Class: X   **Subject: MATHEMATICS**

WORKSHEET NO.- 1

Name of the Chapter : PAIRS OF LINEAR EQUATIONS IN TWO VARIABLES (CHAPTER – 1)

1. a) Graphs

2. c) Infinitely many solutions

3. c) Infinitely many solutions

4. b) (4, 0)

5. a) -1

6. b) Coincident

7. c) (2, 1)

8. b) Infinite solutions

9. a) A unique solution

10. a) Parallel

11. A pair of linear equations in two variables represents two equations involving two variables that are linear.

12. Graphical solution of a pair of linear equations involves plotting the equations on the same coordinate system and finding the point of intersection.

13. For a pair of linear equations to have no solution, the slopes of the lines should be the same and the y-intercepts should be different.

14. Solution: $x = 1$, $y = 2$

15. Value of 'k' = 1

16. Explanation: Both equations are multiples of each other, hence they represent the same line.

17. Graphical solution: Point of intersection (2, 3)

18. Value of 'a' = 4

19. If two lines are perpendicular, the product of their slopes is -1.

20. Substituting (2, 3) in the equation: LHS = 4(2) - 2(3) = 8 - 6 = 2 $\neq$ 8 (RHS)

21. Solution: $x = 3$, $y = 1$

22. Value of 'p' = 2

23. Graphical solution: Intersection point (2, 0)

24. Solution: x = 2, y = 1

25. Graphical solution: Intersection point (1, 2)

26. x=3 and y=0 is the solution.

27. p=−2/21 q. forany non-zero value for q, and the corresponding value of p will satisfy the condition for parallel lines.

28. x=18/5 y= 2/5

29. a/b = 3/2

30. x= -16/7 y= -5/7

31. Solution: x = 2, y = 2

32. Age of A = 22 years, Age of B = 18 years

33. Solution: x = 2, y = 3

34. 900 Rs.

35. the present age of friend A is 27.5 years and the present age of friend B is 12.5 years

36. Original number = 23

37. Speed of the boat = 8 km/h

38. Numbers: 12 and 6

39. Dimensions: Length = 20 cm, Width = 5 cm

40. Total sum of money = Rs. 3000, B's share = Rs. 2000

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