

# MathVision — Complete Solutions

## Problem 1: Linear Equation

$$2x + 5 = 15$$

1. Original equation

$$2x + 5 = 15$$

2. Isolate variable

$$2x = 10$$

3. Divide

$$x = 5$$

**=> Answer:  $x = 5$**

---

## Problem 2: Quadratic Equation

$$x^2 - 9 = 0$$

1. Original equation

$$x^2 - 9 = 0$$

2. Standard form

$$1x + 0x + -9 = 0$$

3. Discriminant

$$\Delta = b^2 - 4ac = 36$$

4. Two real roots

$$x = 3 \text{ or } x = -3$$

**=> Answer:  $x = 3, x = -3$**

---

## Problem 3: Derivative

derivative of  $x^3$

1. Function

$$f(x) = x^3$$

2. Apply differentiation rules

$$\frac{d}{dx}[x^3]$$

3. Result

$$= 3x^2$$

**=> Answer:  $f'(x) = 3x^2$**

---