

# Data Visualization

## Line Chart

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# Line Chart

- A line chart is a graphical representation of an asset's historical price action that connects a series of data points with a continuous line.
- This is the most basic type of chart used in finance, and it typically only depicts a security's closing prices over time.
- Line charts can be used for any timeframe, but they most often make use of day-to-day price changes.



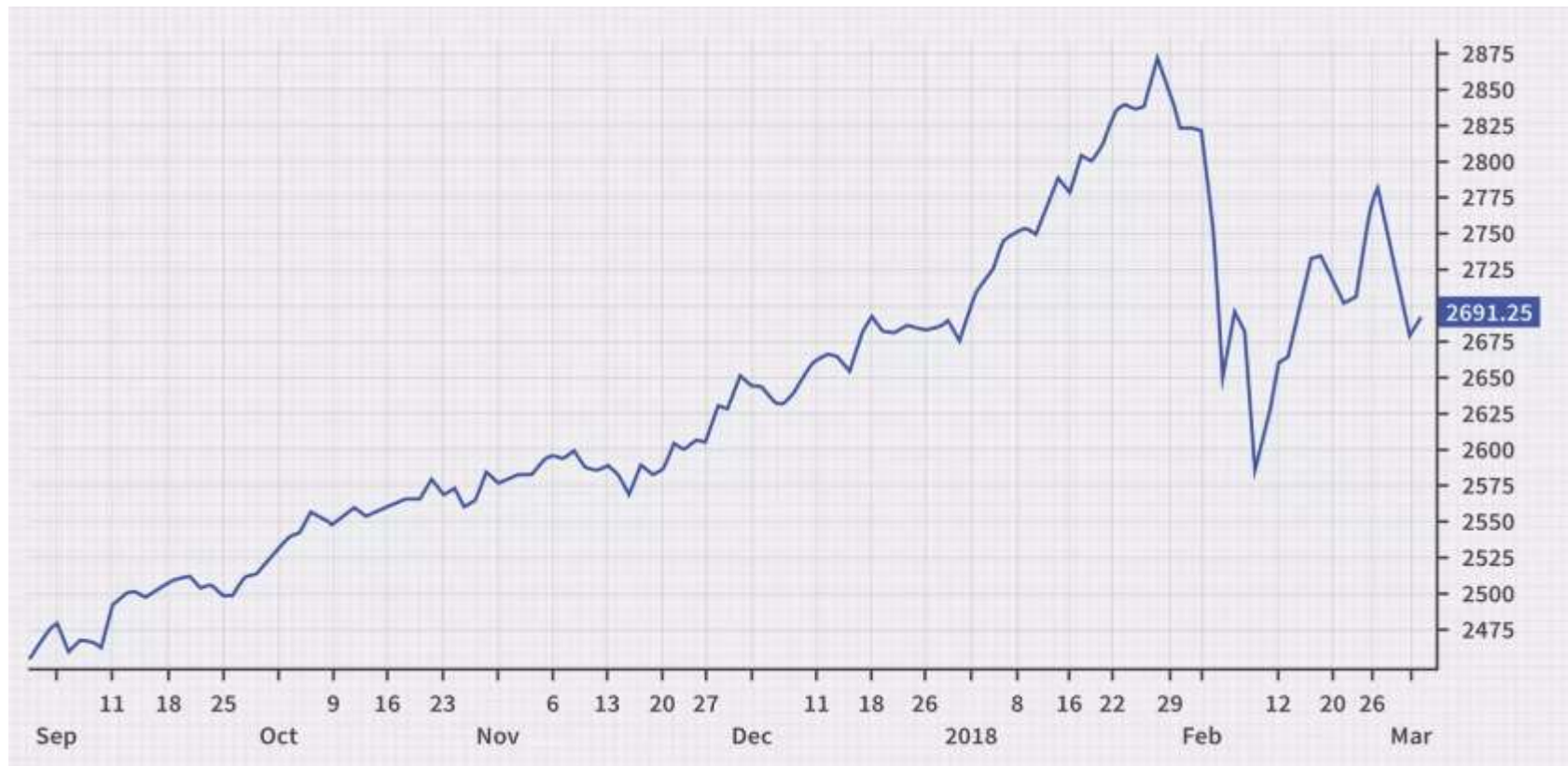
- A line chart is a type of chart that displays information as a series of data points connected by straight line segments.
- A line chart is a way of visually representing an asset's price history using a single, continuous line.
- A line chart is easy to understand and simple in form, typically only depicting only changes in an asset's closing price over time.
- Because line charts usually only show closing prices, they reduce noise from less critical times in the trading day, such as the open, high, and low prices.
- Because of its simplicity, however, traders looking to identify patterns or trends may opt for chart types with more information, such as a candlestick.

