

Quadratic Formula

We can solve a quadratic equation using the **quadratic formula**:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

By using the general form of a quadratic equation $ax^2 + bx + c = 0$ we can substitute the values of a , b and c into the quadratic formula to work out x .



Example Solve $x^2 + 2x - 3 = 0$

$$a = 1 \quad b = 2 \quad c = -3$$

$$x = \frac{-(2) \pm \sqrt{2^2 - 4(1)(-3)}}{2(1)}$$

$$x = \frac{-(2) + \sqrt{2^2 - 4(1)(-3)}}{2(1)}$$

$$x = 1$$

$$x = \frac{-(2) - \sqrt{2^2 - 4(1)(-3)}}{2(1)}$$

$$x = -3$$