

## 4. PAIR OF LINEAR EQUATIONS IN TWO VARIABLES

- The point of intersection of the lines represented by  $3x-2y = 6$ , the Y-axis is \_\_\_\_\_
- If  $x = 2$ ,  $y = 3$  is a solution of a pair of lines  $2x-3y+a = 0$  and  $2x+3y-b+2 = 0$ , then the relationship between  $a$  and  $b$  is \_\_\_\_\_
- If the units and ten's digit of a two digit number are  $y$  and  $x$  respectively, then the number will be in the form of \_\_\_\_\_
- The age of a son is one third the age of his mother. If the present age of mother is  $x$  years, then the age of the son after 12 years is \_\_\_\_\_
- If the line  $y = px-2$  passes through the point  $(3, 2)$ , then the value of  $p$  is \_\_\_\_\_
- The value of  $\frac{2}{\sqrt{x}} + \frac{3}{\sqrt{y}}$  when  $x = 4$  and  $y = 9$  is \_\_\_\_\_
- If  $ad \neq bc$ , then the pair of linear equations  $ax+by = p$  then and  $cx+dy = p$  has \_\_\_\_\_ solutions?
- The pair of linear equations  $3x+5y = 3$ ,  $6x+ky = 8$  do not have solutions if  $k =$  \_\_\_\_\_
- The point of the intersection of the lines  $x-2 = 0$  and  $y+6 = 0$  is \_\_\_\_\_
- \_\_\_\_\_ is the area of the triangle formed by the coordinate axes and the line  $x+y = 6$ .
- The sum of the two digits of a two digit number is 12. The number obtained by interchanging the two digits exceeds the given number by 18. the number is \_\_\_\_\_
- The point  $(-2, -2)$  lies in the \_\_\_\_\_ Quadrant.
- If the difference between two numbers is 26. One number is three times the other number, then the two numbers are \_\_\_\_\_
- If the system of equations  $4x+y = 3$  and  $8x+2y = 5k$  has infinite solutions, then the value of  $k$  is \_\_\_\_\_
- The system of linear equations  $x+y = 14$  and  $x-y = 4$  are \_\_\_\_\_
- If the system of linear equations  $(k-3)x+3y = k$ ,  $kx+ky = 12$  has infinite number of solutions then the value of  $k$  is \_\_\_\_\_
- If the system of linear equations  $3x-4y+7 = 0$  and  $kx+3y-5 = 0$  has no solutions then value of  $k$  is \_\_\_\_\_
- \_\_\_\_\_ is the condition if the pair of linear equations,  $a_1x+b_1y+c_1 = 0$ ,

$a_2x + b_2y + c_2 = 0$ , has a unique solution?

19. The sum of the numerator and the denominator of a fraction is 12. If the denominator is increased by 3, the fraction becomes  $1/2$ . then the fraction is \_\_\_\_\_
20. If  $\frac{x+y}{xy} = 2$  &  $\frac{x-y}{xy} = 6$ , then value of y is \_\_\_\_\_
21. Two angles are complementary. The larger angle is 3 degrees less than twice the measure of the smaller angle. The measure of each angle is \_\_\_\_\_ and \_\_\_\_\_
22. The value of y when  $x = -1/2$  that satisfies the equation  $\frac{2}{x} + \frac{3}{y} = 5$  is \_\_\_\_\_
23. The length and breadth of a rectangle are x, y respectively. The area of the rectangle gets reduced by 9 square units, if its length is reduced by 5 units and breadth is increased by 3 units. Then the equation we get is \_\_\_\_\_
24. The larger of two supplementary angles exceeds the smaller by 20 degrees. Then the angles are \_\_\_\_\_ and \_\_\_\_\_
25. \_\_\_\_\_ is the value of 'a' so that the point (2, a) lies on the line represented by  $4x - y = 3$ ?

## ANSWERS

1) (0, -3); 2)  $3a = b$ ; 3)  $10x + y$ ; 4)  $\frac{x}{3} + 12$ ; 5)  $4/3$ ; 6) 2 or -2;

7) unique solution;

8)  $k = 10$ ; 9) (2, -6); 10) 18; 11) 57;

12) 3<sup>rd</sup> quadrant; 13) 39, 13; 14)  $6/5$ ;

15) consistent; 16) 6; 17)  $-9/4$ ;

18)  $\frac{a_1 \neq b_1}{a_2 \neq b_2}$ ; 19)  $5/7$ ; 20)  $1/4$ ; 21) 31

degrees and 59 degrees; 22)  $1/3$ ;

23)  $(x-5)(y+3) = (xy-9)$ ; 24) 100 degrees, 80 degrees; 25)  $a = 5$ .