

PRINCIPAL SAAB
Periodic Assessment 1 (PA-1) — Sample Paper
Class X | Mathematics (041) | Periodic Assessment 1 | Session 2026-27

Time: 40 minutes | Maximum Marks: 25 | Question Paper

PA-1 is the very first periodic test of the session, and the 10 marks of internal assessment are built on it. This 25-mark practice paper covers Chapters 1, 2 and 3 of CBSE Class 10 Maths: Real Numbers, Polynomials, and Pair of Linear Equations in Two Variables. All the questions are original, and every answer has been solved step by step.

Periodic Assessment pattern — school pattern se thoda alag ho sakta hai. Every question carries its chapter tag: [Ch 1], [Ch 2] or [Ch 3]. If your school has kept only Chapters 1 and 2 for PA-1, skip the [Ch 3] questions — the rest of the paper will work exactly as it is.

General Instructions

- Time: 40 minutes | Maximum Marks: 25
- Chapter coverage: Ch 1 Real Numbers (7 marks), Ch 2 Polynomials (9 marks), Ch 3 Pair of Linear Equations in Two Variables (9 marks).
- The paper has four sections — A (5 × 1 mark), B (4 × 2 marks), C (3 × 3 marks), D (1 case-study of 3 marks).
- All questions are compulsory. There is no internal choice.
- The use of a calculator is not allowed.
- Keep a separate page for rough work, and always write the working along with the final answer — in a PA you get marks for the steps as well.

Section A — Multiple Choice Questions (5 × 1 = 5 marks)

- Q1. [Ch 1] Two positive integers a and b are written as $a = p^3q^2$ and $b = pq^3$, where p and q are two different prime numbers. What is $\text{HCF}(a, b)$? (A) pq^2 (B) p^3q^3 (C) pq^3 (D) p^3q^2
- Q2. [Ch 1] If $\text{HCF}(96, 404) = 4$, then what is $\text{LCM}(96, 404)$? (A) 9696 (B) 4848 (C) 19392 (D) 2424
- Q3. [Ch 2] One zero of the quadratic polynomial $x^2 - 5x + k$ is 2. Then the value of k is: (A) 4 (B) 6 (C) -6 (D) 10
- Q4. [Ch 2] The graph of a quadratic polynomial $p(x)$ meets the x -axis at exactly one point. Then $p(x)$ has: (A) no zeroes (B) two different zeroes (C) two equal zeroes (D) three zeroes
- Q5. [Ch 3] The pair of linear equations $2x + 3y = 7$ and $4x + 6y = 5$ has: (A) exactly one solution (B) infinitely many solutions (C) no solution (D) exactly two solutions

Section B — Very Short Answer (4 × 2 = 8 marks)

- Q6. [Ch 1] Using prime factorisation, find the HCF and the LCM of 90 and 144. Verify your answer using $\text{HCF} \times \text{LCM} = \text{first number} \times \text{second number}$.
- Q7. [Ch 2] Find the zeroes of the polynomial $p(x) = x^2 - 2x - 15$ and verify the relationship between the zeroes and the coefficients.
- Q8. [Ch 3] Solve by the substitution method: $x + 2y = 8$ and $2x - y = 1$.
- Q9. [Ch 2] If α and β are the zeroes of the polynomial $2x^2 - 7x + 3$, find the value of $1/\alpha + 1/\beta$.

Section C — Short Answer (3 × 3 = 9 marks)

- Q10. [Ch 1] Prove that $5 - 2\sqrt{3}$ is an irrational number. (You may assume that $\sqrt{3}$ is irrational.)
- Q11. [Ch 3] The sum of the digits of a two-digit number is 11. If the digits are interchanged, the new number is 27 more than the original number. Find the original number.
- Q12. [Ch 2] Form a quadratic polynomial whose zeroes are $3 + \sqrt{2}$ and $3 - \sqrt{2}$. After that, also find the sum of the squares of its zeroes.

Section D — Case Study / Application (1 × 3 = 3 marks)

- Q13. [Ch 3] A stationery shop sells notebooks and pens, both at a fixed rate. Riya paid ₹240 for 3 notebooks and 4 pens. At the same shop, Mohit paid ₹330 for 5 notebooks and 2 pens. Let the price of one notebook be ₹ x and the price of one pen be ₹ y .
- (i) Using the given information, write the pair of linear equations. (1)
 - (ii) Find the price of one notebook and one pen. (1)
 - (iii) What will be the total cost of 2 notebooks and 5 pens? (1)

Apna Score Kaise Padhein

- 20–25: all three chapters are strong. Now move ahead to the PA-2 chapters.
- 14–19: the concepts are fine, but calculation slips are happening. Solve every wrong question again, without looking at the answer.

- Below 13: first read the notes of the chapter where you lost the most marks, then take this paper again after 3 days.

More chapter-wise tests and unit test papers are available here: [Unit Test & Practice Paper Hub](#).

Kaizen: the whole syllabus will not improve in one day. Today, solve again just that one question you got wrong — without looking at the answer. One small improvement every day, and by PA-1 the difference will be clearly visible.

□ Chapter notes for this paper: [Real Numbers](#) · [Polynomials](#) · [Pair of Linear Equations](#)