

**Graph of Vertex Form  $y = a(x - h)^2 + k$** 

The graph of  $y = a(x - h)^2 + k$  is the parabola  $y = ax^2$  translated horizontally  $h$  units and vertically  $k$  units.

Characteristics of the graph of  $y = a(x - h)^2 + k$ :

- The vertex is  $(h, k)$ .
- The axis of symmetry is  $x = h$ .
- The graph opens up if  $a > 0$  and down if  $a < 0$ .

