Review Lesson 3

NAME:

Graphing Linear Inequalities on the Coordinate Plane

Start by navigating to the Online Lesson for instructions.

Objectives

- Graph a linear inequality.
- Graph a system of linear inequalities.

Introduced in:

Algebra 1: Principles of Secondary Mathematics

Lesson 15B

Graphing Linear Inequalities on the Coordinate Plane

Fill in the notes as you watch the video in the Online Lesson.

- To graph a linear _____ on the coordinate plane, determine if:
  - the line is _____.
  - the shading will be _____ the line.
- Graph the _____ and _____ and extend the line across the graph.
- When graphing a _____ of inequalities, repeat these steps until _____ inequalities are graphed on the coordinate plane.
- The shaded overlapping _____ represents all ordered pairs that make _____ inequality in the system _____.

Example 1

Complete the example as you watch the video in the Online Lesson.

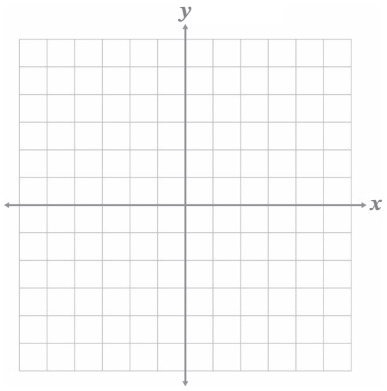
Graph the linear inequality $y < 3x - 1$.

Identify the graph characteristics

Line: solid or dashed

Shading: above or below the line

Point: open or closed



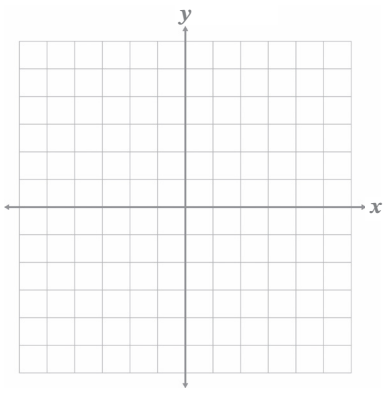
Example 2

Complete the example as you watch the video in the Online Lesson.

Graph the system of inequalities.

$y < 2x + 3$

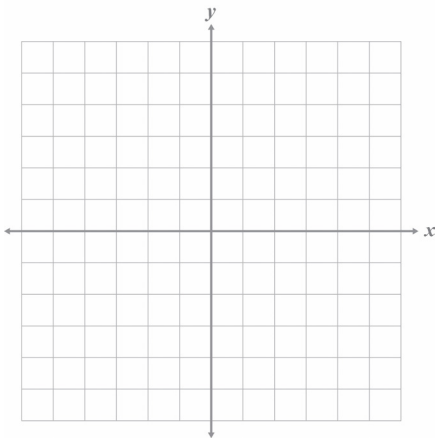
$2x - y < 1$



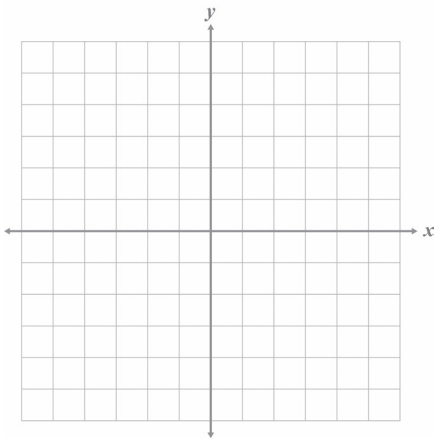
Practice

Graph.

