

class - 10th

Polynomial

chapter - 2

Assignment

1. If α and β are the zeros of polynomial $3x^2 + 6x + k$, such that $\alpha + \beta + \alpha\beta = -\frac{2}{3}$, then the value of k is [cbse-2025]

2. Find the zeros of the Polynomial $p(x) = x^2 + \frac{4}{3}x - \frac{4}{3}$

3. The Quadratic equation whose roots are 7 and $\frac{1}{7}$ is [cbse 2025]

4. If p and q are zeroes of the Polynomial $p(y) = 2y^2 - y - 2$ then find the value of $(1-p) \cdot (1-q)$ [cbse-2025]

5. If α and β are zeroes of a quadratic polynomial $Px^2 + qx + 1$. form a Quadratic polynomial whose zeroes are $\frac{2}{\alpha}$ and $\frac{2}{\beta}$

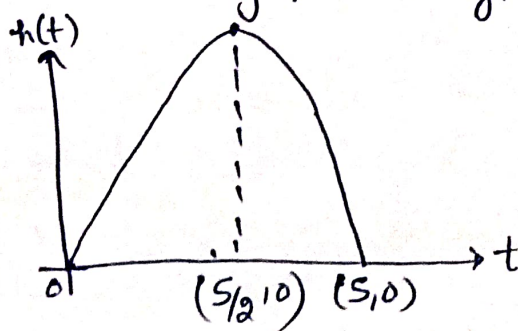
6. Obtain the zeroes of the Polynomial $7x^2 + 18x - 9$ [cbse-2025]
Hence, write a polynomial each of whose zeroes is twice the zeroes of given polynomial [cbse-2025]

7. If the zeroes of the Polynomial $ax^2 + bx + \frac{2a}{b}$ are reciprocal of each other then the value of b is [cbse 2025]

8. Find the zeroes of the polynomial $P(x) = 3x^2 - 4x - 4$. Hence, write a Polynomial whose each of the zeroes is 2 more than zeroes of $P(x)$

9. If the sum of zeroes of the polynomial $p(x) = 2x^2 - k\sqrt{2}x + 1$ is $\sqrt{2}$ then value of k is [cbse-2024]

10. A ball is thrown in the air so that t second after it is thrown. Its height h meter above starting point is given by the Polynomial $h = 25t - 5t^2$



Observe the graph of the polynomial and answer the question

- (i) Write the zeroes of the given polynomial
- (ii) Find the maximum height achieved by ball
- (iii) (a) After throwing upward, how much time did the ball take to reach to the height of 30m? OR
(b) Find the two different value of t when the height of the ball was 30m. [cbse-2024]

11. If a polynomial $p(x)$ is given by $p(x) = x^2 - 5x + 6$, then the value of $p(1) + p(4)$ is [cbse-2024]

12. (a) Find the zeroes of the Polynomial $4x^2 + 4x - 3$ and verify the relationship b/w zeroes and coefficients of the Polynomial

OR

(b) If α and β are the zeroes of the Polynomial $x^2 + x - 2$, then find the value of $\frac{\alpha}{\beta} + \frac{\beta}{\alpha}$ [cbse-2024]

13. If α and β are the zeroes of Polynomial $p(x) = kx^2 - 30x + 45k$, and $\alpha + \beta = \alpha\beta$, value of k is [cbse-2024]

14. If α, β are zeroes of the Polynomial $p(x) = 5x^2 - 6x + 1$ then find the value of $\alpha + \beta + \alpha\beta$ [cbse-2024]

15. If one zero of the polynomial $p(x) = 6x^2 + 37x - (k-2)$ is reciprocal of the other, then find the value of k [cbse-2023]