

## Lesson 12

### Perimeter, Area & Volume : Year 9

*Calculator Needed*

#### 12.1 Solving Quadratic Equations

Quadratic equations are equations of the form

$$a x^2 + b x + c = 0$$

They can be solved using the formula;

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

#### 12.2 Example

Solve the quadratic equation

$$3x^2 - 4x - 5 = 0$$

### 12.3 Exercise

#### Question 1

Solve the quadratic equation

$$2x^2 + 6x + 1 = 0$$

**Check :** One of the two answers should be - 2.82

**Question 2**

Solve the quadratic equation

$$x^2 + 4x + 2 = 0$$

**Check :** One of the two answers should be - 0.59

**Question 3**

Solve the quadratic equation

$$3x^2 + 8x - 2 = 0$$

**Check :** One of the two answers should be 0.23

**Question 4**

Solve the quadratic equation

$$5x^2 + 4x - 3 = 0$$

**Check :** One of the two answers should be - 1.27

### Question 5

Solve the quadratic equation

$$2x^2 - 5x + 1 = 0$$

**Check :** One of the two answers should be 2.28