

MATHS | INTRODUCTION TO GRAPHS

Introduction to Graphs

1. Graphical presentation of data is easier to understand.
2. A bar graph is used to show comparison among categories.
3. A pie graph is used to compare parts of a whole.
4. A Histogram is a bar graph that shows data in intervals.
5. A line graph displays data that changes continuously over periods of time.
6. Two perpendicular number lines intersecting at point zero are called coordinate axes. The horizontal number line is the x-axis and the vertical one is the y-axis. The plane containing both the coordinate axes is called the Cartesian plane. It is also called coordinate plane or xy-plane.
7. The point of intersection of x-axis and y-axis is called origin and is denoted by 'O'.
8. The distance of a point from y-axis is called its x-coordinate and the distance of a point from x-axis is called its y-coordinate. The x-coordinate of a point is called its abscissa. The y-coordinate of the point is called its ordinate. If the abscissa of a point is x and the ordinate of the point is y, then (x, y) are called the coordinates of the point. The coordinates of the origin are (0, 0).
9. The two coordinates x and y taken together for a point P constitutes an ordered pair P(x,y).
10. The positions of the coordinates cannot be interchanged. Therefore $P(x,y) \neq Q(y,x)$, if $x \neq y$.
11. The x- coordinate of every point on y-axis is zero.
12. The y-coordinate of every point on x-axis is zero.
13. The x-coordinate of every point on the line parallel to y-axis is constant.
14. The y-coordinate of every point on the line parallel to x-axis is constant.
15. The Cartesian plane can be used to graph different kinds of situations from everyday life.



16. A line graph which is a whole unbroken line is called a linear graph.
17. Two quantities which vary directly can be plotted as a linear graph. Independent variable is generally taken on x axis the dependent variable is taken on y axis.
18. Steps to draw a graph:
- Find out the relation between y and x.
 - Calculate different values of y corresponding to the values of x.
 - Tabulate the results.
 - Plot the points.
 - Join the points to obtain the graph.
19. By looking at a linear graph, we can find out the 'y' coordinate (or 'x' coordinate) in relation to any point on the 'x' axis (or 'y' axis).

