

CLASS IX- MATHEMATICS

POLYNOMIALS

ASSIGNMENT-1

MULTIPLE CHOICE QUESTION - 1.1

- The product of $(x + a)(x + b)$ is :
(A) $x^2 + (a + b)x + ab$ (B) $x^2 - (a - b)x + ab$ (C) $a^2 + (a - b)x + ab$ (D) $x^2 + (a - b)x - ab$.
- The value of 150×98 is :
(A) 10047 (B) 14800 (C) 14700 (D) 10470
- The expansion of $(x + y - z)^2$ is :
(A) $x^2 + y^2 + z^2 + 2xy + 2yz + 2zx$ (B) $x^2 + y^2 - z^2 - 2xy + yz + 2zx$
(C) $x^2 + y^2 + z^2 + 2xy - 2yz - 2zx$ (D) $x^2 + y^2 - z^2 + 2zy - 2yz - 2zx$
- The value of $(x + 2y + 2z)^2 + (x - 2y - 2z)^2$ is:
(A) $2x^2 + 8y^2 + 8z^2$ (B) $2x^2 + 8y^2 + 8z^2 + 8xyz$
(C) $2x^2 + 8y^2 + 8z^2 - 8yz$ (D) $2x^2 + 8y^2 + 8z^2 + 16yz$
- The value of $25x^2 + 16y^2 + 40xy$ at $x = 1$ and $y = -1$ is :
(A) 81 (B) -49 (C) 1 (D) None of these
- On simplifying $(a + b)^3 + (a - b)^3 + 6a(a^2 - b^2)$ we get :
(A) $8a^2$ (B) $8a^2b$ (C) $8a^3b$ (D) $8a^3$
- Find the value of $\frac{a^3 + b^3 + c^3 - 3abc}{ab + bc + ca - a^2 - b^2 - c^2}$, when $a = -5, b = -6, c = 10$.
(A) 1 (B) -1 (C) 2 (D) -2
- If $(x + y + z) = 1, xy + yz + zx = -1, xyz = -1$ then value of $x^3 + y^3 + z^3$ is :
(A) -1 (B) 1 (C) 2 (D) -2
- In method of factorisation of an algebraic expression. Which of the following statement is false ?
(A) Taking out a common factor from two or more terms.
(B) Taking out a common factor from a group of terms.
(C) By using remainder theorem.
(D) By using standard identities.
- Factors of $(a + b)^3 - (a - b)^3$ is :
(A) $2ab(3a^2 + b^2)$ (B) $ab(3a^2 + b^2)$ (C) $2b(3a^2 + b^2)$ (D) $3a^2 + b^2$
- Degree of zero polynomial is :
(A) 0 (B) 1 (C) Both 0 & 1 (D) Not defined

SUBJECTIVE QUESTION 1.2

- If $a^4 + \frac{1}{a^4} = 119$, then find the value of $-\frac{1}{a^3}$.
- If $x = 152$, $y = -91$ find the value of $9x^2 + 30xy + 25y^2$.
- Evaluate :
 - $(5x + 4y)^2$
 - $(4x - 5y)^2$
 - $\left(2x - \frac{1}{x}\right)^2$
- If $x + y = 3$ and $xy = -18$, find the value of $x^3 + y^3$.
- If $x^2 + \frac{1}{x^2} = 51$ find the value of $x^3 - \frac{1}{x^3}$.
- Evaluate :
 - $25^3 - 75^3 + 50^3$
 - $\left(\frac{1}{2}\right)^3 + \left(\frac{1}{3}\right)^3 - \left(\frac{5}{6}\right)^3$
 - $(0.2)^3 - (0.3)^3 + (0.1)^3$
- Find the product of :
 - $(x + 4)(x + 7)$
 - $\left(x + \frac{1}{5}\right)(x + 5)$
 - $(P^2 + 16)\left(P^2 - \frac{1}{4}\right)$
- Evaluate :
 - 102×106
 - 994×1006
 - 34×36
- Factorise : $4x^4 + (7a)^4$.
- Factorise : $x^{12} = 1$.
- Evaluate $\frac{(a-b)^2}{(b-c)(c-a)} + \frac{(b-c)^2}{(a-b)(c-a)} + \frac{(c-a)^2}{(a-b)(b-c)}$.
- Write the following polynomials in standard forms :
 - $x^6 - 3a^4 + \sqrt{2}x + 5x^2 + 7x^5 + 4$
 - $m^7 + 8m^5 + 4m^6 + 6m - 3m^2 - 11$
- Factorise : $(x + 1)(x + 2)(x + 3)(x + 4) - 3$.
- Factorise : $64a^3 - 27b^3 - 144a^2b + 108ab^2$.
- Factorise : $x^4 + 2x^3y - 2xy^3 - y^4$.