Class 10 Maths MCQs Chapter 4 Quadratic Equations

1. Which of the following is not a quadratic equation
(a) xÂ² + 3x - 5 = 0
(b) xÂ² + x3 + 2 = 0
(c) 3 + x + xÂ² = 0
(d) xÂ² - 9 = 0

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2. The quadratic equation has degree
(a) 0
(b) 1
(c) 2
(d) 3

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3. The cubic equation has degree
(a) 1
(b) 2
(c) 3
(d) 4

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4. A bi-quadratic equation has degree
(a) 1
(b) 2
(c) 3
(d) 4

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5. The polynomial equation x (x + 1) + 8 = (x + 2) {x - 2) is
(a) linear equation
(b) quadratic equation
(c) cubic equation
(d) bi-quadratic equation

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6. The equation (x - 2)Â² + 1 = 2x - 3 is a
(a) linear equation
(b) quadratic equation
(c) cubic equation
(d) bi-quadratic equation

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9. The quadratic equation whose one rational root is 3 + âˆš2 is
(a) xÂ² - 7x + 5 = 0
(b) xÂ² + 7x + 6 = 0
(c) xÂ² - 7x + 6 = 0
(d) xÂ² - 6x + 7 = 0

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10. The equation 2xÂ² + kx + 3 = 0 has two equal roots, then the value of k is
(a) Â±âˆš6
(b) Â± 4
(c) Â±3âˆš2
(d) Â±2âˆš6

$\pm\sqrt{4 \times 6}$

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13. The sum of the roots of the quadratic equation 3Ã—2 - 9x + 5 = 0 is
(a) 3
(b) 6
(c) -3
(d) 2

$= \frac{-b}{a} = -\frac{(-9)}{3} = 3$

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17. If a, p are the roots of the equation (x - a) (x - b) + c = 0, then the roots of the equation (x - a) (x - P) = c are
(a) a, b
(b) a, c
(c) b, c
(d) none of these

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18. Mohan and Sohan solve an equation. In solving Mohan commits a mistake in constant term and finds the roots 8 and 2. Sohan commits a mistake in the coefficient of x. The correct roots are
(a) 9,1
(b) -9,1
(c) 9, -1
(d) -9, -1

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19. If a and p are the roots of the equation 2xÂ² - 3x - 6 = 0. The equation whose roots are $\frac{1}{\alpha}$ and $\frac{1}{\beta}$ is
(a) 6xÂ² - 3x + 2 = 0
(b) 6xÂ² + 3x - 2 = 0
(c) 6xÂ² - 3x - 2 = 0
(d) xÂ² + 3x-2 = 0

20. If the roots of px2 + qx + 2 = 0 are reciprocal of each other, then
(a) P = 0
(b) p = -2
(c) p = Â±2
(d) p = 2

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21. If one root of the quadratic equation 2xÂ² + kx - 6 = 0 is 2, the value of k is
(a) 1
(b) -1
(c) 2
(d) -2

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22. The roots of the quadratic equation
$\frac{1}{a+b+x} = \frac{1}{a} + \frac{1}{b} + \frac{1}{x}, a + b \neq 0$ is
(a) a, b
(b) -a, b
(c) a, -b
(d) -a, -b

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23. The roots of the equation 7xÂ² + x - 1 = 0 are
(a) real and distinct
(b) real and equal
(c) not real
(d) none of these

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24. The equation 12xÂ² + 4kx + 3 = 0 has real and equal roots, if
(a) k = Â±3
(b) k = Â±9
(c) k = 4
(d) k = Â±2

25. If -5 is a root of the quadratic equation 2xÂ² + px - 15 = 0, then
(a) p = 3
(b) p = 5
(c) p = 7
(d) p = 1

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26. If the roots of the equations axÂ² + 2bx + c = 0 and bxÂ² - 2âˆšac x + b = 0 are simultaneously real, then
(a) b = ac
(b) b2 = ac
(c) a2 = be
(d) c2 = ab

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27. The roots of the equation (b - c) xÂ² + (c - a) x + (a - b) = 0 are equal, then
(a) 2a = b + c
(b) 2c = a + b
(c) b = a + c
(d) 2b = a + c

28. A chess board contains 64 equal squares and the area of each square is 6.25 cmÂ². A border round the board is 2 cm wide. The length of the side of the chess board is
(a) 8 cm
(b) 12 cm
(c) 24 cm
(d) 36 cm

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29. One year ago, a man was 8 times as old as his son. Now his age is equal to the square of his son's age. Their present ages are
(a) 7 years, 49 years
(b) 5 years, 25 years
(c) 1 years, 50 years
(d) 6 years, 49 years

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30. The sum of the squares of two consecutive natural numbers is 313. The numbers are
(a) 12, 13
(b) 13,14
(c) 11,12
(d) 14,15

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31. Which of the following is not a quadratic equation? [NCERT Exemplar Problems]
(a) $2(x - 1)Â² = 4xÂ² - 2x + 1$
(b) $2x - xÂ² = xÂ² + 5$
(c) $(âˆš2x + âˆš3)Â² + xÂ² = 3xÂ² - 5x$
(d) $(xÂ² + 2x)Â² = x^4 + 3 + 4x^3$

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32. If (x - a) is one of the factors of the polynomial $axÂ² + bx + c$, then one of the roots of $axÂ² + bx + c = 0$ is
(a) 1
(b) c
(c) a
(d) none of these

33. Which of the following are the roots of the quadratic equation, xÂ² - 9x + 20 = 0 by factorisation?
(a) 3, 4
(b) 4, 5
(c) 5, 6
(d) 6, 1

34. If (1 - p) is a root of the equation xÂ² + px + 1 -p = 0, then roots are
(a) 0, 1
(b) -1, 1
(c) 0, -1
(d) - 1, 2

35. If a, P are roots of the equation xÂ² + 5x + 5 = 0, then equation whose roots are a + 1 and p + 1 is
(a) xÂ² + 5x - 5 = 0
(b) xÂ² + 3x + 5 = 0
(c) xÂ² + 3x + 1 = 0
(d) none of these

36. Which of the following equations has two distinct real roots? [NCERT Exemplar Problems]
(a) 2xÂ² - 3âˆš2x + $\frac{9}{4}$ =0
(b) xÂ² + x - 5 = 0
(c) xÂ² + 3x + 2âˆš2 = 0
(d) 5xÂ² - 3x + 1 = 0

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37. Which of the following equations has no real roots ? [NCERT Exemplar Problems]
(a) xÂ² - 4x + 3âˆš2 =0
(b) xÂ² + 4x - 3âˆš2 = 0
(c) xÂ² - 4x - 3âˆš2 = 0
(d) 3xÂ² + 4âˆš3x + 4 = 0

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38. (xÂ² + 1)Â² - xÂ² = 0 has [NCERT Exemplar Problems]
(a) four real roots
(b) two real roots
(c) no real roots
(d) one real root

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39. If the difference of the roots of the equation xÂ² - bx + c = 0 be 1, then
(a) bÂ² - 4c + 1 = 0
(b) bÂ² + 4c = 0
(c) bÂ² - 4c - 1 - 0
(d) bÂ² - 4c = 0