Suresh Angadi Education Foundation's

Angadi International School

(Affiliated CBSE, New Delhi)

Worksheet - Polynomials (2025-26)

Grade: IX

Section A – Multiple Choice Questions.

1. The degree of the polynomial $5x^3 + 2x^2 - 7x + 4$ is:
(a) 1 (b) 2 (c) 3 (d) 4

2. Which of the following is not a polynomial?
(a) $x^2 + \sqrt{2}$ (b) $x^3 - 2x + 1$ (c) $2/x + 3$ (d) $x^4 + 5$

3. If $x - 2$ is a factor of $x^2 - 5x + k$, then the value of k is:
(a) –10 (b) 10 (c) 4 (d) –4

4. The zeroes of the polynomial $x^2 - 7x + 10$ are:
(a) 2, 5 (b) –2, –5 (c) 7, 10 (d) –7, –10

5. The remainder when $x^3 + 3x^2 + 3x + 1$ is divided by $(x + 1)$ is:
(a) 0 (b) 1 (c) –1 (d) 3

Section B – Short Answer Questions

1. Find the remainder when $x^3 + 2x^2 - 3x + 1$ is divided by $(x - 1)$.

2. If one zero of the polynomial $x^2 + 3x + k$ is –2, find the value of k.

3. Divide $x^3 - 3x^2 + 5x - 3$ by $(x - 1)$ and verify the division algorithm.

4. Find the zeroes of the polynomial $x^2 - 2x - 15$ and verify the relationship between the zeroes and coefficients.

5. If two of the zeroes of the polynomial $x^3 - 3x^2 - 4x + 12$ are $\sqrt{3}$ and $-\sqrt{3}$, find the third zero.

Section C – Long Answer Questions

1. If α and β are the zeroes of the polynomial $p(x) = 6x^2 - 7x - 3$, verify the relationship between the zeroes and coefficients.

2. Construct a quadratic polynomial whose zeroes are 2 and –5. Verify by expanding.

3. If two of the zeroes of the cubic polynomial $x^3 - 3x^2 - x + 3$ are –1 and –3, find the third zero and factorise the polynomial completely.4. Solve: A cubic polynomial has zeroes –2, 1 and 3. Form the polynomial and verify the division algorithm.