

## Algebra - Quadratic Formula

Q1

Solve the equation

$$2x^2 + 6x - 95 = 0$$

Give your solutions correct to 3 significant figures.

**[3]**

Q2

Solve  $3x^2 + 7x - 13 = 0$

Give your solutions correct to 2 decimal places.

**[3]**

## Algebra - Quadratic Formula

Q1

$$\text{For } ax^2 + bx + c = 0$$

Solve the equation

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

$$2x^2 + 6x - 95 = 0$$

Give your solutions correct to 3 significant figures.

$$x = \frac{-6 \pm \sqrt{6^2 - 4 \times 2 \times (-95)}}{2 \times 2}$$

$$x = \frac{-6 \pm \sqrt{796}}{4}$$

$$x = \frac{(-6 + \sqrt{796})}{4} \quad \text{or} \quad x = \frac{(-6 - \sqrt{796})}{4}$$

[3]

$$x = 5.55336799 \quad \text{or} \quad x = -8.55336799$$

$$x = 5.55 \text{ to 3 s.f.} \quad \text{or} \quad x = -8.55 \text{ to 3 s.f.}$$

Q2

$$\text{Solve } 3x^2 + 7x - 13 = 0$$

Give your solutions correct to 2 decimal places.

$$x = \frac{-7 \pm \sqrt{7^2 - 4 \times 3 \times (-13)}}{2 \times 3}$$

$$x = \frac{-7 \pm \sqrt{205}}{6}$$

$$x = \frac{(-7 + \sqrt{205})}{6} \quad \text{or} \quad x = \frac{(-7 - \sqrt{205})}{6}$$

$$x = 1.22 \text{ to 2 d.p.} \quad \text{or} \quad x = -3.55 \text{ to 2 d.p.}$$

[3]