**Some (inaccessible) notes on quadratic equations**

**Quadratic equations**

A *quadratic equation* is an equation with the form *ax2 + bx + c =* 0 where

☺ x represents an unknown and

☺ a, b and c are known numbers with *a ≠* 0.

**Solutions to a quadratic equation**

A solution to a quadratic equation is a value of x such that the equation balances. The solutions to quadratic equations can be found by using the quadratic formula:



***The discriminant***

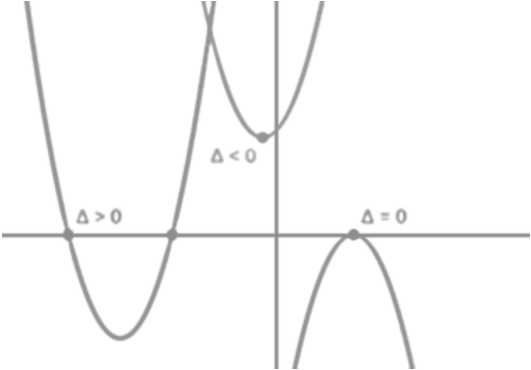
The expression beneath the square root symbol in the quadratic formula is called the *discriminant*:

Δ = b2 – 4ac

We can use this to determine the number of real roots a quadratic equation has:

|  |  |  |
| --- | --- | --- |
| Δ > 0 | Δ = 0 | Δ < 0 |
| Two, distinct | One, repeated | Zero |

**EXAMPLE**

**