

Mathematics

Practice Test Paper 5

(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 dependent pair of linear equations is always:

- (A) inconsistent
- (B) consistent
- (C) uniquely solvable
- (D) represented by distinct parallel lines

2. Which operation eliminates y from $3x + 4y = 19$ and $5x - 4y = 13$?

- (A) Subtract the second from the first
- (B) Multiply the equations
- (C) Add the equations
- (D) Divide the equations

3. If $x = 3m - 1$, $y = 4$ satisfies $x + y = 6$, m is:

- (A) 1
- (B) 2
- (C) 3
- (D) 0

4. Which equation paired with $x - 2y = 7$ gives distinct parallel lines?

- (A) $2x - 4y = 14$
- (B) $x + 2y = 7$
- (C) $2x + y = 3$
- (D) $2x - 4y = 9$

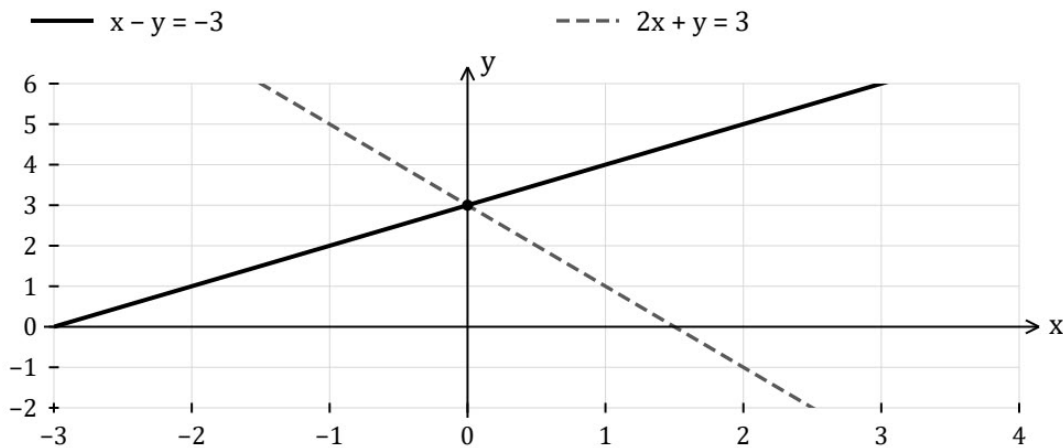
5. Three chairs at ₹ x each and one table at ₹ y cost ₹900. Five chairs and three tables cost ₹2100. The correct equations are:

- (A) $x + 3y = 900$, $3x + 5y = 2100$
- (B) $3x + y = 900$, $5x + 3y = 2100$
- (C) $3x + y = 2100$, $5x + 3y = 900$
- (D) $3x - y = 900$, $5x - 3y = 2100$

SECTION B

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

6. Solve $\frac{3}{2}x - \frac{5}{3}y = -2$ and $\frac{1}{3}x + \frac{1}{2}y = \frac{13}{6}$ by elimination.
7. For which values of k do $3x + 2y = -5$ and $x - ky = 2$ have a unique solution?
8. A student subtracts $x - y = 4$ from $2x + y = 11$ and writes $x = 7$. Correct the subtraction and solve the pair.
9. Read the common solution of the lines shown. Why does their intersection lie on the y -axis?



SECTION C

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

10. The larger of two supplementary angles exceeds the smaller by 18° . Form equations and find both angles by substitution.
11. An artist buys 5 L of red paint and 7 L of blue paint for ₹5000. Another purchase of 7 L of red and 5 L of blue costs ₹4600. Find each price per litre.
12. For what value of t does the solution of $x + y = t$ and $x - y = 4$ also satisfy $2x + y = 17$? Find that solution.

SECTION D

(Application Based Question - 3 marks)

13. A school buys two sizes of art board. Four small and three large boards cost ₹390; two small and five large boards cost ₹510. Let their prices be ₹ x and ₹ y .
- (i) Write the equations.
- (ii) Find the price of one large board.
- (iii) Find the cost of three small and two large boards.