CBSE TEST PAPER-1

CLASS - X

Choose the correct answer from the given four options in the following questions:

1. If one of the zeroes of the quadratic polynomial $(k–1) x^2 + k x + 1$ is $–3$, then the value of k is

(A) 4/3   (B) –43   (C) 2/3   (D)–2/3

2. A quadratic polynomial, whose zeroes are –3 and 4, is

(A) $X^2 – x + 12$ (B) $x^2 + x + 12$ (C) $x^2/2 – x/2 -6$ (D) $2x^2 + 2x –24$

3. If the zeroes of the quadratic polynomial $x^2 + (a + 1) x + b$ are 2 and –3, then

(A) a = –7, b = –1   (B) a = 5, b = –1   (C) a = 2, b = – 6   (D) a = 0, b = – 6

4. The number of polynomials having zeroes as –2 and 5 is

(A) 1   (B) 2   (C) 3   (D) more than 3

5. If one of the zeroes of the cubic polynomial $x^3 + ax^2 + b x + c$ is $–1$, then the product of the other two zeroes is

(A) b – a + 1   (B) b – a – 1   (C) a – b + 1   (D) a – b –1

6. Find the zeroes of the polynomial $x^2 +1/6x – 2$, and verify the relation between the coefficients and the zeroes of the polynomial

7. Find the zeroes of the following polynomials by factorization method and verify the relations between the zeroes and the coefficients of the polynomials $2s^2 – (1 + 2 \sqrt{2}) s + \sqrt{2}$

8. Find a quadratic polynomial, the sum and product of whose zeroes are 2 and $– 3/2$, respectively. Also find its zeroes

9. If the remainder on division of $x^3 + 2x^2 + k x +3$ by $x – 3$ is 21, find the quotient and the value of k. Hence, find the zeroes of the cubic polynomial $x^3 + 2x^2 + k x – 18$

10. Given that $\sqrt{2}$ is a zero of the cubic polynomial $6x^3 + 2 x^2 – 10x – 4 \sqrt{2}$, find its other two zeroes.

11. Given that $x – \sqrt{5}$ is a factor of the cubic polynomial $x^3 – 3\sqrt{5}x^2 + 13x – 3 \sqrt{5}$, find all the zeroes of the polynomial.

12. For which values of a and b, are the zeroes of $q(x) = x^3 + 2x^2 + a$ also the zeroes of the polynomial $p(x) = x^5 – x^4 – 4x^3 + 3x^2 + 3x + b$? Which zeroes of $p(x)$ are not the zeroes of $q(x)$?