ACADEMIC YEAR 2022-23

Grade: X

Subject: MATHEMATICS

CH – 2 POLYNOMIAL - ASSIGNMENT -1

1. If α, β are the zeroes of the polynomials $f(x) = x^2 + x + 1$, then $\dfrac{1}{\alpha} + \dfrac{1}{\beta}$

   (a) 0   (b) 1   (c) –1   (d) none of these

2. If one of the zero of the polynomial $f(x) = (k^2 + 4)x^2 + 13x + 4k$ is reciprocal of the other then k =

   (a) 2   (b) 1   (c) –1   (d) – 2

3. If α, β are the zeroes of the polynomials $f(x) = 4x^2 + 3x + 7$, then $\dfrac{1}{\alpha} + \dfrac{1}{\beta}$

   (a) $\dfrac{7}{3}$ (b) $\dfrac{-7}{3}$ (c) $\dfrac{3}{7}$ (d) $\dfrac{-3}{7}$

4. If the sum of the zeroes of the polynomial $f(x) = 2x^3 – 3kx^2 + 4x – 5$ is 6, then value of k is

   (a) 2   (b) 4   (c) –2   (d) – 4

5. The zeroes of a polynomial $p(x)$ are precisely the x-coordinates of the points, where the graph of $y = p(x)$ intersects the

   (a) x – axis   (b) y – axis   (c) origin   (d) none of the above

6. Find the zeroes of the quadratic polynomial $6x^2 – 7x – 3$ and verify the relationship between the zeroes and the coefficients.

7. If α, β are zeroes of quadratic polynomial $x^2 – (k + 6)x + 2(2k – 1)$, find k, if $\alpha + \beta = \dfrac{1}{2}\alpha\beta$

8. If 1 is zero of the polynomial $p(x) = ax^2 – 3(a – 1)x – 1$, then the value of 'a' is

9. Form a quadratic polynomial whose one of the zeroes is 12 and sum of the zeroes is – 9 .

10. Find the zeros of the quadratic polynomial $3x^2 – 8$

11. Find the quadratic polynomial with 0 – 81 and 3 as product and one of the zeros respectively

12. Find the zeros of $\sqrt{3}x^2 – 8x + 4\sqrt{3}$

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