Golden Days Universal School

Name:_____Roll no*:* ____

ASSIGNMENT 1

Class 10 - Mathematics (Polynomial)

Q.1) Find the zeroes of the quadratic polynomial $3x^2 – 2$ and verify the relationship between the zeroes and the coefficients.

Q.2) 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).

Q.3) If a polynomial $x^4 – 3x^3 – 6x^2 + kx – 16$ is exactly divisible by $x^2 – 3x+ 2$, then find the vaLue of k.

Q.4) Divide the polynomial $x^4 – 11 x^2 + 34x – 12$ by x – 2 and find the quotient and the remainder. Also verify the division algorithm.

Q.5) 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?

Q.6) Obtain all other zeroes of the polynomial $x^4 – 17x^2 – 36x – 20$, if two of its zeroes are + 5 and – 2.

Q.7) Divide the polynomial $x^4 – 9x^2 + 9$ by the polynomial x^2 -3x and verify the division algorithm.

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

Q.9) Obtain all the zeros of the polynomial $x^4 - 17 x^2 -36x -20$ if two of its zeros are 5 and -2.

Q.10) 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.

Q.11) Find the zeroes of the quadratic polynomial $9t^2-6t + 1$ and verify the relationship between the zeroes and the coefficients.

Q.12) When a polynomial $6x^4 + 8x^3 + 290x^2 + 21x + 7$ is divided by another polynomial $3x^2 + 4x + 1$ the remainder is in the form ax + b. Find a and b.

Q.13) Obtain all other zeroes of the polynomial $x^4 + 4x^3-2x^2-20x -15$ if two of its zeroes are $\sqrt{5}$ and $-\sqrt{5}$