

## CLASS-10 - Maths

### [Pair Of Linear Equations]

Date : 26/05/17

Max Marks 50

#### Part A

1. Find the value of 'a' so that the point (3, 9) lies on the line represented by  $2x-3y=5$
2. Find the value of k so that the lines  $2x - 3y = 9$  and  $kx-9y=18$  will be parallel.
3. Find the value of k for which  $x + 2y =5$ ,  $3x+ky+15=0$  is inconsistent
4. Find the point of intersection of line  $-3x + 7y =3$  with x-axis
5. Solve the equation:  $px + qy = p - q$  and  $qx - py = p + q$
6. Solve for x and y:  $139x+56y = 641$  and  $56x+139y =724$
7. Determine the vertices of the triangle formed by the lines representing these equations and the X axis. Shade the triangular region so formed also finds the area of Triangle formed.
8. Solve  $\frac{10}{x+y} + \frac{2}{x-y} = 4$  and  $\frac{15}{x+y} + \frac{5}{x-y} = -2$
9. Solve for x and y :  $2^x + 3^y = 17$  and  $2^{x+2} - 3^{y+1} = 5$

#### Part B

10. Ritu can row downstream 20 km in 2 hr , and upstream 4 km in 2 hr . find her speed of rowing in still water and the speed of the current.
11. 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 1 man alone and that by one boy alone to finish the work
12. Solve by cross multiplication method:  $3x +y +1=0$  and  $2x -3y +8=0$
13. A man travels 370 km partly by train and partly by car. If he covers 250 km by train and the rest by the car it takes him 4 hours, but if he travels 130 km by train and the rest by car, he takes 18 minutes longer. Find the speed of the train and that of the car
14. If from twice the greater of two numbers, 20 is subtracted, the result is the other number. If from twice the smaller number, 5 is subtracted, the result is the greater number. Find the numbers.
15. In a deer park the number of heads and the number of legs of deer and visitors were counted and it was found that there were 39 heads and 132 legs. Find the number of deers and visitors in the park,
16. A two digit number is obtained by either multiplying the sum of the digits by 8 or adding 1; or by multiplying the difference of the digits by 13 and adding 2. Find the number. How many such nos. are there.
17. A train covered a certain distance at a uniform speed. If the train would have been 6km/hr faster, it would have taken 4hours less than the scheduled time. And if the train were slower by 6km/hr, it would have taken 6 hours more than the scheduled time. Find the distance of the journey.