Forms

- Standard form: $y = ax^2 + bx + c$
- Vertex form: $y = a(x - h)^2 + k$
  - In this form, the coordinates of the vertex are (h, k)
- Factored form: $y = a(x - x_1)(x - x_2)$

Vertex

If the binomial is given in standard form, the vertex' x coordinate is given by $-\frac{b}{2a}$. Once you have the x coordinate, substitute in the equation to find y.

Domain and range

The **domain** is always $(-\infty, +\infty)$.

The **range** is, for upward opening parabolas