



CBSE NCERT Based Chapter wise Questions (2025-2026)

Class-X

Subject: MATHEMATICS

Chapter Name : Pair of Linear Equations in two Variables (Chap : 3)

Total : 4 Marks (expected) [MCQ(1)-1 Mark, SA-II(1)-3 Marks]

Level - 2 (Higher Order)

MCQ TYPE :

1. If $12x + 13y = 29$ and $13x + 12y = 21$, then $x + y$ is _____.

(A) 4 (B) -2 (C) 2 (D) -4

(Hints : Add two equations)

2. If the speed of the boat in still water is x km/hr and the speed of the steam is y km/hr, then the speed of the boat in down stream is _____.

(A) $(x - y)$ km/hr (B) (xy) km/hr (C) $(x + y)$ km/hr (D) $\frac{x}{y}$ km/hr

(Hints : Sum of two speeds)

3. Aruna has only ₹1 and ₹2 coins with her. If the total number of coins that she has is 50 and the amount of money with her is ₹75, then the number of ₹1 and ₹2 coins are, respectively _____.

(A) 35 and 15 (B) 35 and 20 (C) 15 and 35 (D) 25 and 25

(Hints : $x + y = 50$, $x + 2y = 75$)

4. Divide 56 into two equal parts such that three times the first part exceeds one third of the second by 48. The parts are _____.

(A) 20, 36 (B) 25, 31 (C) 24, 32 (D) none of these

(Hints : $x + y = 56$, $9x - y = 144$)

5. The point of intersection of the lines $2x - 5y = 6$ and $x + y = 3$ is _____.

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

(Hints : Solve two equations)

6. If the length of a rectangle is 5 cm more than the breadth and if the perimeter of the rectangle is 40 cm, then the length, breadth of the rectangle will be

(A) 7.5 cm, 2.5 cm (B) 1

0 cm, 5 cm (C) 12.5 cm, 7.5 cm (D) 15.5 cm, 10.5 cm

(Hints : $x - y = 5$, $x + y = 20$)

SA-II TYPE:

7. 4 chairs and 3 tables cost ₹2100 and 5 chairs and 2 tables cost ₹1750. Find the cost of one chair and one table separately.

(Hints : $4x + 3y = 2100$, $5x + 2y = 1750$)

8. Solve the following pair of linear equations: $99x + 101y = 499$; $101x + 99y = 501$.

(Hints : Adding and subtracting two equations find two simple equations and solve)

9. Find the value of k such that the following pair of linear equations has unique solution. Solve the equations.

$$4x + ky + 8 = 0, 2x + 3y + 7 = 0$$

(Hints : $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$)

10. Find those integral values of m for which the co-ordinate of the point of intersection of lines represented by $y = mx + 1$ and $3x + 4y = 9$ is an integer.

(Hints : $x = \frac{5}{3 + 4m}$)

11. 8 men and 12 boys can finish a piece of work in 10 days, while 6 men and 8 boys can finish it in 14 days. Find the time taken by one man alone and that by one boy alone to finish the work.

(Hints : $\frac{8}{x} + \frac{12}{y} = \frac{1}{10}, \frac{6}{x} + \frac{8}{y} = \frac{1}{14}$)

12. Places A and B are 80 km apart from each other on a highway. A car starts from A and another from B at the same time. If they move in same direction they meet in 8 hrs and if they move in opposite directions they meet in 1 hr 20 minutes. Find speeds of the cars.

(Hints : $\frac{80}{x - y} = 8, \frac{80}{x + y} = \frac{4}{3}$)

ANSWER

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|--|---|
| 1. © | 8. $x = 3, y = 2$ |
| 2. © | 9. $k \neq 6, x = \frac{-7}{2} + \frac{9}{6 - k}, y = \frac{-6}{6 - k}$ |
| 3. D | 10. $m = -2$ |
| 4. A | 11. $x = 140, y = 280$ |
| 5. B | 12. 35 km/h, 25 km/h |
| 6. © | |
| 7. Cost of 1 chair = ₹ 150 and cost of 1 table = ₹ 500 | |