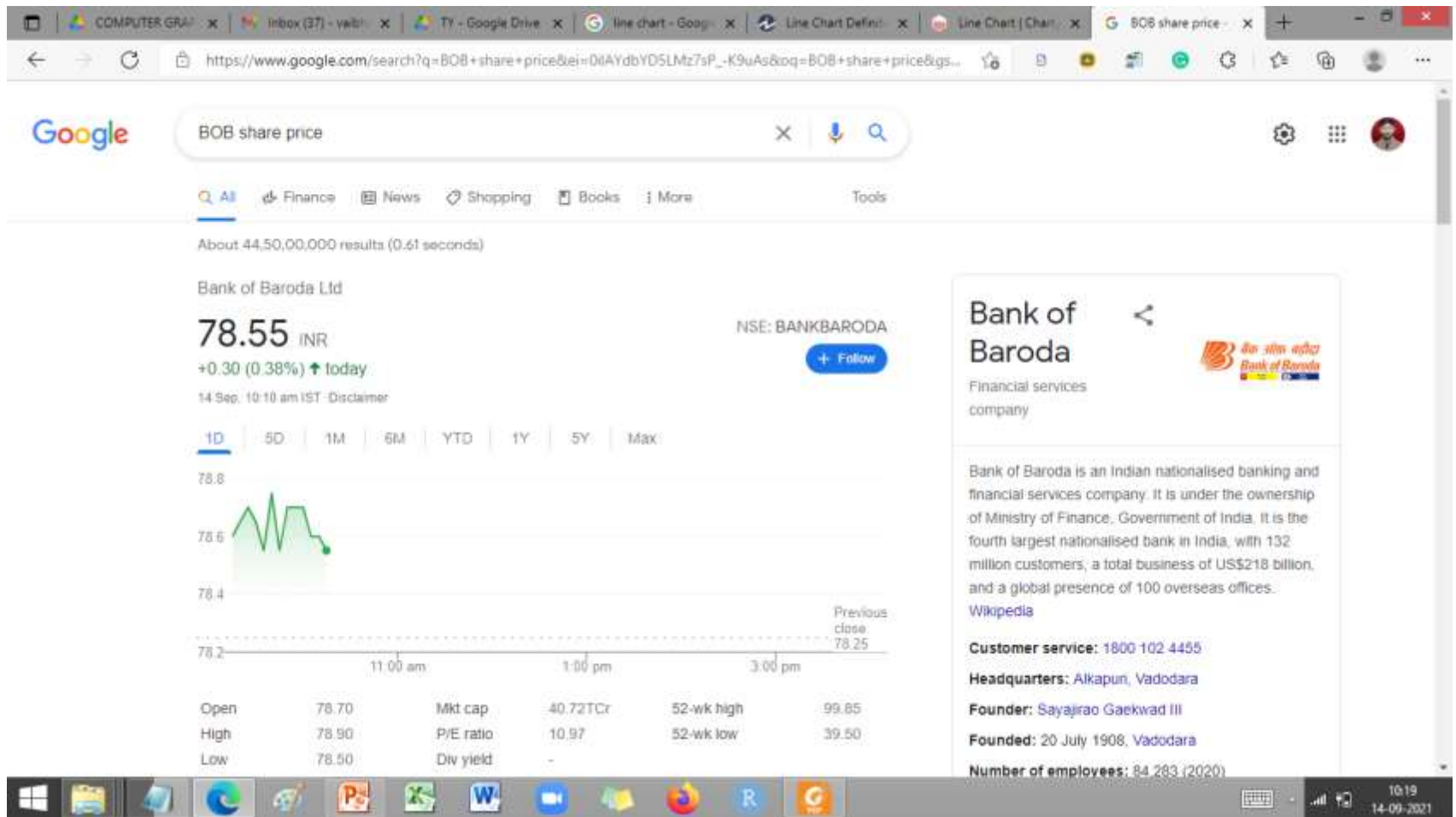


# Understanding Line Charts

- A line chart gives traders a clear visualization of where the price of a security has traveled over a given time period.
- line charts usually only show closing prices, they reduce noise from less critical times in the trading day, such as the open, high, and low prices.
- Line charts are popular with investors and traders because closing prices are a very commonly viewed piece of data related to a security.







