1. Which of the following is a quadratic polynomial?

A. $2x + 3$ B. $x^3 - x$

C. $x^2 - 4x + 3$ D. $3z + 2$ (C)

Explanation : A quadratic polynomial is of the form $ax^2 + bx + c$ with $a \neq 0$. Option C matches this form.

2. What is the degree of the polynomial $5x^3 - 4x^2 + x - 2$?

A. 1 B. 2

C. 3 D. 4 (C)

Explanation : The degree of a polynomial is the highest power of the variable. Here, the highest power is 3.

3. The value of $p(x) = x^2 - 3x - 4$ at $x = 2$ is :

A. 0 B. −6

C. 2 D. 6 (B)

Explanation : $p(2) = 2^2 - 3\times2 - 4 = 4 - 6 - 4 = -6$.

4. What is the zero of the linear polynomial $p(x) = 2x + 3$?

A. −3 B. 3

C. −3/2 D. 3/2 (C)

Explanation : Zero is found by solving $2x + 3 = 0 \rightarrow x = -3/2$.

5. Which polynomial's graph intersects the x-axis at two distinct points?

A. $x^2 - 3x - 4$ B. $x^2 + 1$

C. $(x - 2)^2$ D. $x^2 + 4x + 4$ (A)

Explanation : $x^2 - 3x - 4 = (x + 1)(x - 4)$; its graph cuts x-axis at −1 and 4.

6. How many zeroes can a cubic polynomial have at most?

A. 1 B. 2

C. 3 D. 4 (C)

Explanation : A polynomial of degree 3 can intersect the x-axis at most at 3 points.

7. The zeroes of $x^2 + 7x + 10$ are :

A. −2 and −5 B. 2 and −5

C. −2 and 5 D. 2 and 5 (A)

Explanation : $x^2 + 7x + 10 = (x + 2)(x + 5)$; zeroes are −2 and −5.

8. For the polynomial $2x^2 - 8x + 6$, sum of zeroes is:

A. 4 B. 3

C. −4 D. −3 (A)

Explanation : Sum = −(coefficient of x)/(coefficient of x^2) = −(−8)/2 = 4.

9. If α, β, γ are zeroes of $a^3 + b^2 + cx + d$, then $\alpha + \beta + \gamma$ equals :

A. b/a B. −b/a

C. −c/a D. d/a (B)

Explanation : Sum of zeroes of a cubic polynomial is −(coefficient of x^2)/a = −b/a.

10. What is the value of the product of zeroes of $p(x) = x^2 - 3$?

A. −3 B. 3

C. 0 D. −1 (A)

Explanation : Product = constant term / coefficient of $x^2 = -3 / 1 = -3$.