Name _____

Solving a System of Nonlinear Inequalities

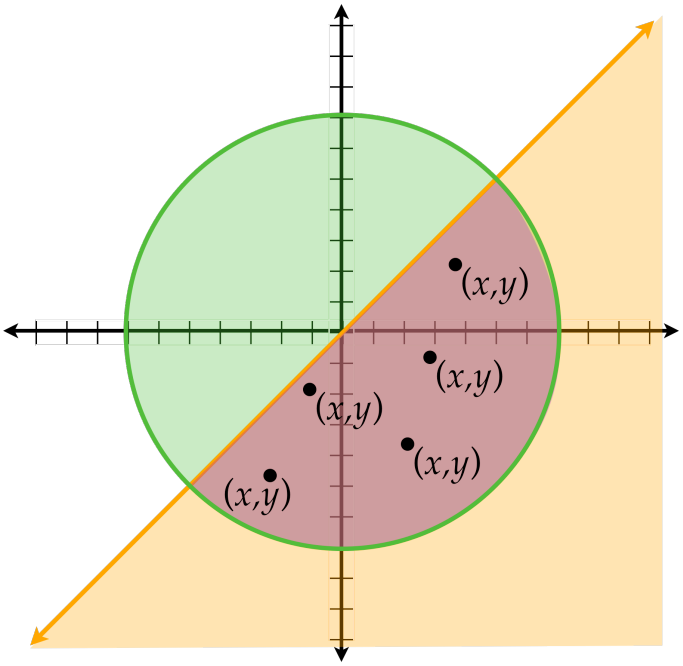
Date _____ Period _____

Solving a System of Non-Linear Inequalities

Graph the Inequalities and shade

The **solution** is the intersection of the shaded region

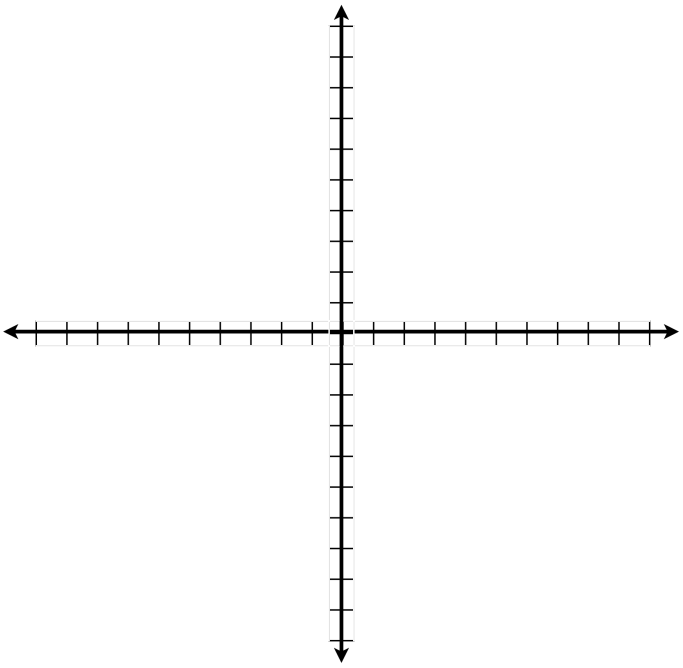
The shaded region represents all ordered pairs (x,y) that satisfies both inequalities



Graph the solution to the following nonlinear system of inequalities.

$y \geq 2|x-2|-5$

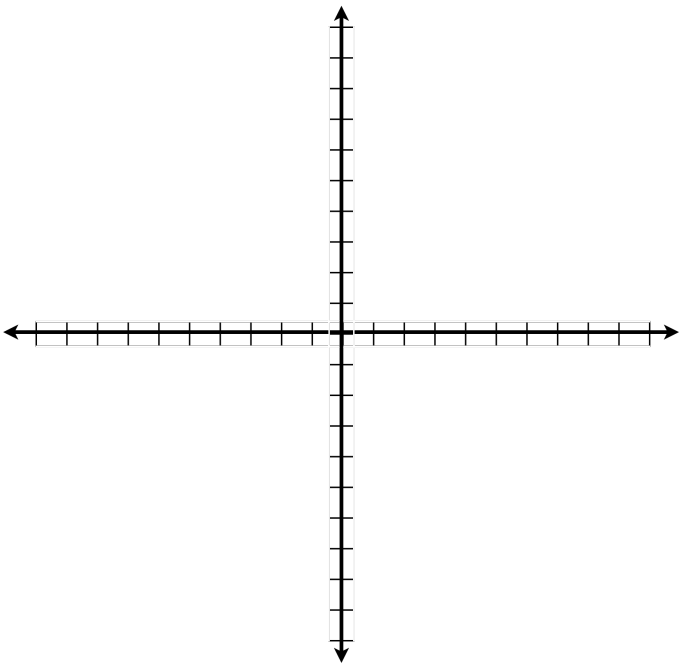
$y \leq -x+3$



Graph the solution to the following nonlinear system of inequalities.

$$y \geq x^2 - 8$$

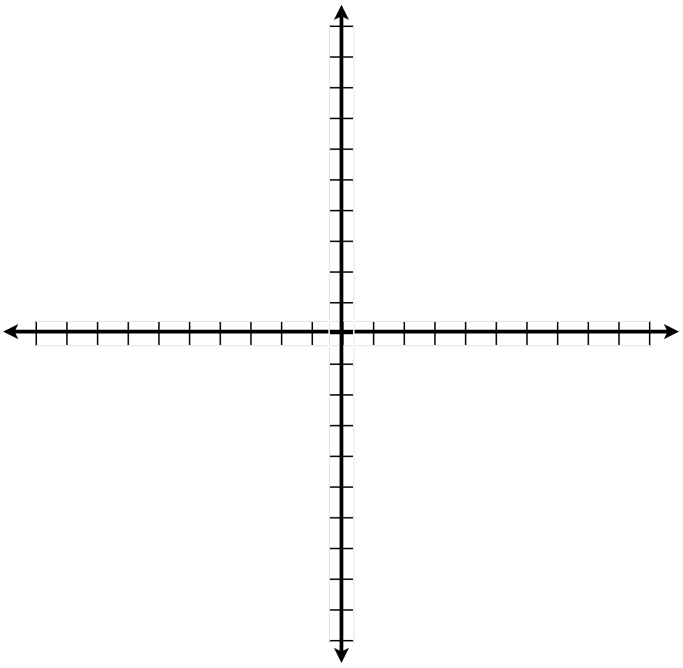
$$y \leq \frac{1}{2}x + 4$$



Graph the solution to the following nonlinear system of inequalities.

$$x^2 + y^2 \leq 49$$

$$y \leq -x^2 + 6$$



Graph the solution to the following nonlinear system of inequalities.

$$y \leq \sqrt{x + 5} - 3$$

$$y \geq |x - 3| - 5$$