

Algebra II
Auch

Section 2.5
Date:

Objectives

- Graph linear inequalities on the coordinate plane.
- Solve problems using linear inequalities.

Vocabulary:

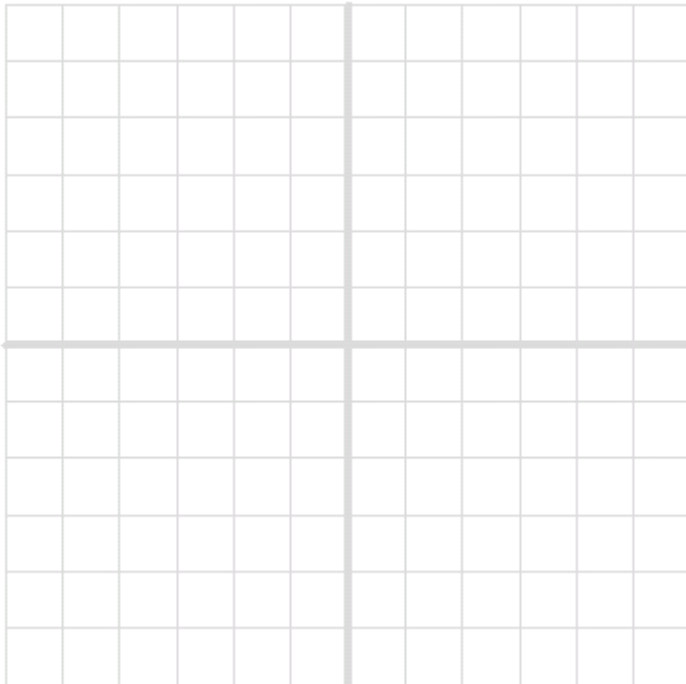
- Linear inequality–

- Boundary line –

Example 1

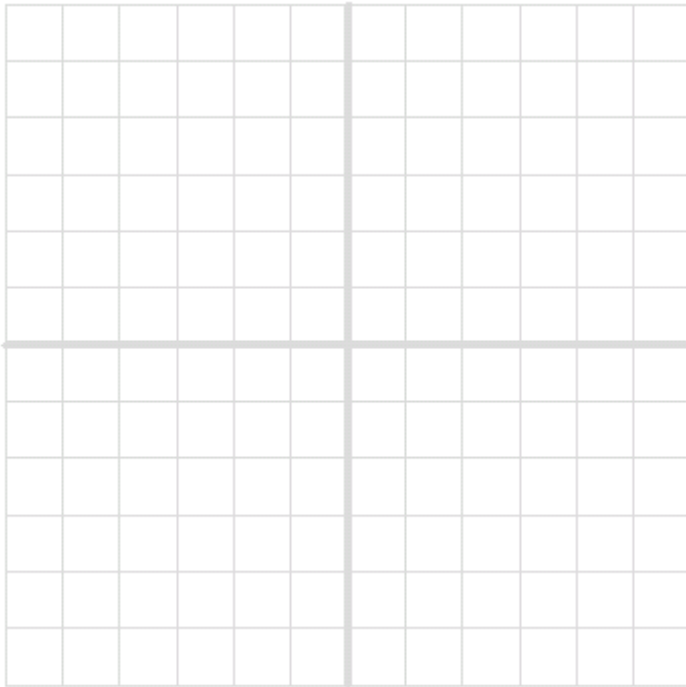
Graph the inequality.

a) $y < \frac{1}{2}x + 1$



Graph the inequality.

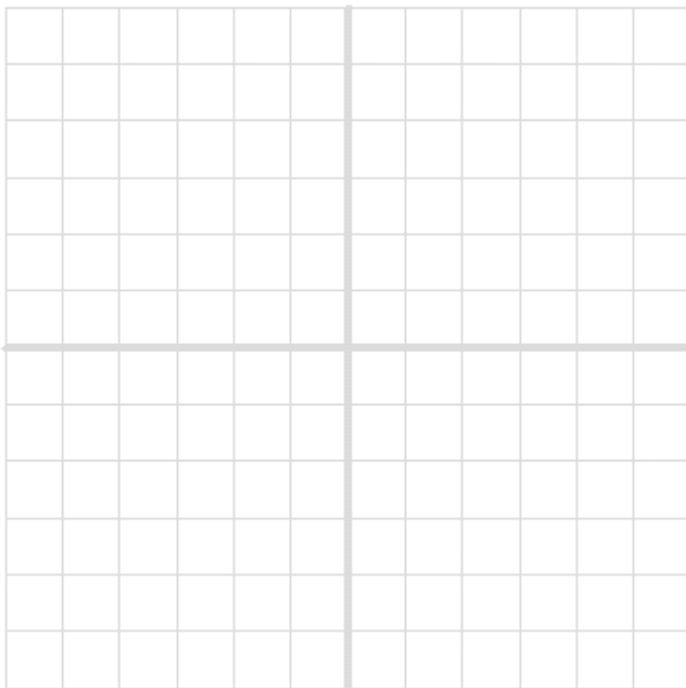
b) $y \geq 2$



Try it!

Graph the inequality.

