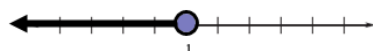**Solve each inequality and graph your solution on a number line.**
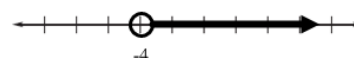
Ex: $2x - 1 \geq 7$ **Ex:** $-5 \geq 2x - 3$ **Ex:** $18 > -4x + 2$

$x \geq 4$ $-1 \geq x$ $-4 < x$

6.3*: Solve Multi-Step Inequalities:

Solve each inequality.

Ex: $6(2x + 3) \geq 9(x + 2)$ **Ex:** $3(4x - 2) < 2(6x - 2)$

$x \geq 0$ any number

Ex: $-2(x + 4) \geq -2x - 3$ **Ex:** $-4(x - 2) \geq -x + 16$

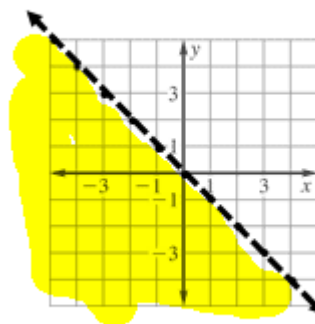No solution $x \leq -\frac{8}{3}$

6.7: Graph Linear Inequalities in Two Variables:

Decide if an ordered pair is a solution to an inequality.

Ex: $\frac{3}{4}x - \frac{1}{3}y < 6;\ (-8, 12)$ **Ex:** $(-1, 1)$ No

Yes
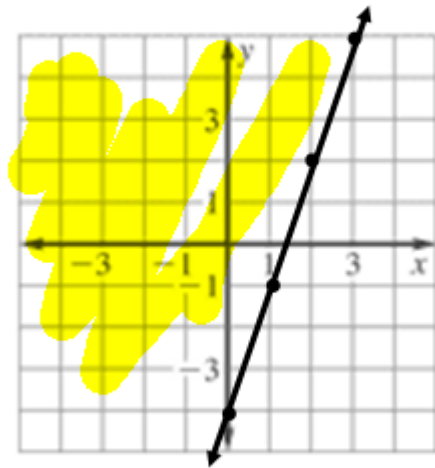
Graph linear inequalities in two variables.

Ex: $y \geq 3x - 4$

Ex: $x < y$