

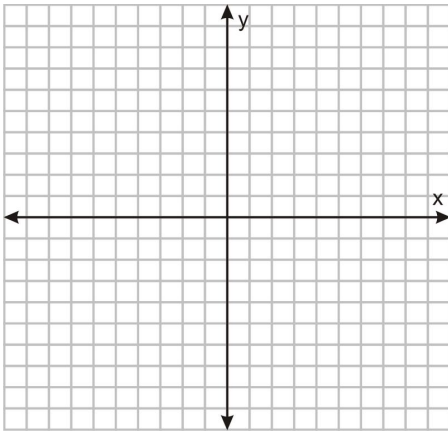
4.8 Graph Quadratic Inequalities  
Honors Algebra 2

**To Graph a Quadratic Inequality in Two Variables:**

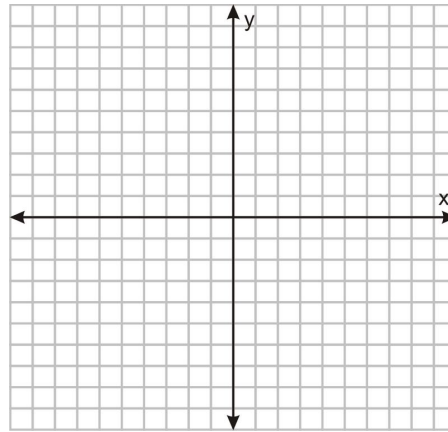
1. Graph the parabola boundary (solid or dashed)
2. Pick a test point NOT on the boundary to determine if it is a solution to the inequality.
3. If it is a solution, shade the part of the plane that contains the point. If it is not a solution, shade the part of the plane that does not contain the point.

Graph each quadratic inequality

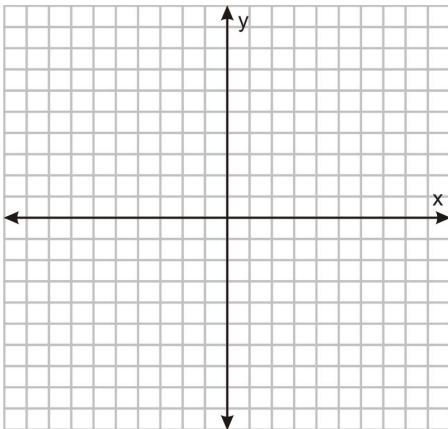
1.  $y > (x - 2)^2 - 3$



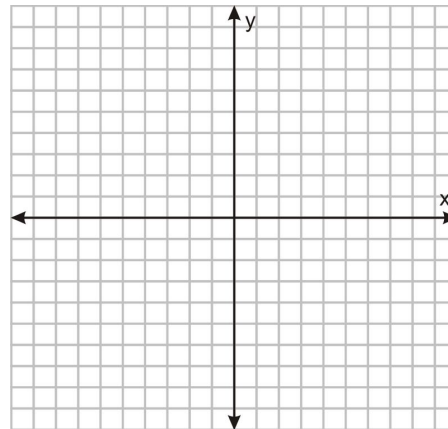
2.  $y < -(x + 1)^2 + 4$



3.  $y \leq 2(x - 5)(x - 1)$

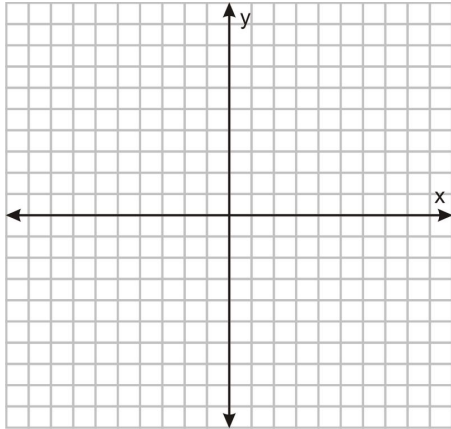


4.  $y \geq -2x^2 + 16x - 31$



4.8 Graph Quadratic Inequalities  
Honors Algebra 2

5.  $y \leq -3(x-2)^2 + 4$



Solve each quadratic inequality algebraically

1.  $x^2 - 3x \leq 18$

2.  $x^2 + 5x < -6$

4.8 Graph Quadratic Inequalities  
Honors Algebra 2

3.  $x^2 + 11x + 30 \geq 0$

4.  $x^2 - 14x > -49$

5.  $x^2 - 4x \leq 21$

6.  $-x^2 + 12x \geq 28$