CBSE NCERT Based Chapter wise Questions (2025-2026)

Class-X

Subject: MATHEMATICS

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

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

Level - 1

MCQ TYPE :

1. Graphically, the pair of equations $7x - y = 5$; $21x - 3y = 10$ represents two lines which are

   Ⓐ intersecting at one point Ⓑ parallel

   Ⓒ intersecting at two points Ⓓ coincident

2. If a pair of linear equations is consistent, then the lines will be

   Ⓐ always coincident Ⓑ parallel

   Ⓒ always intersecting Ⓓ intersecting or coincident

3. The pair of equations $x = -4$ and $y = -5$ graphically represents lines which are

   Ⓐ intersecting at $(-5, -4)$ Ⓑ intersecting at $(-4, -5)$ Ⓒ intersecting at $(5, 4)$ Ⓓ intersecting at $(4, 5)$

4. One equation of a pair of dependent linear equations is $2x + 5y = 3$. The second equation will be

   Ⓐ $2x + 5y = 6$ Ⓑ $3x + 5y = 3$ Ⓒ $-10x - 25y + 15 = 0$ Ⓓ $10x - 25y = 15$

5. Two numbers are in the ratio 5: 6. If 8 is subtracted from each of the numbers, the ratio becomes 4: 5. Then the numbers are:

   Ⓐ 40, 42 Ⓑ 42, 48 Ⓒ 40, 48 Ⓓ 44, 50

(Hints: $6x=5y$, $5(x-8) = 4(y-8)$)

6. If $x = a$, $y = b$ is the solution of the equation $x - y = 2$ and $x + y = 4$, then the value of a and b are respectively

   Ⓐ 3 and 5 Ⓑ 5 and 3 Ⓒ 3 and 1 Ⓓ -1 and -3

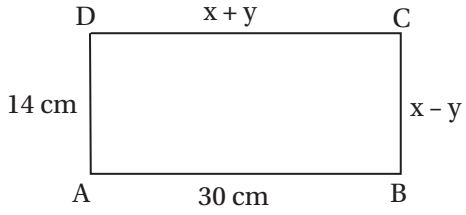
(Hints: $a-b=2$, $a+b=4$)

SA-II TYPE :

7. Find the values of a and b for which the following pair of linear equations has infinitely many solutions: $2x + 3y = 7$; $(a + b)x + (2a - b)y = 21$.

(Hints : Applying conditions for infinitely many solutions form two equations involving a and b)

8. In the below Figure, ABCD is a rectangle. Find the values of x and y.



(Hints : $x+y=30$, $x-y=14$)

9. The sum of the digits of a two-digit number is 9. The number obtained by reversing the order of digits of the given number exceeds the given number by 27. Find the given number.

(Hints : x + y = 9, – x + y = 3)

10. Solve the following system of equations graphically for x and y: 3x + 2y = 12; 5x – 2y = 4. Find the co-ordinates of the points where the lines meet the y-axis.

(Hints : Find at least two points for each equation and draw the graph)

11. Draw the graphs of the equations x – y + 1 = 0 and 3x + 2y – 12 = 0. Determine the co-ordinates of the vertices of the triangle formed by these lines and x-axis. shade the triangular region .

(Hints : Solve two equations for one vertex. Put y=0 in given equations to get two more vertices)

12. Five years ago, Nuri was thrice as old as Sonu. Ten years laer, Nuri will be twice as old as Sonu. How old are Nuri and Sonu ?

(Hints : x=3y-10, x-2y =10)

ANSWER

1. Ⓑ
2. Ⓓ
3. Ⓑ
4. Ⓒ
5. Ⓒ
6. Ⓒ
7. a = 4, b = 1
8. x = 22 cm, y = 8 cm
9. 36
10. x = 2, y = 3, (0, 6) and (0, –2)
11. (–1, 0), (2, 3) and (4, 0)
12. 50 years, 20 years.