

Board - ICSE

Class - 9th

Topic - Simultaneous Equations

Section A: Multiple Choice Questions (1 mark each)

1. If $3x + 4y = 10$ and $6x + 8y = 20$, the system has:
A) No solution B) Infinite solutions C) Unique solution D) None
2. In cross-multiplication method, coefficients are written in the order:
A) x, y, c B) c, x, y C) y, x, c D) y, c, x
3. Which method is preferred if one variable is already isolated?
A) Elimination B) Substitution C) Graphical D) None
4. The pair $x = 2, y = -1$ satisfies which equations?
A) $x + y = 1, x - y = 3$
B) $x + y = 1, x + y = 1$
C) $x + y = 3, x - y = 1$
D) $x - y = 1, x + y = 3$
5. Two lines intersect if they have:
A) No solution B) One solution C) Infinite solutions D) Same slope

Section B: Subjective Questions (2 marks each)

6. Solve by substitution: $x - y = 1, x + y = 9$
7. Solve by Elimination: $4x - y = 7, 2x + y = 5$
8. Solve by cross multiplication: $x + 2y = 7, 2x - 3y = -4$

Section C: Word Problems (3 marks each)

9. The sum of the digits of a two-digit number is 9. When the digits are reversed, the number becomes 27 more than the original number. Find the number.
10. Two years ago, A was 3 times as old as B. Four years from now, A will be twice as old as B. Find their present ages.

Section D: Long Questions (4 marks each)

11. Solve using cross-multiplication: $4x + 3y = 5, 3x - 2y = 11$
12. The cost of 3 notebooks and 5 pens is 120, while the cost of 2 notebooks and 3 pens is 75. Find the cost of each notebook and each pen.