POLYNOMIAL

HOT QUESTIONS

1) Calculate the zeroes of the polynomial $p(x) = 4x^2 - 12x + 9$.   **Ans- 3/2, -3/2**

2) If the product of zeroes of the polynomial ax^2 – 6x – 6 is 4, find the value of a. Find the sum of zeroes of the polynomial.   **Ans- -3/2, 4**

3) For what value of x both the polynomial x^2-3x+2 and x^2-6x +5 becomes zero. **Ans- x=1**

4) Let α and β are two zeroes of a quadratic polynomial x^2-3, then find $\frac{2}{\alpha} + \frac{2}{\beta}$.   **Ans- 0**

5) If α and β are the zeros of the polynomial f (x) = x^2+ px + q, find polynomial whose zeros are (α +β)^2 and (α -β)^2 **Ans-** $x^2 - 2(p^2 - 2q)x + p^2(p^2 - 4q)$

6) If one zero of the polynomial $2x^2$-5x-(2k+1) is twice the other, find both the zeroes of the polynomial, and value of K.   **Ans-** $\frac{5}{3}, \frac{5}{6}, k = \frac{-17}{9}$

7) If α, β be zeroes of a quadratic polynomial where $\alpha + \beta = 7$ and $\alpha \times \beta = 11$, then write the polynomial.   **Ans-** $x^2 - 7x + 11$

8) Find a quadratic polynomial whose zeroes are $5 - 3\sqrt{2}$ and $5 + 3\sqrt{2}$ .Ans- $x^2 - 10x + 7$

9) On dividing x^3 – $8x^2$ + 20x -10 by a polynomial g(x), the quotient and the remainder were x – 4 and 6 respectively. Find g(x).   **Ans-** $x^2 - 4x + 4$

10) An NGO decided to distribute books and pencils to the students of a school running by some other NGO. For this they collected some amount from different people. The total amount collected is represented by $4x^4$ + $2x^3$ – $8x^2$ + 3x – 7. From this fund each student received an equal amount. The number of students, who received the amount, is represented by x – 2 + $2x^2$.After distribution, 5x -11, amount is left with the NGO which they donated to school for their infrastructure.Find the amount received by each student from the NGO.What value has been depicted here?   **Ans-** $2x^2 - 2$

11) Obtain all other zeroes of the polynomial x^4 – $17x^2$ – 36x – 20, if two of its zeroes are + 5 and – 2.   **Ans- (-2,-1)**

12) If one zero of the quadratic polynomial f(x) = $4x^2$ – 8kx + 8x – 9 is negative of the other, then find the zeroes of kx^2 + 3kx + 2.   **Ans- (-1,-2)**

13) If the zeroes of the polynomial x^2 + px + q are double in value to the zeroes of $2x^2$ – 5x – 3, find the value of p and q.   **Ans- (-5,-6)**

14) If 2 and -3 are the zeroes of the quadratic polynomial x^2+ (a + 1) x + b; then find the values of a and b.   **Ans- (0,-6)**

15) If the polynomial x^4 + $2x^3$ + $8x^2$ + 12x + 18 is divided by another polynomial x^2 + 5, the remainder comes out to be px + q, find values of p and q.   **Ans- (2,3)**