Graphing Linear Inequalities in Two Variables

Name _____

Date _____ Period _____

Slope-Intercept form of a line

$y = mx + b$

$y > mx + b$ $\qquad$ $y < mx + b$

$y \geq mx + b$ $\qquad$ $y \leq mx + b$

Linear Inequality

slope = m; y-intercept = $(0,b)$

Rules for graphing linear inequalities in slope-intercept form

Graph the boundary line $y = mx + b$

Solid line or dotted line

$y <$ *or* $y >$ $\Rightarrow$ dotted line

$y \leq$ *or* $y \geq$ $\Rightarrow$ solid line

Shade above or below line

$y >$ *or* $y \geq$ $\Rightarrow$ shade above line

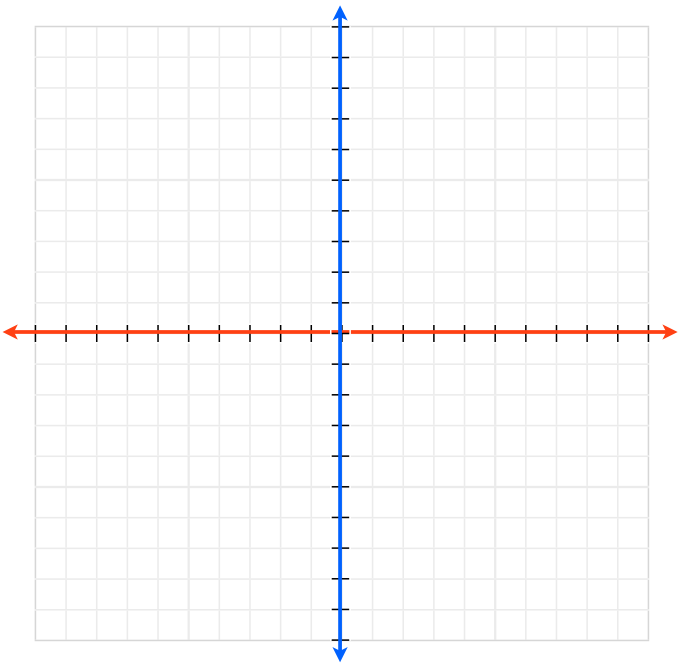
$y <$ *or* $y \leq$ $\Rightarrow$ shade below line

The shaded region represents all (x,y) coordinates that will make the inequality a true statement.

