Math 1313 Section 1.4

Section 1.4: Graphs of Linear Inequalities

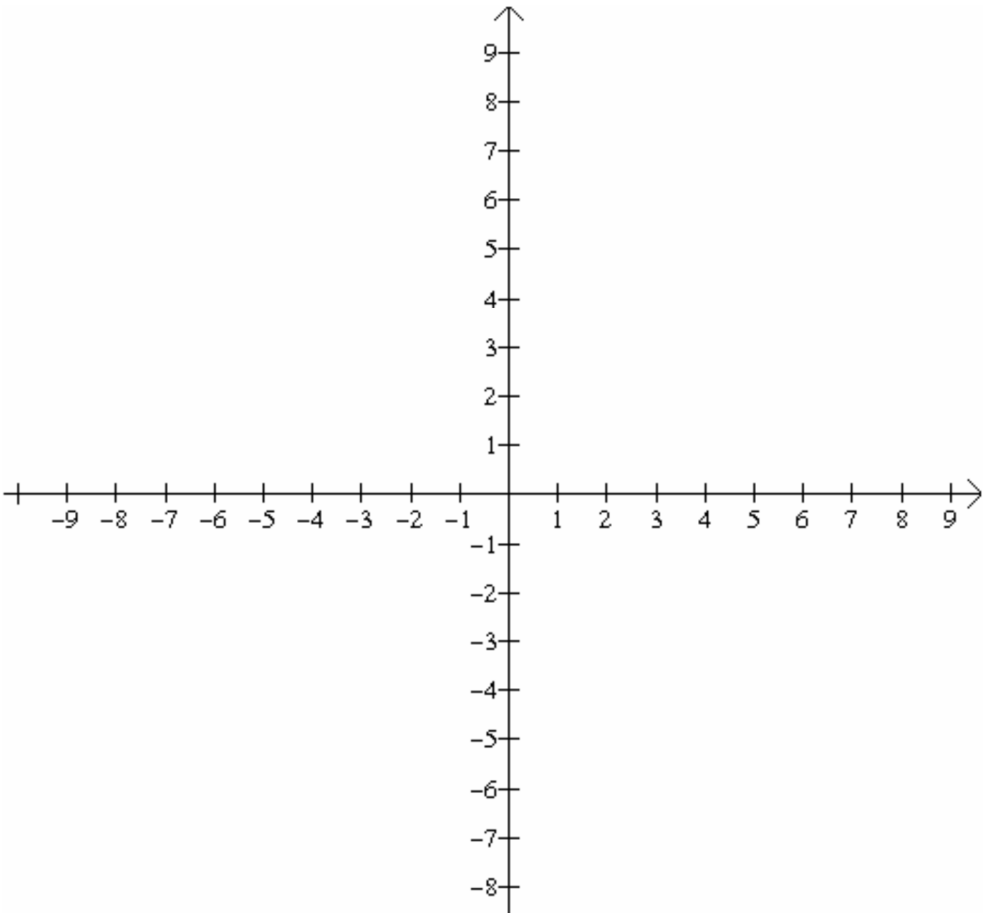
Linear inequalities are in the form of:

$$ax + by + c < 0 \qquad ax + by + c \leq 0$$
$$ax + by + c > 0 \qquad ax + by + c \geq 0$$

Procedures for graphing inequalities:

1. Draw the line of the inequality replacing < or > with "=", if its < or > the line you draw will be dashed not solid.
2. Pick a test point on either side of the line and plug it into the original inequality
3. If the point picked "works" then that's the side you shade in. If it is not true, shade the other side.

Example 1: Determine the solution set for 2x+4y >12



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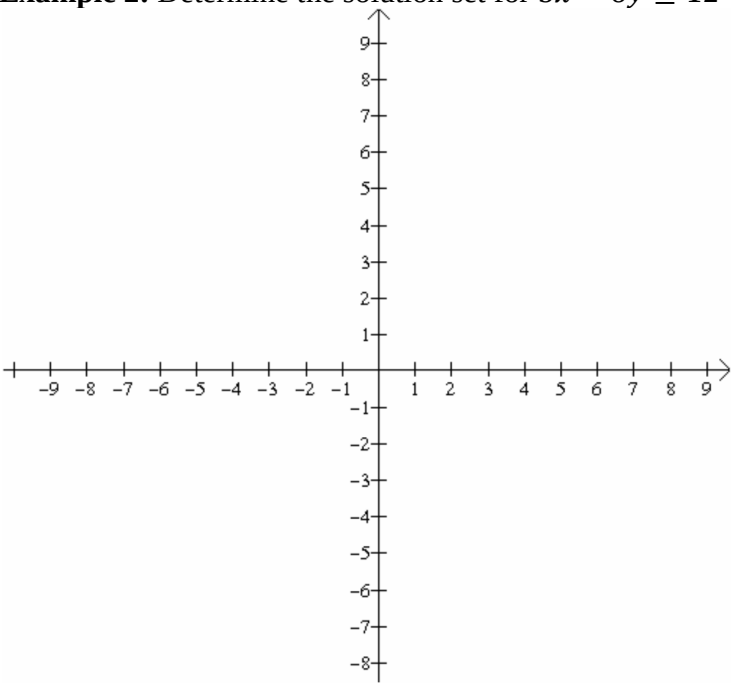
Example 2: Determine the solution set for $3x - 6y \geq 12$



Example 3: Determine the solution set for $3x + 2y < 4$ and $2x + 4y > -8$