- Other popular styles of charts include bar charts, candlestick charts, and point and figure charts. Traders can use line charts alongside other charts to help see a more full technical picture.



# Advantages of A Line Graph

- You can easily show the data changes over time over a line graph.
- It is also helpful to show small changes that are difficult to measure in other graphs.
- A relationship between 2 or more variables get identified.
- It presents a good impression of trends and changes.
- Both negative, as well as positive values, are indicated.





# Disadvantages of A Line Graph

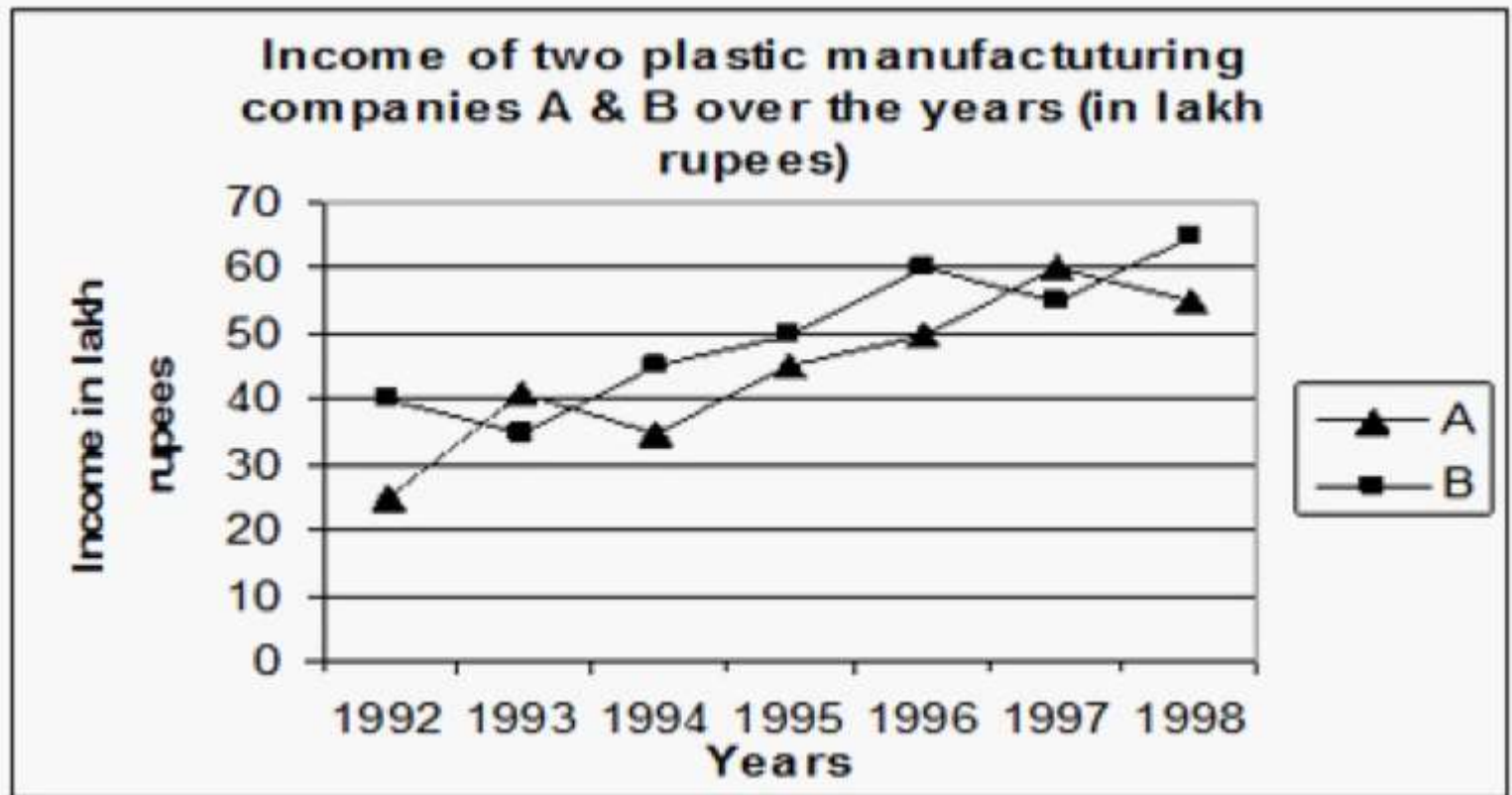
- Plotting too many lines over the graph makes it cluttered and confusing to read.
- A wide range of data is challenging to plot over a line graph.
- They are only ideal for representing data made of total figures such as values of total rainfall in a month.

