

Introduction to Graphs

Linear Graph:

The graph representing two quantities in direct variation is a straight line graph called a linear graph [If the equation representing the relation between two quantities is linear (i.e. degree) then the graph of the two quantities is a linear graph].

Ex. $x^1 + y^1 = 2$

Note: If the equation representing the relation between two quantities is not linear, then the graph representing the relation will not be a straight line.

Ex. $y^1 = x^2$, $y^1 = \frac{1}{x} = x^{-1}$, $y^1 = \sqrt{x} = x^{1/2}$ are not linear graphs.

Plotting linear graphs:

(i) A linear graph shows the relationship between two quantities whose represented by x – and y – co-ordinates.

[Now a days everyone wants to live comfortable life and they have to pay more for this. For example if you use more appliances in your home then the electricity bill is also high. Here we can say that electricity is an independent variable and electric bill is dependent variable].

(ii) The value of ‘y’ depends on the value of ‘x’.

(iii) Here ‘x’ is called the independent variable (or) control variable and y is called the dependent variable.

(iv) In linear graphs, independent variable is always taken on the x – axis and the dependent variable on the y – axis.