

SARALA BIRLA PUBLIC SCHOOL

Birla Knowledge City, Mahilong, Ranchi
CLASS-X (2020-21)



Sub: MATHEMATICS
Assignment-2

1. Solve the following pair of linear equation by the substitution method

$$6x+3y=7xy, 3x+9y=11xy \quad (x \neq 0, y \neq 0.)$$

2. Solve for x and y using elimination method.

$$23x-29y=98, 29x-23y=110$$

3. Solve the following pair of linear equation by the method of cross multiplication.

$$\frac{x}{a} = \frac{y}{b}, ax+by=a^2+b^2$$

4. For what values of k will the following pair of linear equations have infinitely many solutions:

$$2x-3y=7, (k+1)x+(1-2k)y=(5k-4)$$

5. Find the value of k for which following system of equations has no solution:

$$Kx+3y=3, 12x+ky=6$$

6. Find the value of k for which each of the following system of equation has a unique solution: $kx+2y=5, 3x+y=1$

7. Seven times a two digit number is equal to four times the number obtained by reversing the order of its digits. If the difference between the digits is 3, find the number.

8. The sum of two numbers is 8 and sum of their reciprocals is $\frac{8}{15}$. Find the numbers.

9. Solve $2x+3y=11$ and $2x-4y=-24$ and hence find the value of m for which $y=mx+3$.

10. Ritu can row downstream 20km in 2 hours, and upstream 4km in 2 hours. Find her speed of rowing in still water and the speed of the current.