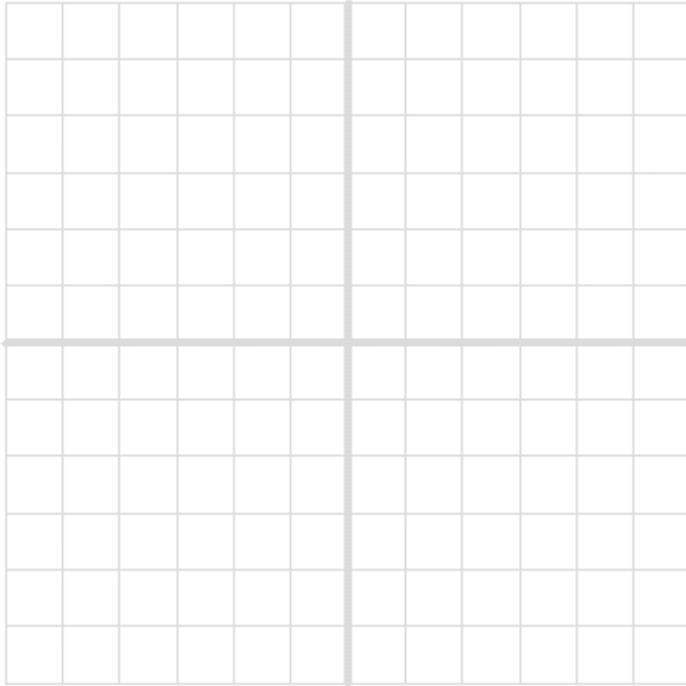
b) $y \geq 3x - 2$



Example 2

Graph the linear inequality using intercepts.

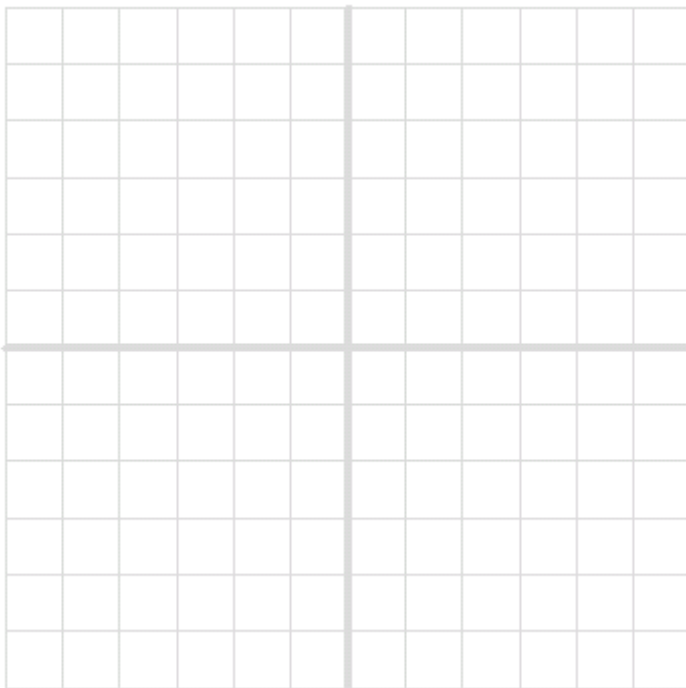
a) $2x + 3y \geq 6$



Try it!

Graph the linear inequality using intercepts.

$3x - 4y > 12$



Example 3

A local theater charges \$7.50 for adult tickets and \$5.00 for discount tickets. The theater needs to make at least \$240 to cover the rent of the building. How many of each type of ticket must be sold to make a profit? If 20 discount tickets are sold, how many adult tickets must be sold?

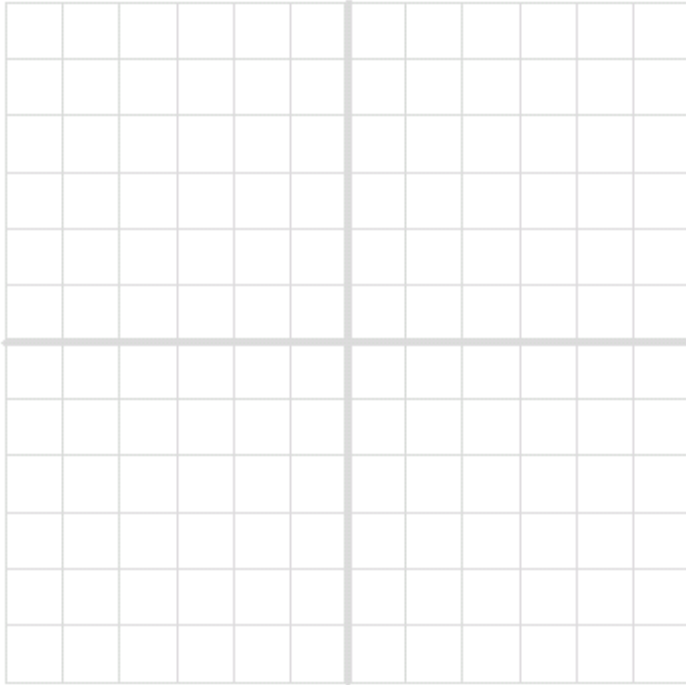
Try it!

A café gives away prizes. A large prize costs the café \$125, and the small prize cost \$40. The café will not spend more than \$1500. How many of each prize can be awarded? How many small prizes can be awarded if 4 large prizes are given away?

Example 4

Solving and graphing Linear Inequalities

Solve $\frac{2}{3}(2x - y) < 2$ for y . Graph the solution.



Try it!

Solving and graphing Linear Inequalities

Solve $2(3x - 4y) > 24$ for y . Graph the solution.

