

Quadratic Equations

Worsheet-2

Module 2/3

Choose the Correct Answer:

- The roots of the equation $x^2 - 3x + 2 = 0$ are
A) (1, -2) B) (-1, -2) C) (-1, 2) D) (1, 2)
- The roots of the quadratic equation $6x^2 - x - 2 = 0$ is:
A) $\frac{1}{2}$ B) $-\frac{1}{2}$ C) $-\frac{2}{3}$ D) -1
- The positive root of $\sqrt{3x^2 + 6} = 9$ is
A) 3 B) 4 C) 5 D) 7
- Which of the following is a solution of the quadratic equation $x^2 - b^2 = a(2x - a)$?
A) $a+b$ B) $2b - a$ C) ab D) $\frac{a}{b}$
- Which of the following is the root of the equation $2x^2 - 5x - 3 = 0$?
A) $x = 3$ B) $x = 4$ C) $x = 1$ D) $x = -4$

Short Answer Type Questions

- Find the roots of the following quadratic equations by factorisation method:
 - $6x^2 - \sqrt{2}x - 2 = 0$
 - $4\sqrt{3}x^2 + 5x - 2\sqrt{3} = 0$
- Solve: $a^2b^2x^2 + b^2x - a^2x - 1 = 0$
- Solve for x : $12abx^2 - (9a^2 - 8b^2)x - 6ab = 0$
- Solve; $\frac{1}{a+b+x} = \frac{1}{a} + \frac{1}{b} + \frac{1}{x}$; $a \neq 0, b \neq 0, x \neq 0, x \neq -(a+b)$
- Solve for x : $4x^2 - 4a^2x + (a^4 - b^4) = 0$
- Solve: $\frac{x+1}{x-1} + \frac{x-2}{x+2} = 3$; $x \neq 1, -2$
- Solve for x : $\frac{x-1}{x-2} + \frac{x-3}{x-4} = \frac{10}{3}$ ($x \neq 2, x \neq 4$)
- Solve the following quadratic equations by factorization method:
 - $\frac{4}{x} - 3 = \frac{5}{2x+3}$; $x \neq 0, -\frac{3}{2}$
 - $\frac{2x}{x-3} + \frac{1}{2x+3} + \frac{3x+9}{(x-3)(2x+3)} = 0$
- Use factor method to find roots of $\sqrt{3}x^2 + 10x + 7\sqrt{3} = 0$
- Solve: $4x^2 - 2(a^2 + b^2)x + a^2b^2 = 0$ by factorisation method.
