

Mathematics

Practice Test Paper 4

(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. For $x + 4y = 9$ and $2x + 8y = 18$, the number of solutions is:

- (A) 0 (B) 1
(C) 2 (D) infinitely many

2. Which pair of equations models two numbers with sum 24 and difference 6, where x is larger?

- (A) $x + y = 24, x - y = 6$
(B) $x - y = 24, x + y = 6$
(C) $x + y = 6, y - x = 24$
(D) $x + y = 24, xy = 6$

3. The y -intercept of $3x - 2y = 6$ is:

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

4. For which k do $kx + 2y = 5$ and $3x + y = 4$ fail to have a unique solution?

- (A) 3 (B) 6
(C) 2 (D) -6

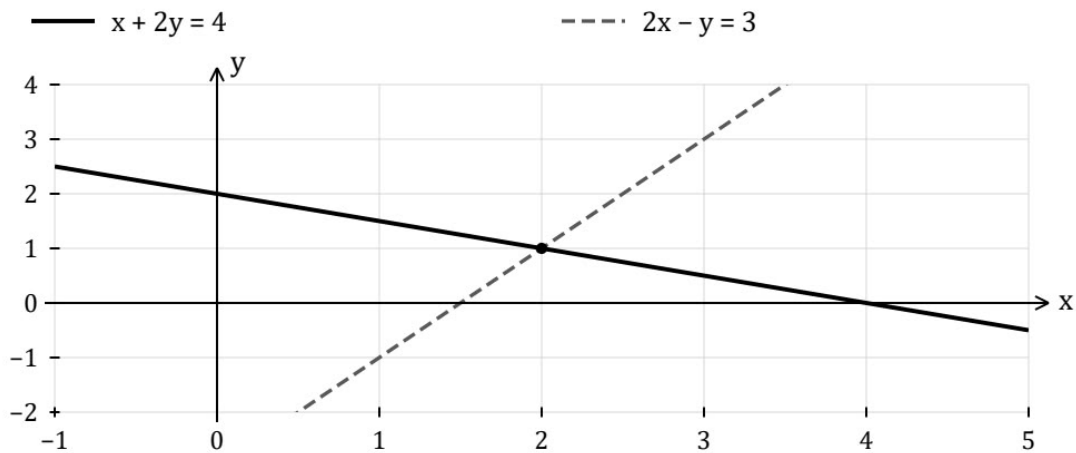
5. If $x = 2$ and $y = -1$, which equation is satisfied?

- (A) $x + y = 3$
(B) $2x - y = 3$
(C) $x - 2y = 0$
(D) $3x + y = 5$

SECTION B

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

6. Use substitution to determine all solutions of $3x - y = 3$ and $9x - 3y = 9$.
7. Given that $x = 3, y = 1$ solves $x - 4y + p = 0$ and $2x + y - q - 2 = 0$, find p and q .
8. Solve $x + y = 9$ and $3x - y = 7$, then check the result in both equations.
9. Read the common solution of the lines shown and the y -intercept of the solid line.



SECTION C

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

10. The difference between two numbers is 26. The larger number is three times the smaller. Form equations and solve by substitution.
11. Sumit is three times as old as his son. Five years later he will be two and a half times his son's age then. Find their present ages.
12. Classify $kx + 2y = 6$ and $3x + y = 5$ for every real value of k . Give the values with a unique solution, no solution or infinitely many solutions.

SECTION D

(Application Based Question - 3 marks)

13. A parking area contains only bicycles and cars. There are 32 vehicles and 92 wheels. Let x be the number of bicycles and y the number of cars.
- (i) Form the two equations.
- (ii) Find the number of cars.
- (iii) How many vehicles remain if five bicycles leave?