



INDIAN LEARNERS OWN ACADEMY, KUWAIT

Class : IX	Subject : Mathematics
Assignment by : Mrs. Nusrat Unnisa	Topic / Lesson : Polynomials

2nd Assignment Questions:-

- 1) Define polynomial, degree of a polynomial and give one example of a polynomial of degree 3.
- 2) Write about the following polynomials with an example
 - i) Linear polynomial
 - ii) quadratic polynomial
 - iii) Cubic polynomial
- 3) Give one example of a monomial of degree 7 and binomial of degree 9.
- 4) Find the value of the polynomial $P(x) = x^3 + x - 3 - 3x^2$ at $x = 0, 1, 2, 3$.
- 5) Verify whether the following are zeroes of the polynomial, indicated against them
 - i) $P(x) = x^3 - x^2 - x + 1$; $x = 1, 3$
 - ii) $P(x) = x^2 + 2x - 8$; $x = -4$
 - iii) $P(x) = 3x + 7$; $x = -\frac{7}{3}$
- 6) Define i) Remainder theorem ii) Factor theorem
- 7) Divide the polynomials
 - i) $2x^3 + x^2 - 2x - 1$ by $(x - 1)$
 - ii) $x^4 - 3x^2 + 2x + 1$ by $(x - 1)$
 - iii) $5x^3 + 5x^2 - 6x + 9$ by $(x + 3)$
 - iv) $3x^3 - 16x^2 - 5x + 50$ by $(x - 5)$
- 8) Find the remainder by using remainder theorem when $P(x) = x^3 - 2x^2 + x - 2$ is divided by i) $(x - 2)$ ii) $(x - 1)$
- 9) By using remainder theorem, show that $g(x)$ is a factor of $f(x)$, given
 $f(x) = x^3 - x^2 + 11x + 69$, $g(x) = x + 3$
- 10) Factorise $12x^2 - 7x + 1$ by splitting middle term and also by using factor theorem.
- 11) Factorise i) $x^3 - 3x^2 - 9x - 5$ ii) $x^3 + 13x^2 + 32x + 20$
- 12) Use suitable identities to evaluate the following:
 - i) $(x^2 + 4)(x^2 + 9)$
 - ii) $(x + 2y + 4z)^2$
 - iii) $(\frac{x}{3} - \frac{2y}{3})^3$
 - iv) $(x - \frac{2y}{3})^3$