



ACADEMIC YEAR 2022-23

Grade: X

Subject: MATHEMATICS

CH – 3- LINEAR EQUATION IN TWO VARIABLES - ASSIGNMENT -1

1. Solve the following linear equations by elimination method

$$2x - y = 2, \quad x + 3y = 15$$

2. Draw the graph of following equations $2x + y = 6$ and $4x - 2y = 4$

i) Find the solution of equations from the graph

ii) Find the area of triangle formed by these lines and x- axis

3. For what value of p will the following system of equations have no solutions

$$(2p - 1)x + (p - 1)y = 2p + 1, \quad y + 3x - 1 = 0$$

4. Solve ; $99x + 101y = 499$, $101x + 99y = 501$

5. If $x+1$ is a factor of $2x^3 + ax^2 + 2bx + 1$, then find the values of a and b given that $2a - 3b = 4$

6 . Solve $\frac{4}{x} + 5y = 7$ $\frac{3}{x} + 4y = 5$

7. Solve for x and y : $mx - ny = m^2 + n^2$, $x - y = 2n$

8. For what value of k will the following pair of linear equations has no solution

$$3x + y = 1, \quad (2k - 1)x + (k - 1)y = 2k + 1$$

9. Solve for x and y : $\frac{5}{x-1} + \frac{1}{y-2} = 2$; $\frac{6}{x-1} - \frac{3}{y-2} = 1$

10. Find the value of a and b for which the following system of linear equations has infinitely many solutions : $2x + 3y = 7$, $(a + b)x + (2a - b)y = 21$
