

Mathematics

Practice Test Paper 9

(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. The pair $5x + 2y = 11$, $10x + 4y = 22$ is:

- (A) inconsistent
- (B) consistent and dependent
- (C) consistent with one solution
- (D) satisfied only by (0, 0)

2. If $x + y = 13$ and $x - y = -5$, the value of x is:

- (A) 9
- (B) 8
- (C) 5
- (D) 4

3. The x-intercept of $2x + 3y = 12$ is:

- (A) (6, 0)
- (B) (0, 4)
- (C) (4, 0)
- (D) (0, 6)

4. Which equation is equivalent to $0.3x + 0.2y = 1.7$?

- (A) $3x + 2y = 1.7$
- (B) $30x + 2y = 17$
- (C) $3x + 2y = 17$
- (D) $3x + 20y = 17$

5. A two-digit number has tens digit x and units digit y. Its reversed number is:

- (A) $10x + y$
- (B) $10y + x$
- (C) $x + y$
- (D) $10(x + y)$

SECTION B

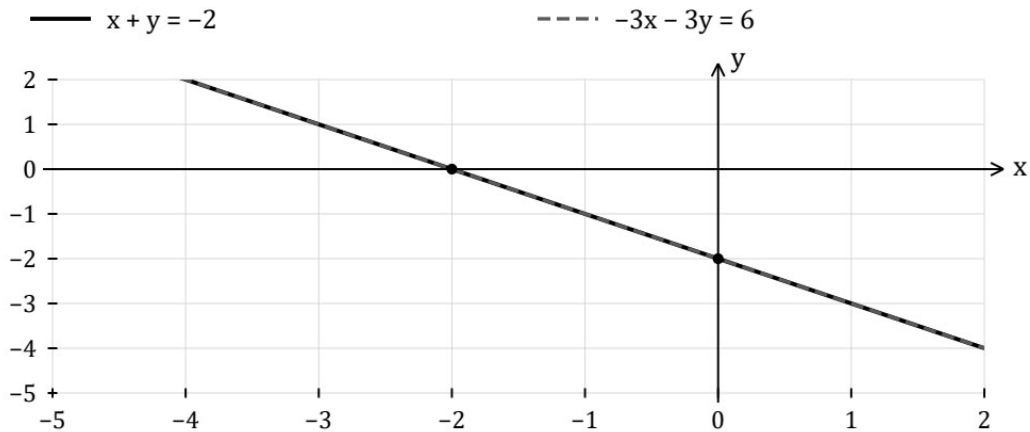
(4 questions $\times$ 2 marks = 8 marks)

6. Solve $\frac{1}{2}x + \frac{2}{3}y = -1$ and $x - \frac{1}{3}y = 3$ by substitution.

7. Let b be an integer. Show that $2x - y = b + 1$ and $x + (b - 1)y = 3b$ always have a unique solution.

8. Use elimination to decide whether $5x + 2y = 17$ and $10x + 4y = 40$ have any common solution.

9. The plotted equations share one line. Give its axis-intercepts and state whether the solution is unique.



SECTION C

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

10. Five years from now, Jacob will be three times as old as his son. Five years ago, Jacob was seven times as old as his son. Find their present ages.

11. Three kilograms of almonds and one kilogram of cashews cost ₹1600. Five kilograms of almonds and two kilograms of cashews cost ₹3000. Find the price per kilogram of each.

12. The sum of the digits of a two-digit number is 9. Nine times the number equals twice the number formed by reversing its digits. Find the original number.

SECTION D

(Application Based Question - 3 marks)

13. An electricity bill consists of a fixed fee ₹ x plus ₹ y per unit. The totals for 50 and 90 units are ₹250 and ₹370, respectively.

(i) Form the equations.

(ii) Find the charge per unit.

(iii) Find the bill for 120 units.