

Quadratic Relations: Graphing

Course: Grade 10 Mathematics

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

Remember that:

a is the **Stretch Factor** and **Vertical Flip**

h is the **Horizontal Shift**

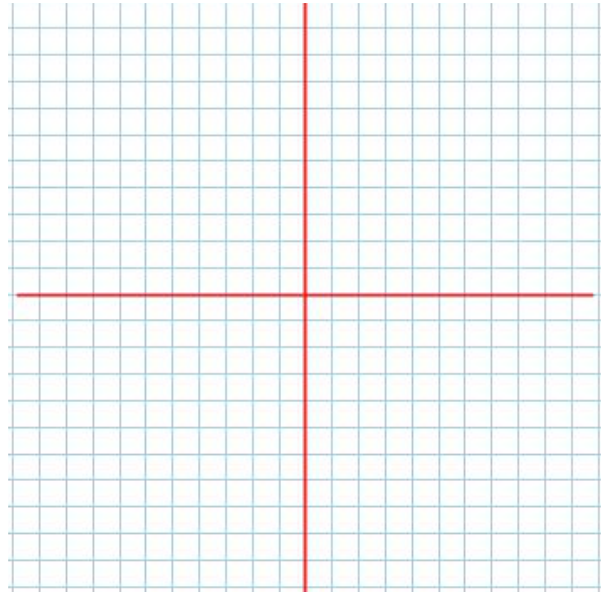
k is the **Vertical Shift**

When we graph, we take the parent graph, $y = x^2$, and apply the following **IN THIS ORDER**:

1. **Multiply the y-values** by the **a** value
2. **Add the Horizontal Shift** to the **x-values** and the **Vertical Shift** to the **y-values**

The parent graph of a Quadratic Relation, $y = x^2$, is:

Graph $y = 2(x-3)^2 - 8$



Graph $y = -\frac{1}{2}(x+2)^2 + 2$

