

QUADRATIC EQUATION**Solution of Quadratic Equation by Quadratic Formula****SOLUTION OF QUADRATIC EQUATION BY QUADRATIC FORMULA**

Solve each of the following equations by using quadratic formula (Q.1 to Q.8)

Q1. $x^2 - 2\sqrt{2}x - 6 = 0$

Q2. $\sqrt{6}x^2 - 4x - 2\sqrt{6} = 0$

Q3. $\sqrt{3}x^2 + 11x + 6\sqrt{3} = 0$

Q4. $16x^2 - 1 = 0$

Q5. $5x^2 - x - 4 = 0$

Q6. $4x^2 - 7x + 3 = 0$

Q7. $x^2 = 3x$

Q8. $3x^2 - 5x = 0$

Q9. Solve : (i) $10x^2 + 3(5a - 2)x - 9 = 0, a \neq 0$ (ii) $abx^2 = (a + b)^2(x - 1), ab \neq 0$

Q10. Solve : (i) $x^2 - 2ax + (a^2 - b^2) = 0$ (ii) $x^2 - 4ax + 4a^2 - b^2 = 0$

Q11. Solve : (i) $4x^2 - 2(a^2 + b^2)x + a^2b^2 = 0$

(ii) $9x^2 - 9(a + b)x + (2a^2 + 5ab + 2b^2) = 0$

ANSWER

1. $3\sqrt{2}, -\sqrt{2}$

2. $\sqrt{6}, -\frac{2}{\sqrt{6}}$

3. $-3\sqrt{3}, -\frac{2}{\sqrt{3}}$

4. $\frac{1}{4}, -\frac{1}{4}$

5. $1, -\frac{4}{5}$

6. $1, \frac{3}{4}$

7. $0, 3$

8. $0, \frac{5}{3}$

9. (i) $-\frac{3}{2}, \frac{3}{\sqrt{a}}$

(ii) $\frac{a+b}{a}, \frac{a+b}{b}$

10. (i) $a + b, a - b$

(ii) $2a + b, 2a - b$

11. (i) $\frac{a^2}{2}, \frac{b^2}{2}$

(ii) $\frac{2a+b}{3}, \frac{a+2b}{3}$