

Mathematics

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(Chapter - 3) (Pair of Linear Equations in two Variables) (Practice Test 2)

(Class X)

Time: 1 hour 15 minutes

M. M: 25

General Instructions:

1. This question paper contains four sections: A, B, C and D. Each part is compulsory.
2. Section A has 5 MCQ of one mark each.
3. Section B has 3 questions of two marks each.
4. Section C has 3 questions of three marks each.
5. Section D has 2 questions of five marks each, attempt any 1 out of 2.
6. There is no negative marking.

[Section - A]

1. The pair of equations $x + 2y - 5 = 0$ and $-3x - 6y + 15 = 0$ have:
(A) Unique solution (B) exactly two solution
(C) infinitely many solutions (D) no solution
2. If a pair of linear equations is consistent, then the lines will be:
(A) parallel (B) always coincident
(C) intersecting or coincident (D) always intersecting
3. The pair of equations $y = 0$ and $y = -7$ has
(A) One solution (B) two solution
(C) infinitely many solution (D) no solution
4. The value of c for which the pair of equations $cx - y = 2$ and $6x - 2y = 3$ will have infinitely many solutions is
(A) 3 (B) - 3
(C) -12 (D) no value
5. One equation of a pair of dependent linear equations is $-5x + 7y - 2 = 0$. The second equation can be
(A) $10x + 14y + 4 = 0$ (B) $-10x - 14y + 4 = 0$
(C) $-10x + 14y + 4 = 0$ (D) $10x - 14y = -4$

[Section - B]

6. Solve the following pair of linear equations: $y - 4x = 1$ and $6x - 5y = 9$.
7. Find whether the lines representing the following pair of linear equations intersect at a point, are parallel or coincident: $2x - 3y + 6 = 0$, $4x - 5y + 2 = 0$.
8. 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.

[Section - C]

9. A part of monthly Hostel charge is fixed and the remaining depends on the number of days one has taken food in the mess. When Swati takes food for 20 days, she has to pay ₹13000 as hostel charges whereas, Mansi who takes food for 25 days pays ₹3500 as hostel charges. Find the fixed charges and the cost of food per day.

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10. Solve using cross multiplication method: $x + y = 1$ and $2x - 3y = 11$.
11. Find those integral values of m for which the c -coordinate of the point of intersection of lines represented by $y = mx + 1$ and $3x + 4y = 9$ is an integer.

[Section - D]

12. 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.
13. Draw the graphs of the pair of equations $x + 2y = 5$ and $2x - 3y = -4$. Also find the points where the lines meet the x -axis.



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Hindi and Answers

Section - A

1. Infinitely many solutions
2. Intersecting or coincident
3. No solution
4. 3
5. $10x - 14y = -4$

Section - B

6. $x = -1, y = -3$
7. unique solution, and given lines intersect at a point
8. one man alone can finish in 140 days and one boy alone can finish in 280 days

Section - C

9. fixed charges = ₹1000, charges per day = ₹100
10. $x = \frac{32}{5}, y = \frac{3}{5}$
11. $m = -2$, the x-coordinate is an integral value equal to -1

Section - D

12. cost of one chair = ₹150 and cost of one table ₹500
13. meets at (5, 0) and (-2, 0)



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