Graph the following linear inequalities

Solid or Dotted Above or Below

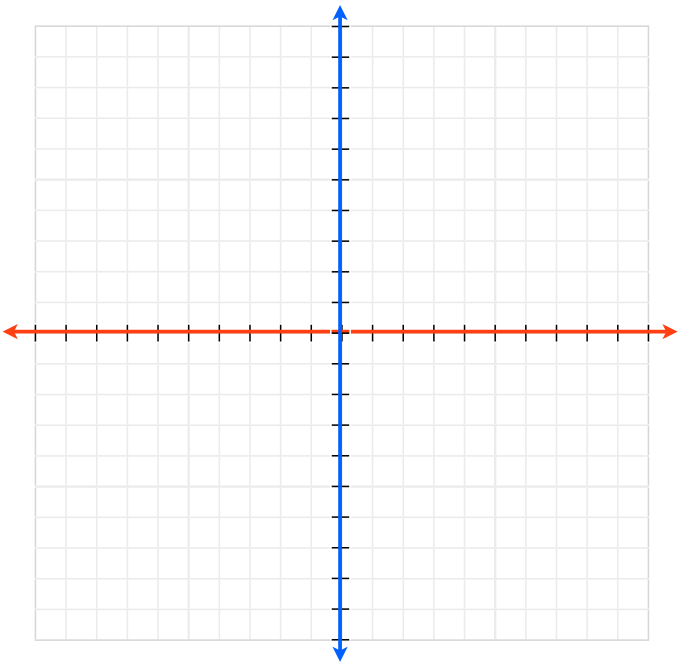
$y > 2x - 4$



Graph the following linear inequalities

Solid or Dotted Above or Below

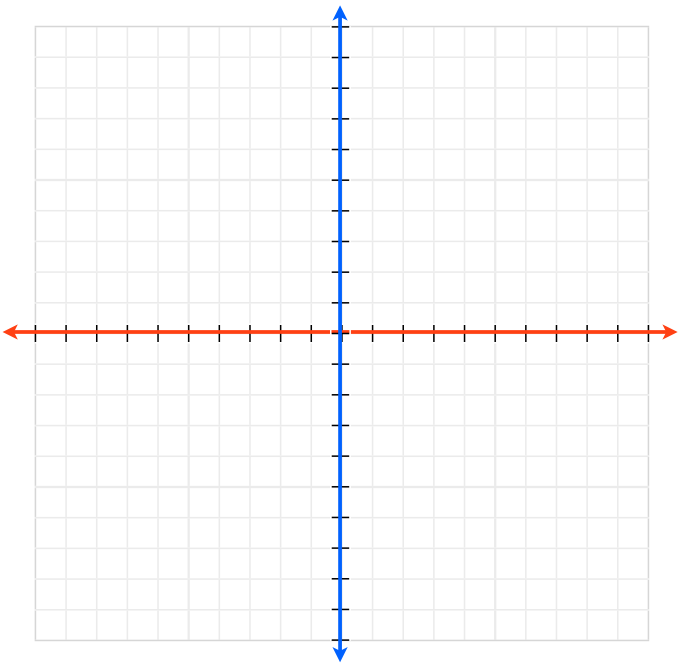
$y \leq -x + 5$



Graph the following linear inequalities

Solid or Dotted Above or Below

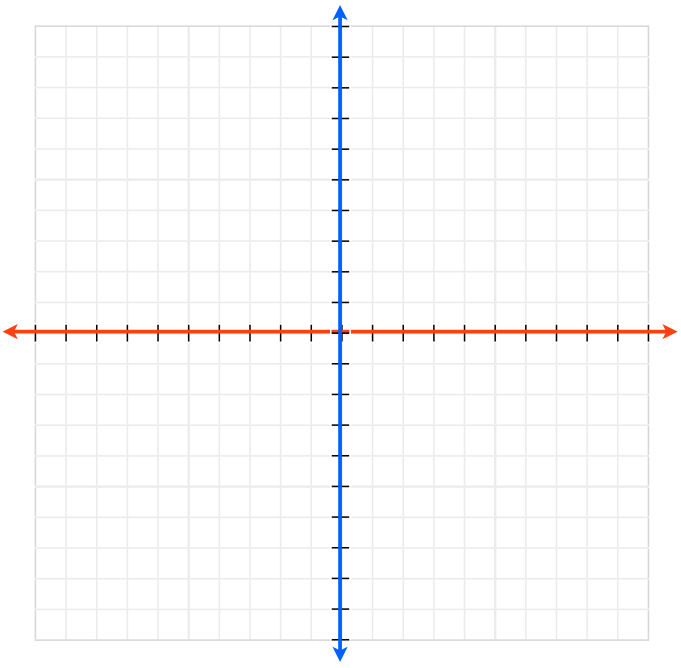
$$y < \frac{1}{4}x - 4$$



Graph the following linear inequalities

Solid or Dotted Above or Below

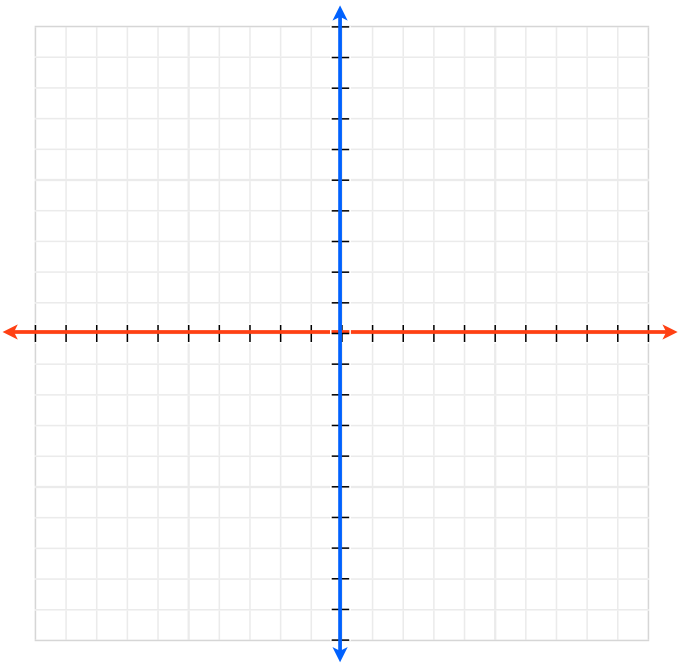
