**SAINIK SCHOOL GOPALGANJ**

**SUMMER VACATION ASSIGNMENT**

**SUBJECT: MATHEMATICS**

**CLASS: IX**

**Chapter 4**

**Linear Equation in two variables**

1. To represent a linear equation in two variables graphically.

2. To find the following using paper folding :

(a) The perpendicular bisector of line segment.

(b) The perpendicular to a line at a point given on line.

The above work should be done in File with A 4 size sheet

3. Express x in term of y: x/ 7 + 2y = 6

4. If we multiply or divide both sides of a linear equation with a non-zero number, then what will happen to the solution of the linear equation ?

5. Write the equation of a line which is parallel to x-axis and is at a distance of 2 units from the origin.

6. Find ‘a’, if linear equation 3x – ay = 6 has one solution as (4, 3).

7. Cost of a pen is two and half times the cost of a pencil. Express this situation as a linear equation in two variables.

8. The cost of a table is 100 more than half the cost of a chair. Write this statement as a linear equation in two variables.

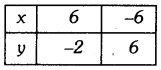
9. Write linear equation representing a line which is parallel to y-axis and is at a distance of 2 units on the left side of y-axis.

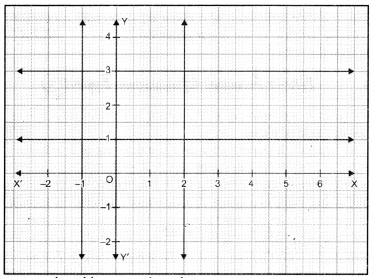
10. In some countries temperature is measured in Fahrenheit, whereas in countries like India it is measured in Celsius. Here is a linear equation that converts Fahrenheit to Celsius :  
F = (95)C + 32°  
If the temperature is – 40°C, then what is the temperature in Fahrenheit?

11. A fraction becomes , when 2 is subtracted from the numerator and 3 is added to the denominator. Represent this situation as a linear equation in two variables. Also, find two solutions for this.

12. The path of an aeroplane is given by the equation 3x – 4y = 1 2: Represent the path graphically. Also, show that the point (-4,-6) lies on the graph.

13. Express y in terms of x for the equation 3x – 4y + 7 = 0. Check whether the points (2/3, 4) and (0,7/4) lie on the graph of this equation or not.

14. The following observed values of x and y are thought to satisfy a linear equation. Write the linear equation :  
  
Draw the graph using the values of x, y as given in the above table. At what points the graph of the linear equation :

15. Write the equations of the lines drawn in following graph :  
  
Also, find the area enclosed between these lines.

16. If (2, 3) and (4, 0) lie on the graph of equation ax + by = 1. Find the value of a and b. Plot the graph of equation obtained.

17. Draw the graphs of the following equations on the same graph sheet :  
x = 4, x = 2, y = 1 and y – 3 = 0.

18. Cost of 1 pen is Rs x and that of 1 pencil is Rs y. Cost of 2 pens and 3 pencils together is Rs18. Write a linear equation which satisfies this data. Draw the graph for the same.

19. Sum of two numbers is 8. Write this in the form of a linear equation in two variables. Also, draw the line given by this equation. Find graphically the numbers, if difference between them is 2.

20. Solve for y :  
Linear Equations for Two Variables Class 9 Extra Questions Maths Chapter 4 with Solutions Answers 18