

# 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**

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## Problem 2: Quadratic Equation

$$x^2 - 9 = 0$$

1. Original equation

$$x^2 - 9 = 0$$

2. Standard form

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

3. Discriminant

$$\text{delta} = b - 4ac = 36$$

4. Two real roots

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

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

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## Problem 3: Derivative

derivative of  $x^3$

1. Function

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

2. Apply differentiation rules

$$d/dx[x^3]$$

3. Result

$$= 3*x^2$$

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

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