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CBSE Class 10- Mathematics: Chapter – 4 Quadratic Equations Part 6

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1 Marks Question

Question 1:

Which of the following is quadratic equation?

- (a) $x^3 - 2x - \sqrt{5} - x = 0$
- (b) $3x^2 - 5x + 9 = x^2 - 7x + 3$
- (c) $\left(x + \frac{1}{x}\right)^2 = 3\left(x + \frac{1}{x}\right) + 4$
- (d) $x^3 + x + 3 = 0$

Answer:

- (b) $3x^2 - 5x + 9 = x^2 - 7x + 3$

Question 2:

Factor of $a^2x^2 - 3abx + 2b^2 = 0$ is

- (a) $\frac{2b}{a}, \frac{b}{a}$
- (b) $\frac{3b}{a}, \frac{a}{b}$
- (c) $\frac{b}{a}, \frac{a}{b}$
- (d) $\frac{a}{b}, \frac{a}{b}$

Answer:

- (a) $\frac{2b}{a}, \frac{b}{a}$

Question 3:

Which of the following have real root

- (a) $2x^2 + x - 1 = 0$
- (b) $x^2 + x + 1 = 0$
- (c) $x^2 - 6x + 6 = 0$
- (d) $2x^2 + 15x + 30 = 0$

Answer:

(c) $x^2 - 6x + 6 = 0$

Question 4:

Solve for x : $x = \frac{1}{2 - \frac{1}{2 - \frac{1}{2-x}}}$

(a) $x = 2$

(b) $x = -1$

(c) $x = -1$

(d) $x = 3$

Answer:

(b) $x = -1$

Question 5:

Solve by factorization $\sqrt{3}x^2 + 10x + 7\sqrt{3} = 0$

(a) $x = -\sqrt{3}, -\frac{7}{\sqrt{3}}$

(b) $x = -\sqrt{3}, \frac{7}{\sqrt{3}}$

(c) $x = 2, \frac{1}{2}$

(d) ± 3

Answer:

(a) $x = -\sqrt{3}, -\frac{7}{\sqrt{3}}$

Question 6:The quadratic equation whose roots are 3 and -3 is

(a) $x^2 - 9 = 0$

(b) $x^2 - 3x - 3 = 0$

(c) $x^2 - 2x + 2 = 0$

(d) $x^2 + 9 = 0$

Answer:

(a) $x^2 - 9 = 0$

Question 7:

Discriminant of $-x^2 + \frac{1}{2}x + \frac{1}{2} = 0$

(a) $-\frac{1}{2}, 1$

(b) $\frac{1}{2}, 1$

(c) $\frac{-1}{2}, -1$

(d) $\frac{1}{2}, \frac{-1}{2}$

Answer:

(a) $-\frac{1}{2}, 1$

Question 8:

For equal root, $kx(x - 2) + 6 = 0$, value of k is

(a) $k = 6$

(b) $k = 3$

(c) $k = 2$

(d) $k = 8$

Answer:

(a) $k = 6$