4.1 Graphing Linear Inequalities

Graphing a linear inequality is very similar to graphing linear equations with only two differences.

1. The line you graph will either be solid or dotted.
2. The final graph will be shaded.

The line is referred to as the _____ which separates the solution set from the rest of the graph.
The solution set will be _____ and the _____ area is not a part of the solution.

Inequalities with a ___ or ___ will be _____

Inequalities with a ___ or ___ will be _____

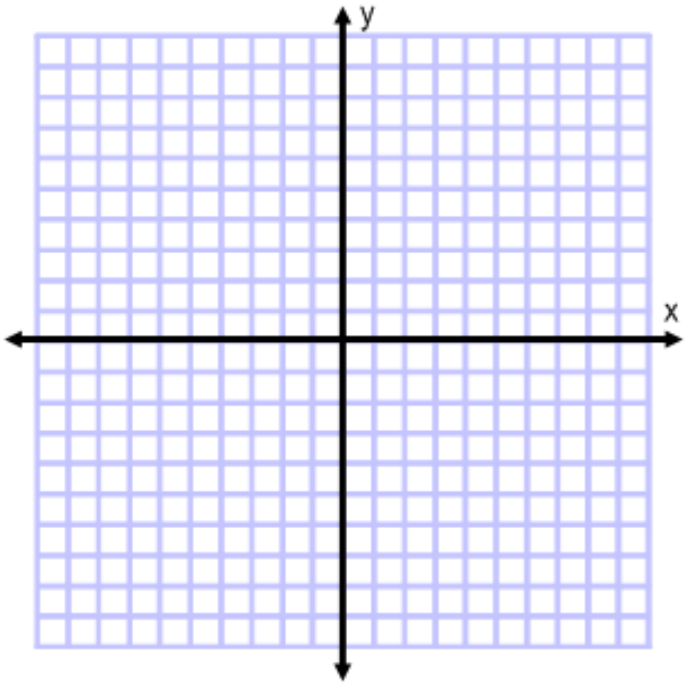
Steps to Graphing Linear Inequalities:

1) Solve the inequality for 'y' so that you can graph the line in the form of y = mx + b

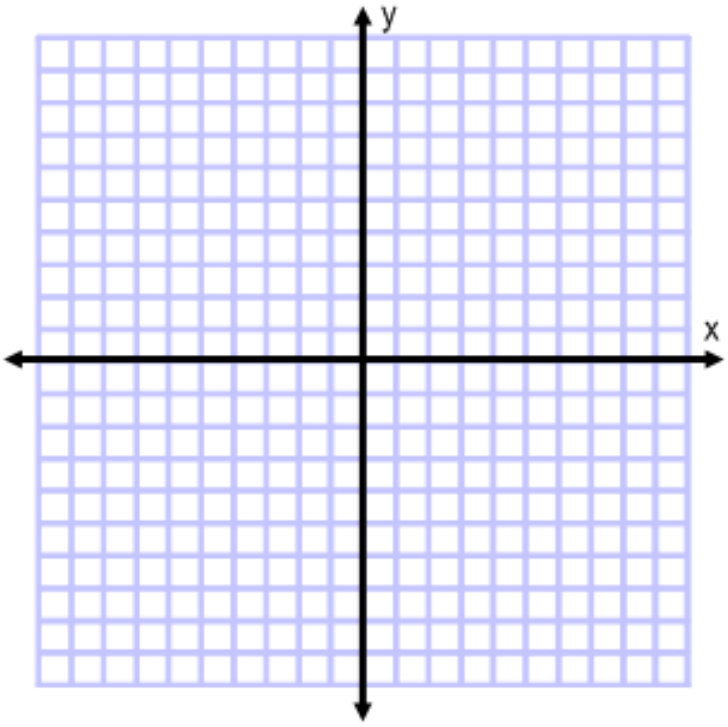
2) Graph the line using your slope and y-intercept.
   - *dashed line for < or >*
   - solid line for ≤ ≥

3) Shade the half-plane the makes the inequality true.
   ⇒ for > or ≥, you will shade _____
   for < or ≤, you will shade _____

