

Standard form

$$y=ax^2+bx+c$$

The equation of the axis of symmetry is $x=-b/2a$.

The vertex lies on the axis of symmetry, so its x-coordinate is $-b/(2a)$. You can find its y-coordinate by substituting $-b/(2a)$ for x in the equation of the parabola.

Vertex form

$$y=a(x-h)^2+k$$

If $|a|<1$, then the graph will be wider than the graph of $y=x^2$.

If $|a|>1$, then the graph will be narrower than the graph of $y=x^2$.

The vertex of the parabola is located at the point with coordinates (h, k) and the equation of the axis of symmetry is $x=h$.