

Class- IX Maths Chapter-2 Polynomials
Assignment - 2

Part-1

Q.1- Which of the following expressions are polynomials?

In case of a polynomial, write its degree.

~~Q.2~~ (i) $x^5 - 2x^3 + x + \sqrt{3}$ (ii) $t^2 - \frac{2}{5}t + \sqrt{5}$

(iii) $x^{-2} + 2x^{-1} + 3$ (iv) $\frac{x^2}{2} - \frac{2}{x^2}$ (v) $\frac{3x^4 - 7x^2 - 5x}{2x}$

(vi) $-\frac{3}{5}$ (vi) $2x^3 + 3x^2 + \sqrt{x} - 1$ (vii) $x^{-2}(x^4 + x^2)$

Q.2- Identify constant, linear, quadratic, cubic and biquadratic (quartic) polynomials from the following.

(i) $6y$ (ii) $1 - y - y^3$ (iii) $x - x^3 + x^4$ (iv) $-6x^2$ (v) -13

Q.3- Write the coefficient of x , x^2 , x^3 and constant term of $7x^4 - ax^3 - 6x - d$.

Q.4- Give an example of a monomial, binomial, trinomial of degree 100, 50 and 30 respectively.

Q.5- Rewrite each of the following polynomials in standard form.

(i) $x - 2x^2 + 8 + 5x^3$ (ii) $\frac{2}{3} + 4y^2 - 3y + 2y^3$

(iii) $6z^3 + 2x - x^5 - 3x^2$ (iv) $2 + t - 3t^3 + t^4 - t^2$

Q.6- Find a zero of the polynomial $P(y) = py + q$, $p \neq 0$ and p, q are real numbers.

Q.7- If $P(x) = x + 3$ then find $P(x) + P(-x)$.

Q.8- If 2 and 0 are the zeros of the polynomial $f(x) = 2x^3 - 5x^2 + ax + b$ then find the values of a and b .

Class-IX Maths Ch-2 Polynomials Assignment-2 Part-2

Q.9- If $P(x) = x^3 + x^2 - 9x - 9$, find $P(0)$, $P(3)$, $P(-3)$ and $P(-1)$. What do you conclude about the zeros of $P(x)$?
~~Is~~ ^{Is} 0 a zero of $P(x)$?

Q.10- Verify that 2 and -3 are the zeros of the polynomial $Q(x) = x^2 + x - 6$

Q.11- Give ~~and~~ an example of constant and zero polynomial.

Q.12 Write degree of

(i) $(7y - 3y^2 - 4y)(2y - 3)$

(ii)
$$\frac{7\sqrt{x} - 3y^{\frac{7}{2}} - 6y^{\frac{5}{2}}}{2\sqrt{x}}$$

(iii)
$$\frac{6z^3 - 4z^7 - 6z^2}{3z^2}$$