

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**

This is an original PA 1 practice paper for CBSE Class 10 Mathematics (Standard), session 2026-27, built for schools whose first Periodic Assessment covers Chapters 1 to 4 — Real Numbers, Polynomials, Pair of Linear Equations in Two Variables and Quadratic Equations. It carries 25 marks and is designed to be finished in 40 minutes.

Periodic Assessment pattern — school pattern se thoda alag ho sakta hai. Every question below carries a chapter tag such as [Ch 3]. If your school has only covered up to Chapter 2 or Chapter 3, skip the questions tagged beyond your syllabus and adjust your total accordingly.

Before you start

- Maximum marks: 25
- Time allowed: 40 minutes
- Chapters covered: Chapter 1 (Real Numbers), Chapter 2 (Polynomials), Chapter 3 (Pair of Linear Equations in Two Variables), Chapter 4 (Quadratic Equations)
- Sections: A — 5 MCQs of 1 mark; B — 4 questions of 2 marks; C — 3 questions of 3 marks; D — 1 case-based question of 3 marks
- All questions are compulsory. Calculators are not allowed. Sit with a timer and write the full working, exactly as you would in the real assessment.

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

- Q1. [Ch 1] Two positive integers are written as $a = x^4y^2$ and $b = x^2y^3$, where x and y are distinct prime numbers. The LCM of a and b is: (A) x^2y^2 (B) x^4y^3 (C) x^6y^5 (D) x^2y^3
- Q2. [Ch 2] If 3 is a zero of the polynomial $p(x) = x^2 - 7x + k$, then the value of k is: (A) 10 (B) 12 (C) -12 (D) 4
- Q3. [Ch 3] The pair of linear equations $3x - y = 5$ and $6x - 2y = 11$ has: (A) a unique solution (B) exactly two solutions (C) infinitely many solutions (D) no solution
- Q4. [Ch 4] The quadratic equation $4x^2 - kx + 9 = 0$ has two equal real roots when k equals: (A) 6 only (B) 12 only (C) ± 12 (D) ± 6
- Q5. [Ch 1] The HCF of two numbers is 9 and their LCM is 360. If one of the numbers is 45, the other number is: (A) 72 (B) 80 (C) 90 (D) 63

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

- Q6. [Ch 1] Prove that $5 + 2\sqrt{3}$ is an irrational number. (You may assume that $\sqrt{3}$ is irrational.)
- Q7. [Ch 2] Write a quadratic polynomial whose sum of zeroes is -5 and product of zeroes is 6. Also find its zeroes.
- Q8. [Ch 3] Solve the following pair of equations by the elimination method: $2x + 3y = 13$ and $3x - y = 3$.
- Q9. [Ch 4] Find the roots of the quadratic equation $2x^2 - 7x + 3 = 0$ by the factorisation method.

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

- Q10. [Ch 1] Three bells in a school ring at intervals of 9 minutes, 12 minutes and 15 minutes respectively. All three ring together at 7:00 a.m. At what time will they next ring together? Show your working.
- Q11. [Ch 2] If α and β are the zeroes of the polynomial $p(x) = 2x^2 - 5x + 1$, find the value of (i) $\alpha + \beta$, (ii) $\alpha\beta$, and (iii) $1/\alpha + 1/\beta$.
- Q12. [Ch 3] The sum of the present ages of a father and his son is 45 years. Five years ago, the father was six times as old as his son. Find their present ages.

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

- Q13. [Ch 4] A school is planning a rectangular vegetable garden in one corner of its playground. The gardener is told that the length of the plot must be 3 metres more than twice its breadth, and the plot must have an area of 90 square metres. Let the breadth of the plot be x metres. (i) Form a quadratic equation in x from the information given. (1)(ii) Solve the equation and state the breadth and the length of the plot in metres. (2)

Apna Score Kaise Padhein

- 21-25: Chapters 1 to 4 are solid. Move on to timed mixed practice.
- 16-20: Good base. Look at which chapter tag your lost marks came from and revise only that chapter.
- 11-15: The methods are known but the working is slipping. Redo Sections B and C without looking at the key.
- Below 11: Go back to the chapter notes first, then attempt this paper again after two days.

Looking for more assessment practice? The Unit Test and PA practice hub collects every chapter test and Periodic Assessment

paper on the site, class by class.

Kaizen note: one paper attempted honestly under a timer teaches more than ten papers read with the answer key open.
Improve by one mark at a time.

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