TWO FORMS FOR THE EQUATION OF A PARABOLA

I \( f(x) = ax^2 + bx + C \)

Finding the vertex takes a little bit of effort!

\[
V_x = -\frac{b}{2a} \\
V_y = f\left(-\frac{b}{2a}\right)
\]

II \( f(x) = a(x-h)^2 + k \)

Finding the vertex is very easy!!

\[
V = (h, k)
\]

In either case observe the following:
(a) If \( a \) is \(+\), the graph opens up. If \( a \) is \( -\) opens down.
(b) To find the range, use the \( y \)-coord of vertex.
(c) To find the eqtn of the axis of symmetry, use the \( x \)-coord of vertex.