

Mathematics

Practice Test Paper 3

(Chapter 3: Pair of Linear Equations in Two Variables)

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. If eliminating the variables from a pair produces $0 = 7$, the pair has:
(A) exactly seven solutions
(B) one solution
(C) infinitely many solutions
(D) no solution
2. Which equation represents the same line as $2x - 5y = 9$?
(A) $4x - 10y = 9$
(B) $6x - 15y = 27$
(C) $2x + 5y = 9$
(D) $4x - 5y = 18$
3. The pair $y = x$ and $y = -x$ has solution:
(A) (0, 0) (B) (1, 1)
(C) (-1, 1) (D) (1, -1)
4. A larger number x is 18 more than a smaller number y . Which equation models this?
(A) $x + y = 18$ (B) $y - x = 18$
(C) $x - y = 18$ (D) $18x = y$
5. Adding $5x + 2y = 17$ and $-5x + 3y = 8$ eliminates:
(A) y only (B) x only
(C) both variables (D) neither variable

SECTION B

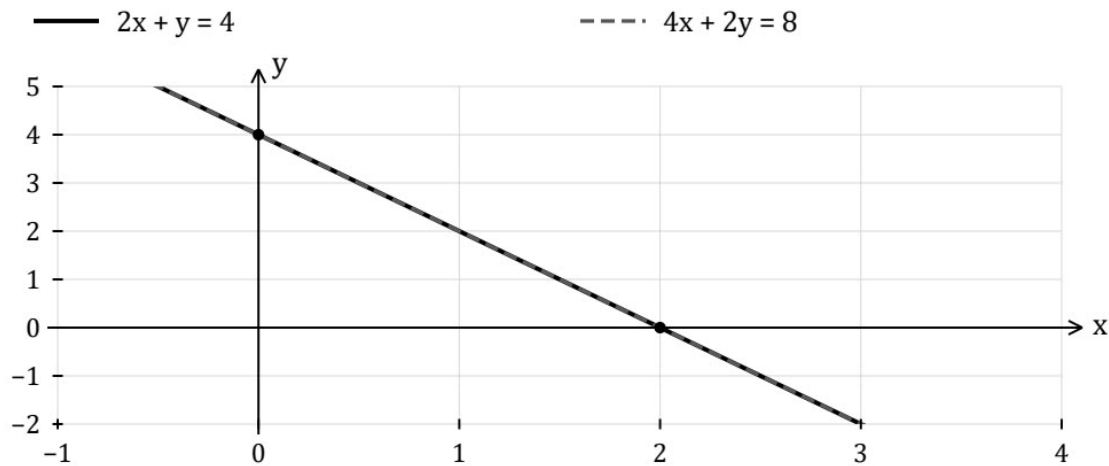
(4 questions $\times$ 2 marks = 8 marks)

6. Solve $\frac{1}{5}x + \frac{3}{10}y = \frac{13}{10}$ and $\frac{2}{5}x + \frac{1}{2}y = \frac{23}{10}$ by elimination.

7. Find c so that $cx + 3y + 3 - c = 0$ and $12x + cy - c = 0$ have infinitely many solutions.

8. Write one equation which, paired with $3x + 2y = 12$, gives intersecting lines, and another which gives parallel lines. Justify your choices.

9. The two plotted lines coincide. Give two common solutions and state the total number of solutions.



SECTION C

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

10. Half the perimeter of a rectangular garden is 36 m. Its length is 4 m more than its width. Form a pair of equations and find the dimensions.

11. Pinky attempted every question. She scored 40 with +3 marks per correct answer and -1 per wrong answer. With +4 per correct answer and -2 per wrong answer, she would again score 40. How many questions were there?

12. Determine m and n if $(2, -1)$ satisfies both $mx + ny = 7$ and $nx - my = 4$.

SECTION D

(Application Based Question - 3 marks)

13. Library membership costs ₹ x plus ₹ y per book borrowed. The totals for four and nine books are ₹110 and ₹185, respectively.

(i) Form the equations.

(ii) Find the charge per book.

(iii) Find the total charge for 12 books.