

Mathematics
Practice Test Paper 1
(Chapter 2: Polynomials)
Class X | 2026-27

Time Allowed: 45 Minutes

Maximum Marks: 25

General Instructions

1. All 13 questions are compulsory. The paper has four sections: A, B, C and D.
2. Section A - 5 marks; Section B - 8 marks; Section C - 9 marks; Section D - 3 marks.
3. Choose one correct option in Section A. Show the necessary steps and reasoning in Sections B, C and D.
4. Use algebraic methods where required. Use of calculators is not allowed.

SECTION A

(5 questions $\times$ 1 mark = 5 marks)

1. The degree of $7x^3 - 2x^2 + x - 5$ is:

- | | |
|-------|-------|
| (A) 1 | (B) 2 |
| (C) 3 | (D) 7 |

2. The zero of $3x - 12$ is:

- | | |
|--------|-------|
| (A) -4 | (B) 0 |
| (C) 3 | (D) 4 |

3. The sum of the zeroes of $2x^2 - 5x + 3$ is:

- (A) $-\frac{5}{2}$
- (B) $\frac{5}{2}$
- (C) $\frac{3}{2}$
- (D) $-\frac{3}{2}$

4. The product of the zeroes of $x^2 + 4x - 12$ is:

- | | |
|--------|---------|
| (A) 4 | (B) -4 |
| (C) 12 | (D) -12 |

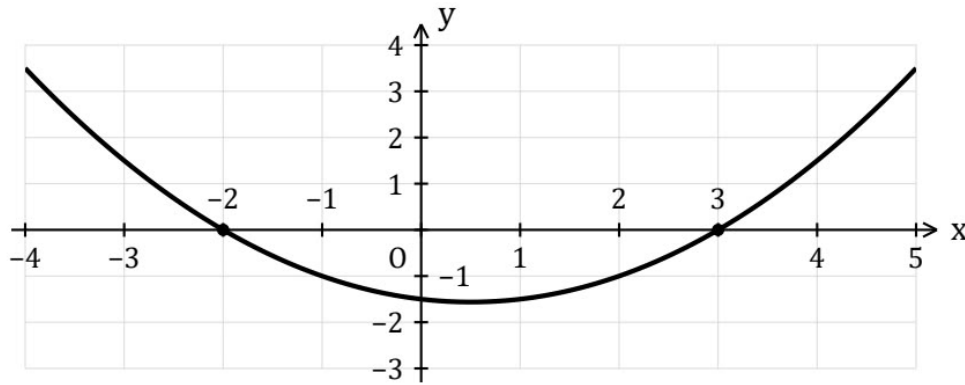
5. Which number is a zero of $x^2 - 5x + 6$?

- | | |
|-------|-------|
| (A) 1 | (B) 2 |
| (C) 4 | (D) 5 |

SECTION B

(4 questions $\times$ 2 marks = 8 marks)

6. Find a quadratic polynomial whose zeroes have sum $\frac{1}{4}$ and product -1 .
7. One zero of $x^2 + 3x + k$ is 2. Find k and the other zero.
8. If α and β are zeroes of $x^2 - 6x + 8$, find $\alpha^2 + \beta^2$ without finding α and β separately.
9. Use the graph below to state the number of distinct real zeroes and write the zeroes.



SECTION C

(3 questions $\times$ 3 marks = 9 marks)

10. Find the zeroes of $x^2 - 2x - 8$ and verify both relationships between the zeroes and the coefficients.
11. If α and β are zeroes of $2x^2 - 7x + 3$, form a quadratic with zeroes $\frac{1}{\alpha}$ and $\frac{1}{\beta}$.
12. The zeroes of a quadratic polynomial are in the ratio 2 : 3 and their sum is 15. Find the zeroes and one such polynomial.

SECTION D

(Application Based Question - 3 marks)

13. A dolphin's height above water is modelled by $h(t) = 20t - 16t^2$ centimetres, t seconds after it leaves the water.
- (i) Find the zeroes of $h(t)$.
- (ii) After how many seconds does the dolphin return to water level?
- (iii) Find its modelled height at $t = 1$ second.