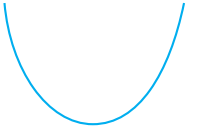
A **quadratic function** can be written in the form $ax^2 + bx + c$, where a, b and c are constants and $a \neq 0$

A **quadratic equation** can be written in the general form $ax^2 + bx + c = 0$

Curves of quadratic functions, $y = ax^2 + bx + c$, have the same general shape. The curve crosses the y-axis when $x = 0$, and the curve crosses the x-axis at any **roots** (or solutions) of the equation $ax^2 + bx + c = 0$

Quadratic curves are symmetrical about their **vertex** (the turning point). For $a > 0$, this vertex is always a **minimum** point, and for $a < 0$ this vertex is always a **maximum** point.

When $a > 0$, a quadratic graph looks like this.



When $a < 0$, a quadratic graph looks like this.