10 Class Math Tuition Assignment

Assignment – 2

Assigned To = All 10 Class Student

Note: All Questions are compulsory to attempt

Chapter = POLYNOMIALS

Submission Date = See on portal **MM = 30**

Q1. α and β are zeroes of the quadratic polynomial $x^2 - 6x + y$. Find the value of 'y' if $3\alpha + 2\beta = 20$.

Q2. If the zeroes of the polynomial $x^3 - 3x^2 + x + 1$ are a – b, a, a + b, then find the value of a and b.

Q3. **Obtain all other zeroes of $3x^4 + 6x^3 - 2x^2 - 10x - 5$, if two of its zeroes are $\sqrt{(5/3)}$ and $-\sqrt{(5/3)}$.**

Q4. **Find a quadratic polynomial whose zeroes are reciprocals of the zeroes of the polynomial $f(x) = ax^2 + bx + c$, $a \neq 0$, $c \neq 0$.**

Q5. Divide the polynomial $f(x) = 3x^2 - x^3 - 3x + 5$ by the polynomial $g(x) = x - 1 - x^2$ and verify the division algorithm.

Q6. For what value of k, is the polynomial $f(x) = 3x^4 - 9x^3 + x^2 + 15x + k$ completely divisible by $3x^2 - 5$?

Q7. If 4 is a zero of the cubic polynomial $x^3 - 3x^2 - 10x + 24$, find its other two zeroes.

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Q8. How many zeros does the polynomial $(x - 3)^2 - 4$ have? Also, find its zeroes.

Q9. Find the value of "x" in the polynomial $2a^2 + 2xa + 5a + 10$ if $(a + x)$ is one of its factors.

Q10. Compute the zeroes of the polynomial $4x^2 - 4x - 8$. Also, establish a relationship between the zeroes and coefficients.