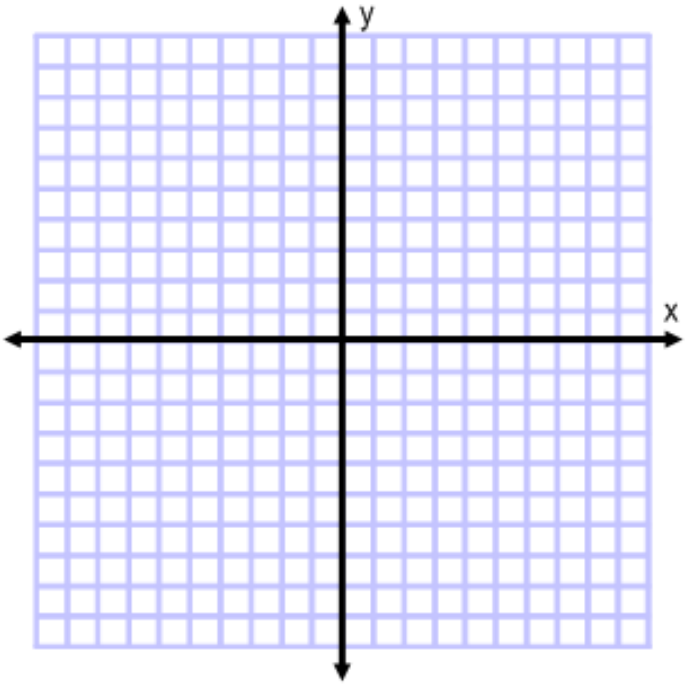
$y \geq 1 + x$

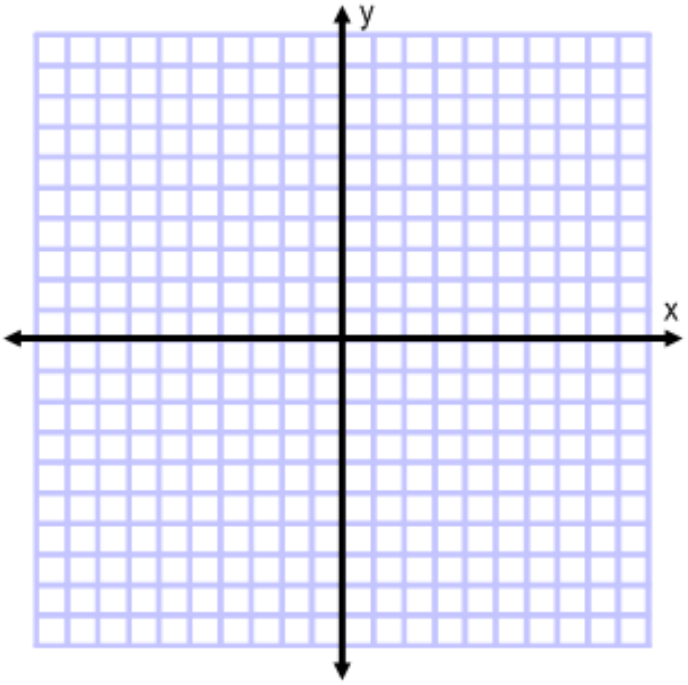


$y < \frac{1}{4}x + 4$

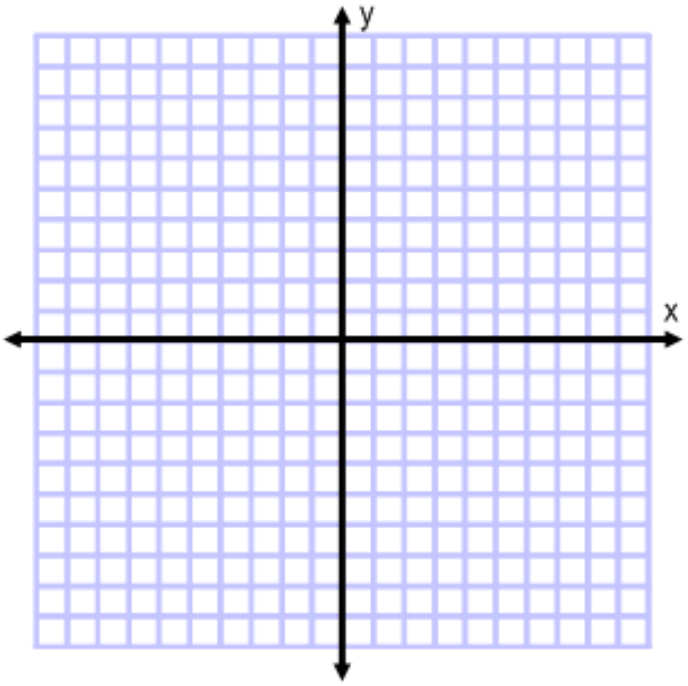


$-3y > 5x - 6$





$x > 3$



$x \leq -2$

When graphing inequalities what are the important things to remember?