

Mathematics

Practice Test Paper 10

(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. A pair of linear equations in two variables can never have exactly:

- (A) zero solutions
- (B) one solution
- (C) two solutions
- (D) infinitely many solutions

2. Which point satisfies $3x + y = 1$ and $x - y = -5$?

- (A) $(-1, 4)$
- (B) $(1, -4)$
- (C) $(4, -1)$
- (D) $(-4, 1)$

3. For $2x - 3y = 7$, a correct expression for x is:

- (A) $\frac{7 - 3y}{2}$
- (B) $7 + 3y$
- (C) $\frac{3y - 7}{2}$
- (D) $\frac{7 + 3y}{2}$

4. To eliminate x from $3x + 2y = 11$ and $5x - 4y = 1$, multiply the equations respectively by:

- (A) 2 and 4
- (B) 5 and 3
- (C) 3 and 5
- (D) 4 and 2

5. For the pair $2x + y = 4$, $6x + 3y = k$ to be dependent, k must equal:

- (A) 4
- (B) 8
- (C) 12
- (D) 24

SECTION B

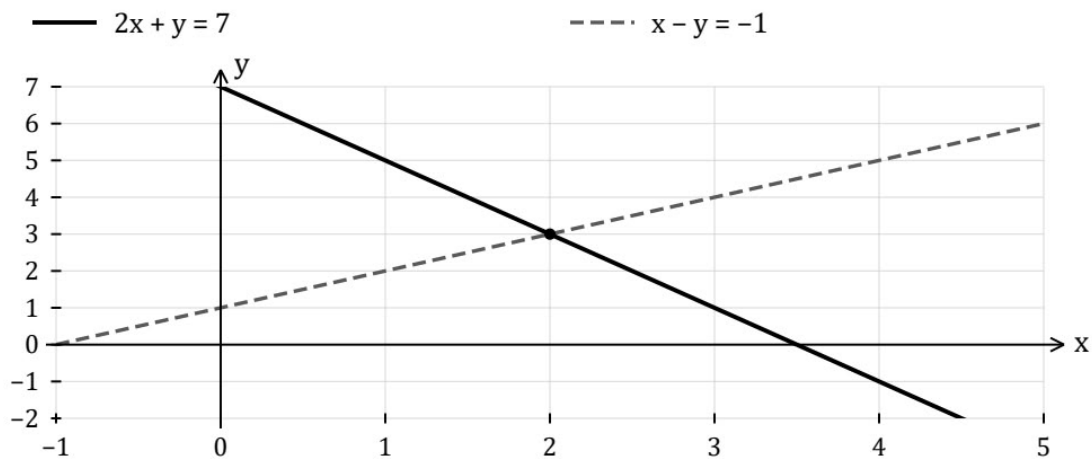
(4 questions $\times$ 2 marks = 8 marks)

6. Solve $7x - 15y = 2$ and $x + 2y = 3$ by substitution.

7. Can any real p make $x + y = 3$ and $3x + py = 9$ inconsistent? Justify your answer.

8. A student multiplies $2x + y = 5$ by 3 and writes $6x + y = 15$. Explain the error using $(2, 1)$, and write the correct equation.

9. Read the common solution from the graph. Hence find $2x - y$.



SECTION C

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

10. A lending library charges a fixed amount for the first three days and an extra amount per day thereafter. A seven-day loan costs ₹27 and a five-day loan costs ₹21. Find both charges.

11. A reserved full-fare railway ticket costs ₹2530. One such full ticket and one reserved half-fare ticket together cost ₹3810. The reservation charge is the same for either ticket. Find the full fare before reservation and the reservation charge.

12. Solve $7x + 5y = 31$ and $5x + 7y = 29$ by adding and subtracting them. Hence find $x^2 - y^2$.

SECTION D

(Application Based Question - 3 marks)

13. For a science activity, two resistors and three bulbs cost ₹104. Five resistors and two bulbs cost ₹128. Let one resistor cost ₹ x and one bulb cost ₹ y .

(i) Form the two equations.

(ii) Find the price of one bulb.

(iii) Find the cost of four resistors and one bulb.