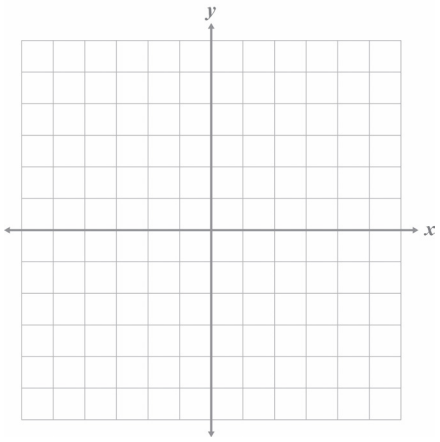
1) $y > \frac{1}{3}x - 2$



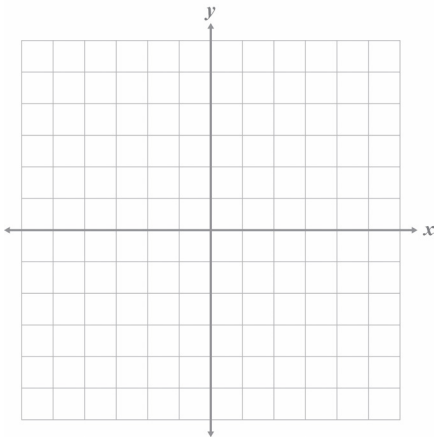
2) $y \leq \frac{3}{2}x + 1$



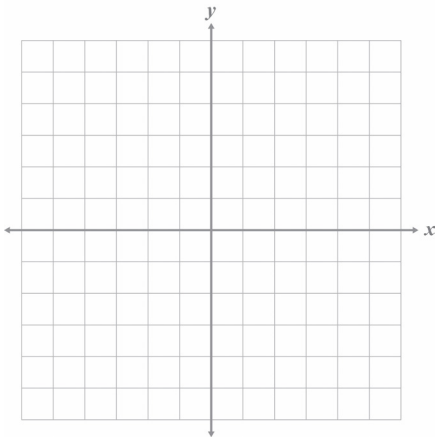
3) $3x + y > 3$



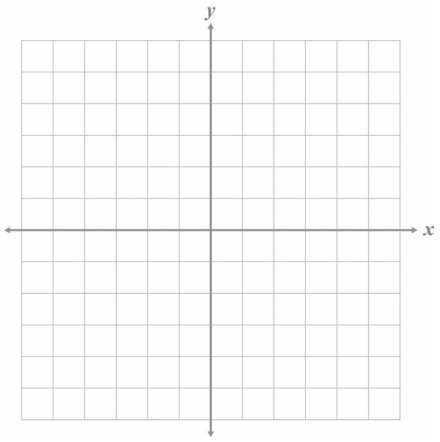
4) $x + y \leq 4$



5) $y \geq -\frac{1}{2}x - 3$



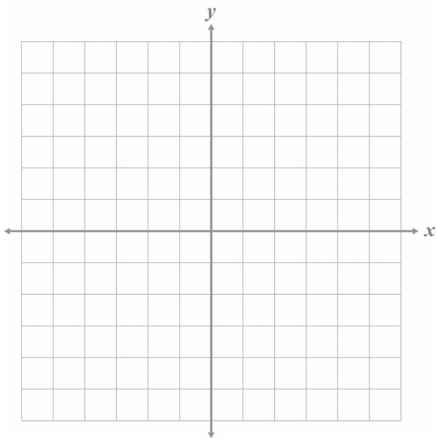
6) $y \leq -4x + 4$



Graph.

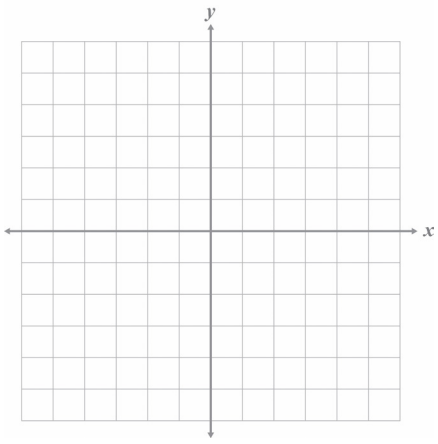
7) $y \le \frac{1}{4}x + 3$

$y \ge 2x$



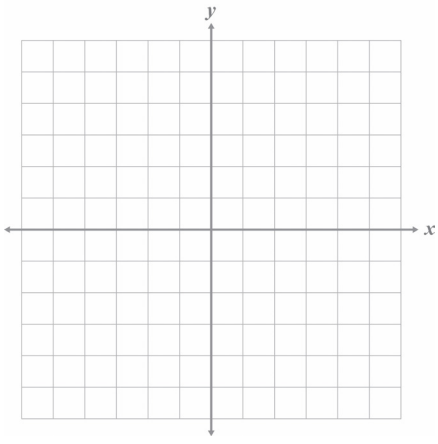
8) $y \ge 2x - 3$

$y > -\frac{2}{3}x + 5$



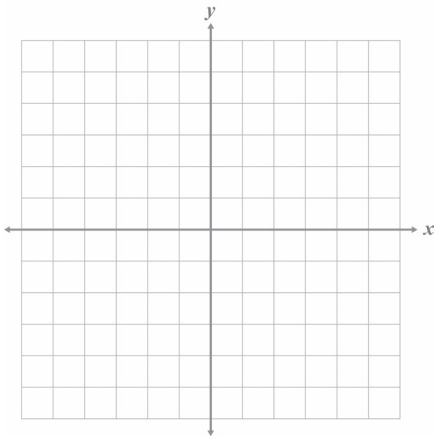
9) $x + y \le 3$

$y \le x - 1$



10) $y > -x$

$x - 2y \le 6$



To continue, return to the Online Lesson.