

# Spring Meadows Public School

Practice Assignment - 3

Session: 2020-21

Grade – X

Subject – Mathematics

**Topic** – [Ch 3 Pair of Linear Equation in Two Variables](#)

**Q1.** For what value of  $k$  for which the system of equations have

(i) a unique solution (ii) no solution :  $2x + ky = 1$  and  $3x - 5y = 7$

**Q2.** Form the pair of linear equations in the following problems and find their solutions graphically. Also find out whether they are consistent or inconsistent:

- (i) 10 students of class x took part in a Mathematics Quiz. If the number of girls is 4 more than the number of boys, find the number of boys and girls who took part in the quiz.
- (ii) The cost of 4 pens and 4 pencil boxes is ₹100. Three times the cost of a pen is ₹15 more than the cost of pencil box, find the cost of pen and pencil box.

**Q3.** Five years hence, the age of Jacob will be three times that of his son. Five years ago, Jacob's age was seven times that of his son. What are their present ages. Solve it by Substitution Method.

**Q4.** Solve  $2x + 3y = 11$  and  $2x - 4y = -24$  and hence find the value of ' $m$ ' for which  $y = mx + 3$ .

**Q5.** Solve the following pair of equations graphically:

$$3x + 5y = 12 \quad \text{and} \quad 3x - 5y = -18$$

Also shade the region enclosed by these two lines and x-axis.

**Q6.** Check the consistency of a following pair of linear equations:

$$\frac{3x}{2} + \frac{5y}{3} = 7 \quad \text{and} \quad 9x + 10y = 14$$

**Q7.** For what values of  $a$  and  $b$  such that the following pair of linear equations have infinite number of solutions:

$$2x + 3y = 7$$

$$a(x + y) - b(x - y) = 3a + b - 2$$

**Q8.** Solve the following pair of linear equation by the elimination method and the substitution method:

(i)  $x + y = 5$                       *and*  $2x - 3y = 4$

(ii)  $3x - 5y - 4 = 0$             *and*  $9x = 2y + 7$

**Q9.** Meena went to a bank to withdraw ₹ 2,000. She asked the cashier to give her ₹ 50 and ₹ 100 notes only. Meena got 25 notes in all. Find how many notes of ₹ 50 and ₹ 100 she received. **(Elimination Method)**

**Q10.** The difference between two numbers is 26 and the larger number exceeds thrice of the smaller by 4. Find the numbers. **(Substitution Method)**

**Q11.** A fraction becomes  $\frac{1}{3}$  when 1 is subtracted from the numerator and it becomes  $\frac{1}{4}$  when 8 is added to its denominator. Find the Fraction.

**Q12.** The sum of two-digit number and the number obtained by reversing the order of its digits is 99. If the digits differ by 3. Find the number.



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