

# Equation Solution Report

Generated on 2025-04-19 20:27:29

## Equation:

$$x^2 - 5x + 6 = 0$$

## Solution Steps:

Solving quadratic equation:

Standard form:  $1.0x^2 + -5.0x + 6.0 = 0$

Step 1: Calculate discriminant

$$D = b^2 - 4ac = -5.0^2 - 4 \cdot 1.0 \cdot 6.0 = 1.0$$

$$\sqrt{D} = 1.0$$

Step 2: Apply quadratic formula

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

Step 3: Calculate roots

$$x_1 = \frac{-(-5.0) + 1.0}{(2 \cdot 1.0)} = 3.0$$

$$x_2 = \frac{-(-5.0) - 1.0}{(2 \cdot 1.0)} = 2.0$$

Solution:  $x_1 = 3.0$ ,  $x_2 = 2.0$