



7.5 Graphing Linear Inequalities

Need To Know



- Idea of linear inequalities
- How to graph linear inequalities
- Apply



Idea of Linear Inequalities

One dimensional graphing Two dimensional graphing

How to Graph Linear Inequalities

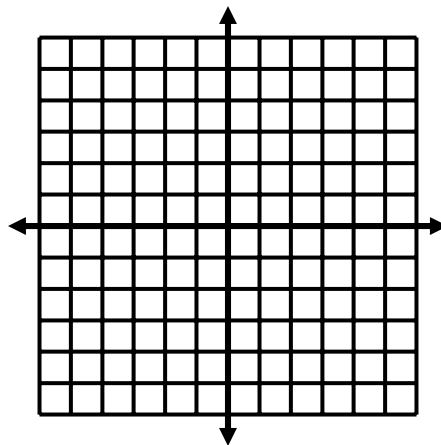
Graphing Linear Inequalities - Easy

- 1) Graph the boundary line
- 2) Shade the solution side of the boundary line

Practice

Graph:

$$y < \frac{1}{2}x - 3$$



How to Graph Linear Inequalities

Graphing Linear Inequalities - Detailed

Graph the boundary line

- A) Decide if the line is included in the solutions set or not.
 - $<$ or $>$ means the line is **not** in solutions – **dashed line**
 - \leq or \geq means the line **is** a solutions – **solid line**
- B) Make the inequality into an equation ($=$) and graph it.

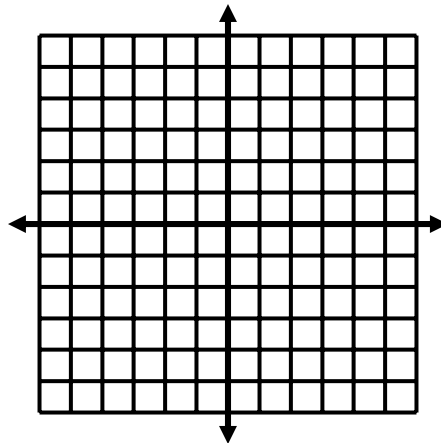
Shade the solution side of the boundary line

- A) Pick a test point **not** on the line
- B) Plug it into the original inequality and evaluate true or false
- C) Shade the side containing the point making the inequality true.

Practice

Graph:

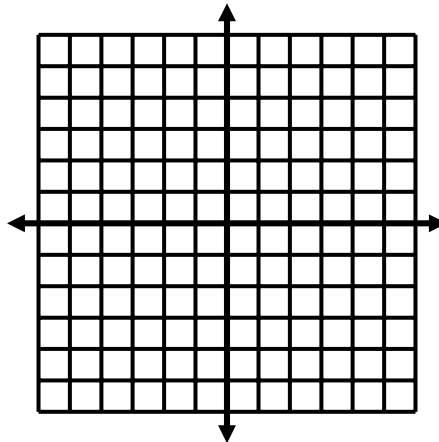
$$x + y \geq 3$$





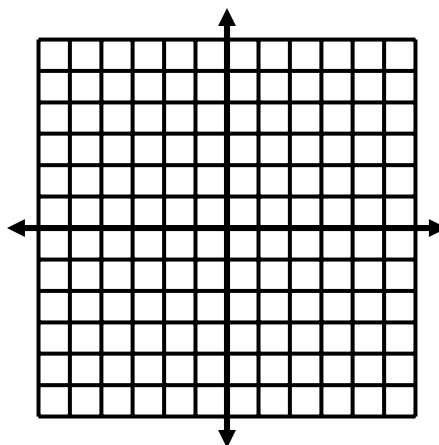
Practice

Graph:
 $3x + 2y \leq 6$



Practice

Graph:
 $y > -2$



end