

Board – ICSE

Class – 7th

Topic – Algebraic Expression

1. Divide:

(i) $x^6 + 7x^5 - 5x^4$ by x^2 $[x^4 + 7x^3 - 5x^2]$

(ii) $a^2 + ab - ac$ by $-a$ $[-a - b + c]$

2. Find the quotient

(i) $a^3 - a^2b - a^2b^2$ by a^2 $[a - b - b^2]$

(ii) $4m^4n^4 - 8m^3n^4 + 6mn^3$ by $-2mn$ $[2m^3n^3 + 4m^2n^3 - 3n^2]$

3. Divide a polynomial by a monomial:

(i) $(m^2 - 2mn) \div m$ $[m - 2n]$

(ii) $(z^3 - 3z^2 + z) \div z$ $[z^2 - 3z + 1]$

(iii) $(k^6 - 7k^5 + 4k^4) \div k^2$ $[k^4 - 7k^3 + 4k^2]$

(iv) $(10y^7 - 8y^6 + 3y^4) \div y^3$ $[10y^4 - 8y^3 + 3y]$

4. Simplify: $(5 - x)(6 - 5x)(2 - x)$. $[-5x^3 + 41x^2 - 92x + 60]$

5. The area of a rectangle is $6x^2 - 4xy - 10y^2$ square unit and its length is $2x + 2y$ unit. Find its breadth. $[x^2 - 7x - 7]$

6. Evaluate: $(2x - 5y)(3x + 7y)(8x - 9y)$ $[48x^3 - 62x^2y - 271xy^2 + 315y^3]$

7. The sides of a triangle are $x^2 - 3xy + 8$, $4x^2 + 5xy - 3$ and $6 - 3x^2 + 4xy$. Find its perimeter. $[2x^2 + 6xy + 11]$

8. Take away $-3x^3 + 4x^2 - 5x + 6$ from $3x^3 - 4x^2 + 5x - 6$ $[6x^3 - 8x^2 + 10x - 12]$

9. How much smaller is $15x - 18y + 19z$ than $22x - 20y - 13z + 26$? $[7x - 2y - 32z + 26]$

10. Find the value of $(3x^3) \times (-5xy^2) \times (2x^2yz^3)$ for $x = 1$, $y = 2$ and $z = 3$. $[-6480]$