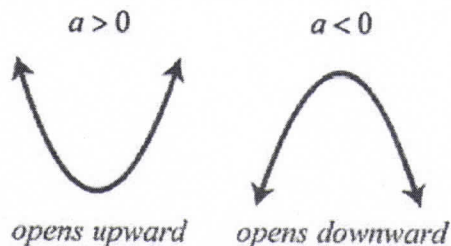


Solving Quadratic Equations by Graphing

1. **A = UP -A = DOWN**

Parabola $f(x) = ax^2 + bx + c$



2. **Use discriminant:**

if $b^2 - 4ac > 0$ 2 solutions

if $b^2 - 4ac = 0$ 1 solution

if $b^2 - 4ac < 0$ no real solution

3. **Factor or use Quadratic Equation:**

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

4. **Find Vertex:**

$$x = \frac{-b}{2a}$$

Plug "X" into equation to find "Y"