

LENIAR EQUATIONS

SECTION -3 (8X2=16m)

Answer the following

8X2=16m

21. For what value of p , the equations $2x+py = -5$ and $3x+3y = -6$ have a unique solution?
22. Find the value of k , the equations $2x-ky+3=0$ and $4x+6y-5=0$ represent parallel lines?
23. For what value of k , the equations $3x+4y+2=0$ and $9x+12y+k=0$ represent coincident lines?
24. Solve $3x+2y=11$ and $2x+3y=4$ by elimination method ?
25. Solve $2x-y=5$ and $3x+2y=11$ by substitution method ?
26. The larger of two supplementary angles exceeds the smaller by 18° . Find the angles.?
27. Two angles are complementary. The larger angle is 3° less than twice the measure of the smaller angle. Find the measure of each angle.?
28. Half the perimeter of a rectangular garden, whose length is 4m more than its width, is 36m. Find the dimensions of the garden.?

SECTION -4 (5X4=20m)

Answer the following

5X4=20m

29. In a garden there are some bees and flowers. If one bee sits on each flower then one bee will be left. If two bees sit on each flower, one flower will be left. Find the number of bees and number of flowers.?

OR

The perimeter of a rectangular plot is 32m. If the length is increased by 2m and the breadth is decreased by 1m, the area of the plot remains the same. Find the length and breadth of the plot.?

30. Mary told her daughter, "Seven years ago, I was seven times as old as you were then. Also, three years from now, I shall be three times as old as you will be." Find the present age of Mary and her daughter.?

OR

A fraction becomes $\frac{4}{5}$ if 1 is added to both numerator and denominator. If, however, 5 is subtracted from both numerator and denominator, the fraction becomes $\frac{1}{2}$. What is the fraction?

31. Solve $\frac{2}{x} + \frac{3}{y} = 13$ and $\frac{5}{x} - \frac{4}{y} = -2$?

OR

$$\text{Solve } \frac{2}{\sqrt{x}} + \frac{3}{\sqrt{y}} = 2 \quad \text{and} \quad \frac{4}{\sqrt{x}} - \frac{9}{\sqrt{y}} = -1$$

32. Solve $2x+3y = 1$ and $3x-y = 7$ graphically?

OR

Solve $3x+2y = 5$ and $2x-2y = 7$ graphically?

33. Solve each of the following pairs of equations by reducing them to a pair of linear equations.

$$\frac{5}{x-1} + \frac{1}{y-2} = 2$$

$$\frac{x+y}{xy} = 2$$

$$\frac{6}{x-1} - \frac{3}{y-2} = 1$$

$$\frac{x-y}{xy} = 6$$