**Assignment**

**Class 10**

**Ch. – 3(Linear Equations in 2 Variables)**

1. Find the value of k for which the system of equations have infinitely many solutions 2x+3y=7 and (k+1)x+(2k-1)y=4k+1.
2. For which values of, do the following pair of equations x+y= and x+ y=1 have i) no solutions? ii) unique solution?
3. A motor boat can travel 30 km upstream and 28 km down stream in 7 hours. It can travel 21 km upstream and return in 5 hours. Find the speed of the boat in still water and the speed of the stream.
4. A shopkeeper gives books on rent for reading. She takes a fixed charge for the first two days, and an additional charge for each day thereafter. Latika paid Rs. 22 for a book kept for 6 days, while Anand paid Rs. 16 for the book kept for 4 days. Find the fixed charges and charge for each extra day.
5. In a competitive exam, one mark is awarded for each correct answer while ½ mark is deducted for every wrong answer. Jayanti answered 120 questions and got 90 marks. How many questions did she answer correctly.
6. Find the values of x and y in the following rectangle.

 x+3y

 3x+y 7

 13

1. Solve the following systems of equations:
2. 7(y+3) – 2(x+2) = 14 and 4(y-2) + 3(x-3) = 2
3. $\frac{3}{x+y}$ + $\frac{2}{x-y}$ = 2 and $\frac{9}{x+y}$ - $\frac{4}{x-y}$ = 1
4. $\frac{2}{3x+2y}$ + $\frac{3}{3x-2y}$ = $\frac{17}{5}$ and $\frac{5}{3x+2y}$ + $\frac{1}{3x-2y}$ = 2
5. If x+1 is a factor of 2x3 + ax2 +2bx + 1, then find the values of a and b given that 2a – 3b = 4.
6. Solve the equations graphically:
7. x+y = 3 and 2x +5y = 12
8. 2x + 3y = 4 and x – y +3 = 0