

**CLASS-9-MATHEMATICS**  
**CHAPTER-4**  
**LINEAR EQUATIONS IN TWO VARIABLES**

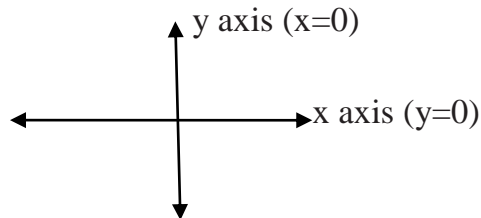
**HAND OUT 2 of 3**

**1) Graph of a Linear Equation in Two Variables**

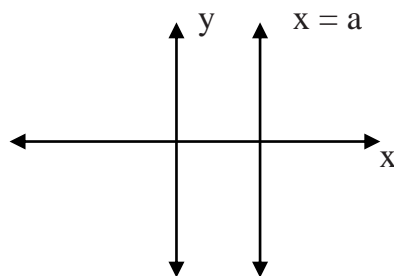
- a) To represent a linear equation in two variables on a graph
- Solve the equation (find at least two solutions)
  - Plot the points on the graph
  - Join the points to get a straight line
- b) Every point on the line satisfies the equation of the line and every solution of the equation is a point on the line.

**2) Equations of Axes and Lines Parallel to the x-axis and y-axis**

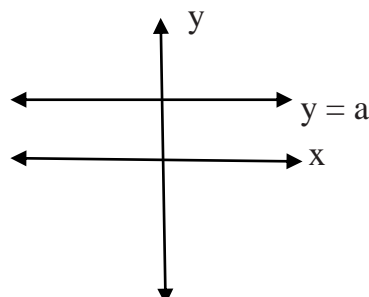
- a)  $x = 0$  is the equation of the y-axis and  $y = 0$  is the equation of the x-axis.



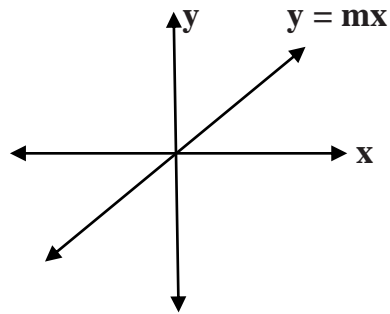
- b) The graph of  $x = a$  is a straight line parallel to the y-axis.



- c) The graph of  $y = a$  is a straight line parallel to the x-axis.



- d) An equation of the type  $y = mx$  represents a line passing through the origin.



### 3) Geometric Representations of an Equation in One Variable and in Two Variables

- a) Geometric representation of an equation as an equation in one variable is a point on a number line
- b) Geometric representation of an equation as an equation in two variable is a straight line

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