$$y \geq -\frac{2}{3}x + 5$$



Graph the following linear inequalities

Solid or Dotted Above or Below

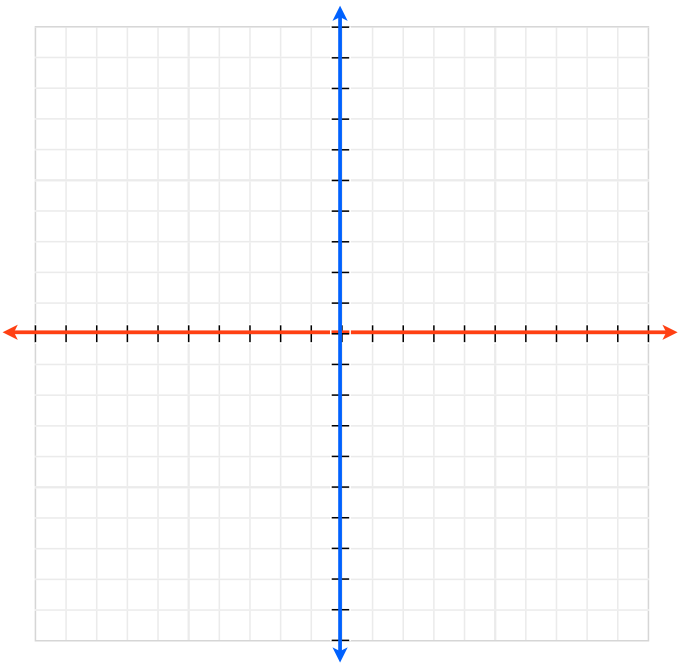
$y > -5$



Graph the following linear inequalities

Solid or Dotted Above or Below

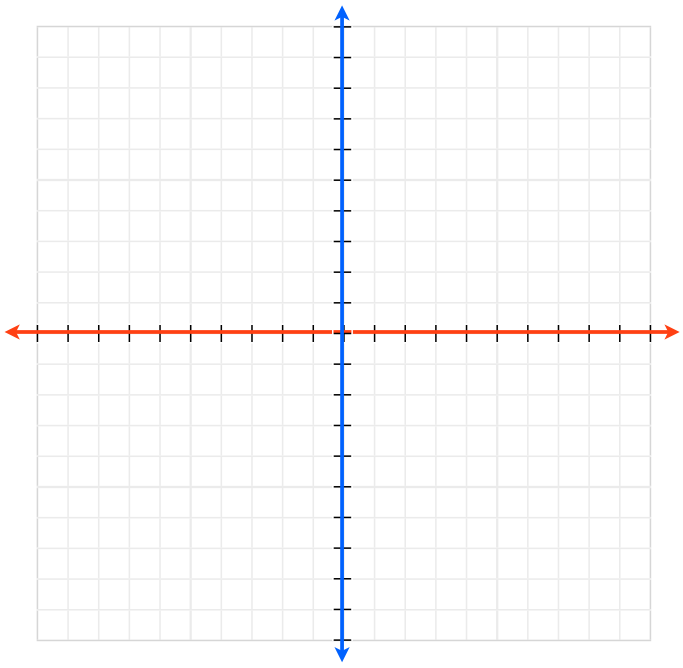
$x \leq 6$



Graph the following linear inequalities

Solid or Dotted Above or Below

$4x - 2y > 8$



Rules for graphing linear inequalities in slope-intercept form

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