# Line Graph VS. Line Plot

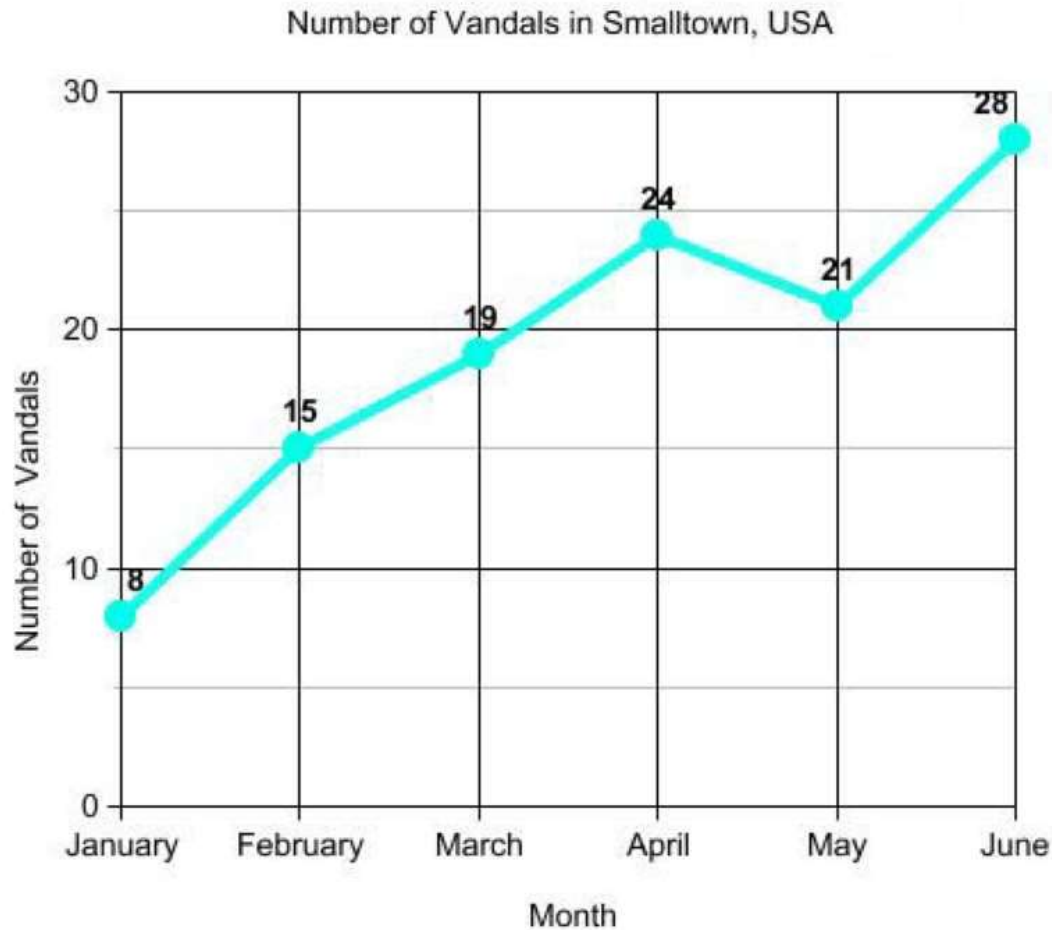
Basis	Line Graphs	Line Plots
Type	They are a type of graph using lines.	They are also a type of graph using dots.
Usage	They are used to indicate different values for two or more subjects.	They are also used to indicate the same except using lines.
Reading	They are read or being analyzed to evaluate data changes over time.	Similarly, they also analyze data changes.

