

SECTION 5.6: GRAPHING LINEAR INEQUALITIES

Homework: _____

Learning Targets:

- 5e. Understanding of how graph the line of a linear inequality.
- 5f. Understanding of when a line is dashed or solid.
- 5g. Understanding of when to shade above and below the line.

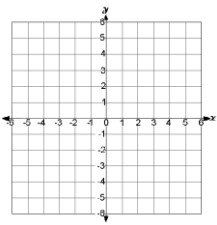
Dotted Lines

Solid Lines

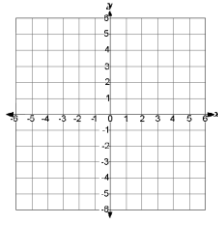
Shade **above** the line

Shade **below** the line

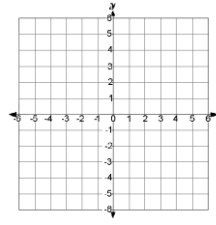
$$y > x$$



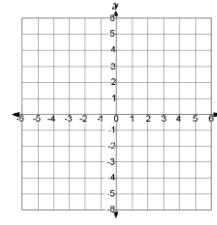
$$y \geq x$$



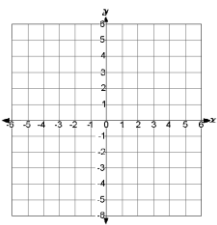
$$y < x$$



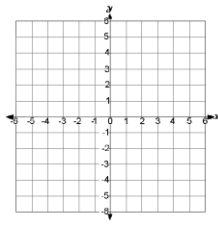
$$y \leq x$$



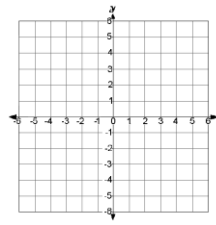
$$y > -x$$



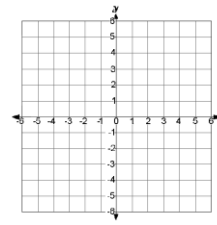
$$y \geq -x$$



$$y < -x$$



$$y \leq -x$$



Steps on Graphing Linear Inequalities

1. Solve the equation for y
 - a. Remember to flip the inequality if you divide by a negative!!!
2. Determine the m & b
3. Graph the line (dashed or solid?)
4. Shade the appropriate region

Solution: The solution region for a linear inequality is in the _____. To determine if a point is a solution, just plot it and see if it is in the _____