

9.3 Quadratic Inequalities in Two Variables

Combine 9.1 and 9.2:

1. Graph the inequality as an equal sign: dotted for $<$ or $>$, solid if \leq or \geq
2. Choose a test point: if the point is true, then shade that region, if the point is not true, then shade the other region.

Sketching quadratics in form: $y = a(x - p)^2 + q$

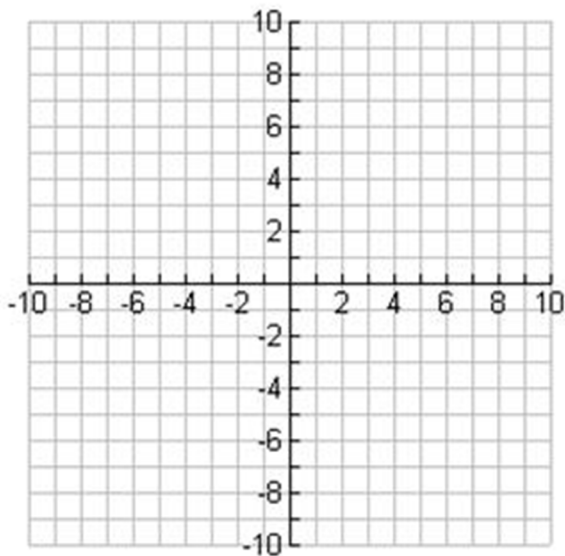
- $V(p, q)$ is the point of the vertex

- a determines the direction and the stretch or compression of the graph.

Example 1:

Graph

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



Sketching quadratics in the form: $y = Ax^2 + Bx + C$

Example 2:

Graph

$$y \leq -x^2 + 2x + 4$$