Basis	Line Graphs	Line Plots
Presentation	They use lines to connect different data points.	They only make use of dots to facilitate comparisons.
Usage	It is not used to show data frequency rather a data change over time.	It is used to show data frequency over some time.
Structure	Several occurrences are not visible. Rather a straight line indicates the purpose.	Several occurrences are visible above every number on a line.

# Example 1: Income of two companies A & B.

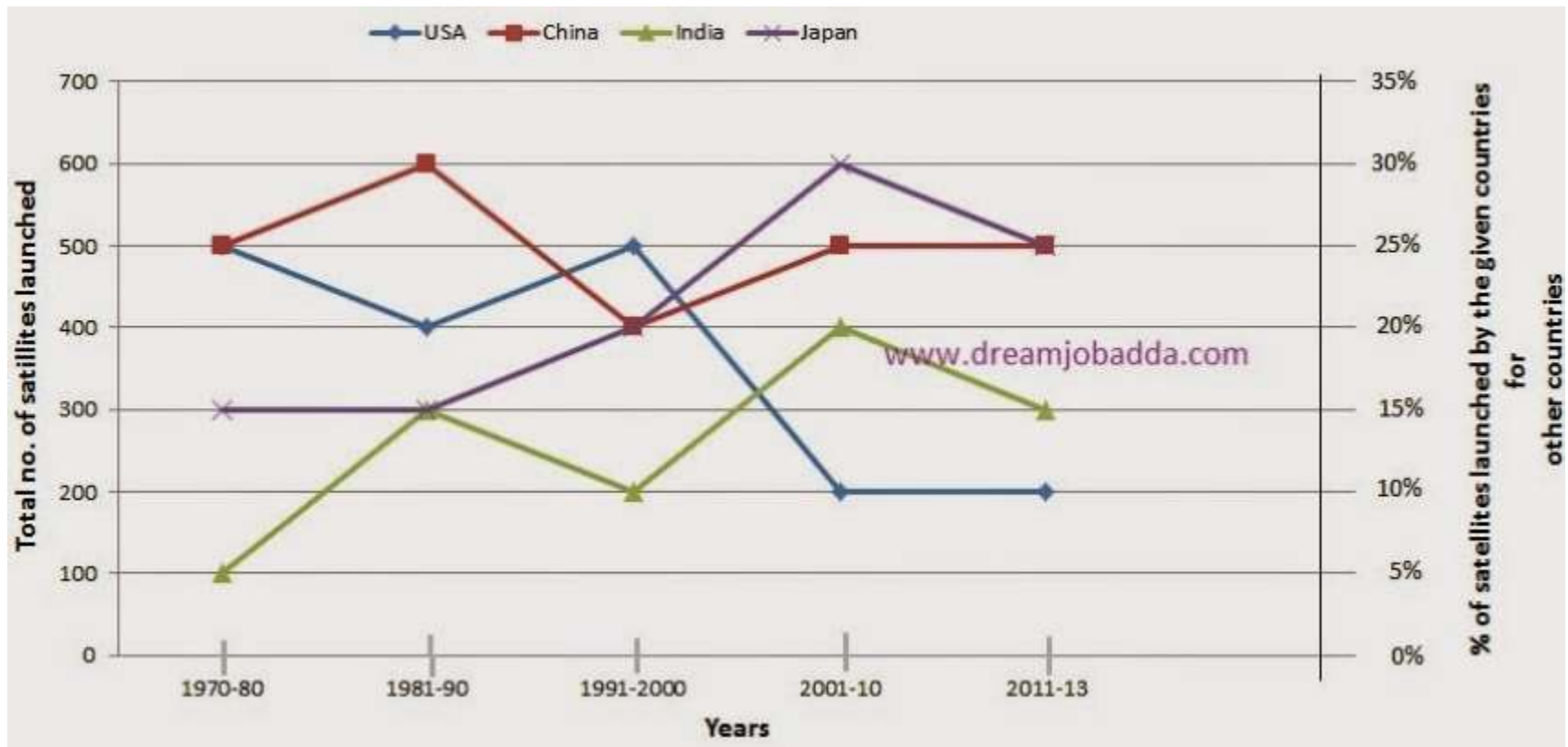


# Example 2: Weight



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# Example 3: Number of satellites launched by different countries



# Question ?



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