Quadratic Formula

For a quadratic equation in the form

$$ax^2 + bx + c = 0$$

the solutions are given by:

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

Example

Solve: $2x^2 + 3x - 5 = 0$

$a = 2 \quad b = 3 \quad c = -5$

$$x = \frac{-3 \pm \sqrt{3^2 - 4(2)(-5)}}{2(2)}$$

$$x = \frac{-3 + \sqrt{49}}{4} \qquad x = \frac{-3 - \sqrt{49}}{4}$$

$$x = 1 \qquad\qquad\qquad x = -2.5$$