

Quadratic equations

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10th Maths - Chapter 4

This is Problem-1(ii) from Exercise 4.2

1. Find the roots of the following quadratic equations by factorisation:
 $2x^2 + x - 6 = 0$

Solution:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \quad (1)$$

$$x = \frac{-1 \pm \sqrt{1^2 - 4 \times 2 \times -6}}{2 \times 2} \quad (2)$$

$$x = \frac{-1 \pm \sqrt{1 - 4 - 12}}{4} \quad (3)$$

$$x = \frac{-1 \pm \sqrt{49}}{4} \quad (4)$$

$$x = \frac{-1 \pm 7}{4} \quad (5)$$

$$x = \frac{-1 + 7}{4} \quad (6)$$

$$x = \frac{6}{4} \quad (7)$$

$$x = \frac{3}{2} \quad (8)$$

$$OR \quad (9)$$

$$x = \frac{-1 - 7}{4} \quad (10)$$

$$x = \frac{-8}{4} \quad (11)$$

$$x = -2 \quad (12)$$