INDIAN SCHOOL MUSCAT
SENIOR SECTION
DEPARTMENT OF MATHEMATICS
CLASS IX
WORKSHEET NO - 7
LINEAR EQUATIONS IN TWO VARIABLES

SECTION A: (1 MARK)

1. Find m , if point (7, -3) lies on the equation $y - \frac{3}{7} = m \left(x - \frac{2}{7} \right)$ $\left(m = \frac{-24}{47} \right)$
   (NCERT EXEMPLAR)

2. Find the value of α in the equation $\alpha x + y = 5$ if x=2 and y=3   (α=1)

3. If $x - 4 = \sqrt{3}\, y$ is written in the standard form $ax + by + c = 0$ then find the values of a , b , c   (a=1, b=$-\sqrt{3}$, c= - 4)

SECTION B: (2 MARKS)

4. Represent an equation of a straight line which is parallel to x- axis and at a distance of 2.5 units below it

5. For the first Km, the fare is Rs15 and for the successive distance it is Rs8 per Km. Taking distance covered as x (Km) and the total fare as y (RS) Represent a linear equation in two variables   (Y=15 + 8(x-1))

6. If (2,3) and (4,0) lie on the graph of the equation $ax + by = 1$ then find a and b   (a= 1/4 , b= 1/6)

7. Find the co-ordinates of the points where the graph of the equation $7x - 3y = 4$ Cuts x-axis and y-axis   (X axis $\left(\frac{4}{7}, 0 \right)$ Y axis $\left(0, \frac{-4}{3} \right)$)

SECTION C: (3 MARKS)

8. Solve $\frac{3x+2}{7} + \frac{4(x+1)}{5} = \frac{2(2x+1)}{3}$ (X=4)

9. Draw the graph of the linear equation y=x and y=-x on the same Cartesian plane What do you observe?   (Point of intersection is origin)

10. Draw the graph for the equation $2x + 3y = 12$ and check whether the points (4.5 ,1) and (1.5 , 3) lies on the graph

11. Give the geometrical interpretation of $5x + 3 = 3x - 7$ as an equation
    i) In one variable   ii) In two variables

SECTION D: (4 MARKS)

12. Draw lines x= 4, y = 2, x = y on the same graph paper and identify what type of the figure obtained? Also write the point of vertices of this figure formed.
    (NCERT EXEMPLAR)   Triangle With vertices (2,2),(4,2), (4,4)

13. Ram is half of his father's age. Twenty years ago , the age of father was six times age of Ram Find the age of Ram and his father   (Ram=25yrs, Father = 50yrs)

14. Draw a Triangle whose sides are represented by x=0 , y=0 , x + y =4 Also find the Area of the Triangle   A(Triangle)=8sq.units

15. Draw the graph for $2x + y = 6$ and find the points where line meet the two axes .   (X axis (3,0) Y axis (0,6))