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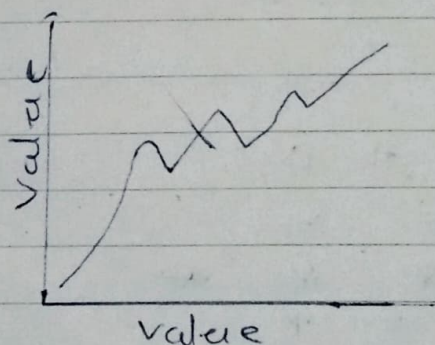
* Line chart :

A line chart (or line graph) is a type of chart used to show changes or trends over time .

- x - axis usually represents time .
- y - axis represents the value being measured like sales , temperature , marks , etc .
- Data points are marked on the chart and then connected with a line to show the trend .

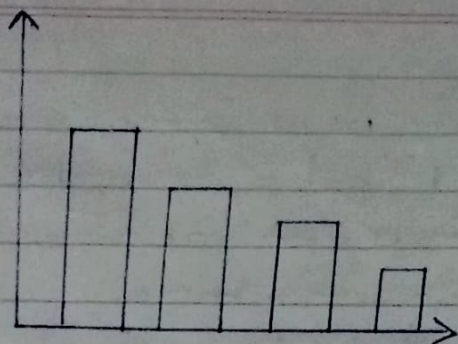
* Advantages of a line chart

- 1) show trends over time .
- 2) Easy to read and understand .
- 3) Highlights relationships .
- 4) Detects patterns and fluctuations .



* Bar chart :-

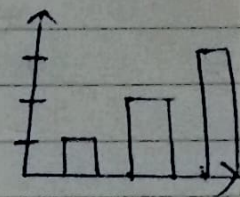
A Bar chart is visual representation of data using rectangular bars . Each bar represents a category of data and height of the bar shows the value or frequency of that category .



* Histogram :-

1) Advantages :

- displays distribution clearly ..
- Groups large sets of Data .
- Easy to identify patterns .
- Highlights outlier and Gaps .
- Great for frequency data



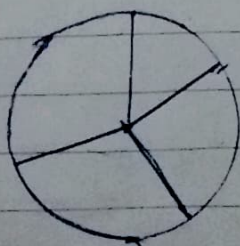
2) Disadvantages :

- loses individual data points .
- Bin size sensitivity .
- Not ideal for comparing .

* Pie chart :

A pie chart is a circular graph divided into slices to illustrate numerical proportions. Each slice represents a category and its size reflects the percentage or proportions of the total .

- circular shapes representing 100% of the data .
- Slices show how much each category contributes to the whole .



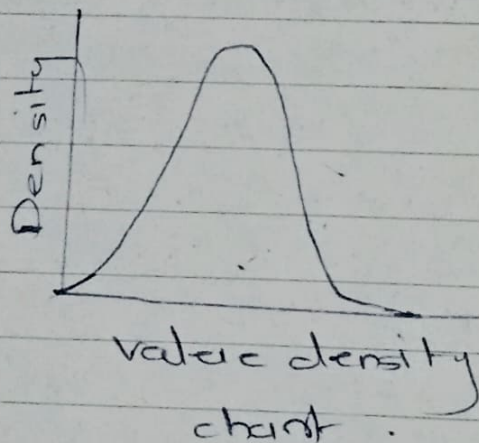
* Density Plot ::

A density chart is a smoothed version of a histogram. It estimates the probability distribution of a continuous variable.

- smooth curve, no bars.
- Represents distribution of continuous Data.
- Good for visualizing the shape of Data.
- Area under the curve = 1.

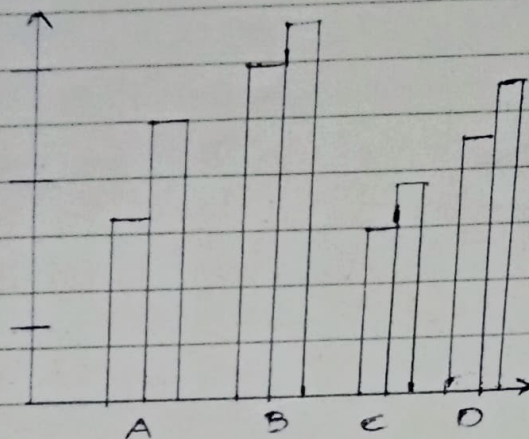
Advantages :

- Smooth visualization.
- No bin size needed.
- Good for comparison.



* Group plot:

A group plot is used to compare different datasets. It often involves comparing the same type of data for different groups or categories. For example, a group plot could be used to compare the performance of different products in the same market.



* Faced Grid plot:

A faced grid plot creates multi-plot grids for conditional relationships. It divides the data into subsets based on one or more variables and then displays a plot for each subset in a grid format. This allows us to explore how the relationships between two variables change under different conditions.

