

Class 9th Chapter 2- Polynomials

Time: 1 Hour Marks: 30

Q.1 Give an example of a monomial and a binomial having degrees of 82 and 99, respectively.

Q.2 If $x^2 + \frac{1}{x^2} = 27$, find the values of each of the following: $x + \frac{1}{x}$

Q.3 If $x + y = 12$ and $xy = 32$, Find the value of $x^2 + y^2$.

Q.4 Using factor theorem, factorize each of the following polynomials:

$$x^3 - 6x^2 + 3x + 10$$

Q.5. Find the value of k, if $(x - 1)$ is a factor of $4x^3 + 3x^2 - 4x + k$,

Q.6 Factorise:

A) $2y^3 - 4y^2 - 2y + 4$

B) $2x^2 + 7x + 3$

C) $x^3 + 13x^2 + 32x + 20$

Q.7 Using the Factor Theorem to determine whether $g(x)$ is a factor of $p(x)$ in the following case

(i) $p(x) = 2x^3 + x^2 - 2x - 1$, $g(x) = x + 1$

Q.8 Compute the perimeter of a rectangle whose area is $25x^2 - 35x + 12$.

Q.9 Use suitable identities to find the following products:

$$(x + 4)(x + 10) \text{ (ii)}$$

$$(y^2 + \frac{3}{2})(y^2 - \frac{3}{2})$$

Evaluate the following products without multiplying directly:

Q.10 (i) 103×107 (ii) 95×96 (iii) 104×96 .

