



ISO 9001:2008 CERTIFIED



# Graphical Representations

Sudhakar C Agarkar

Dr. V N Bedekar Institute of Management Studies, Thane



Let us visit Silicon Valley

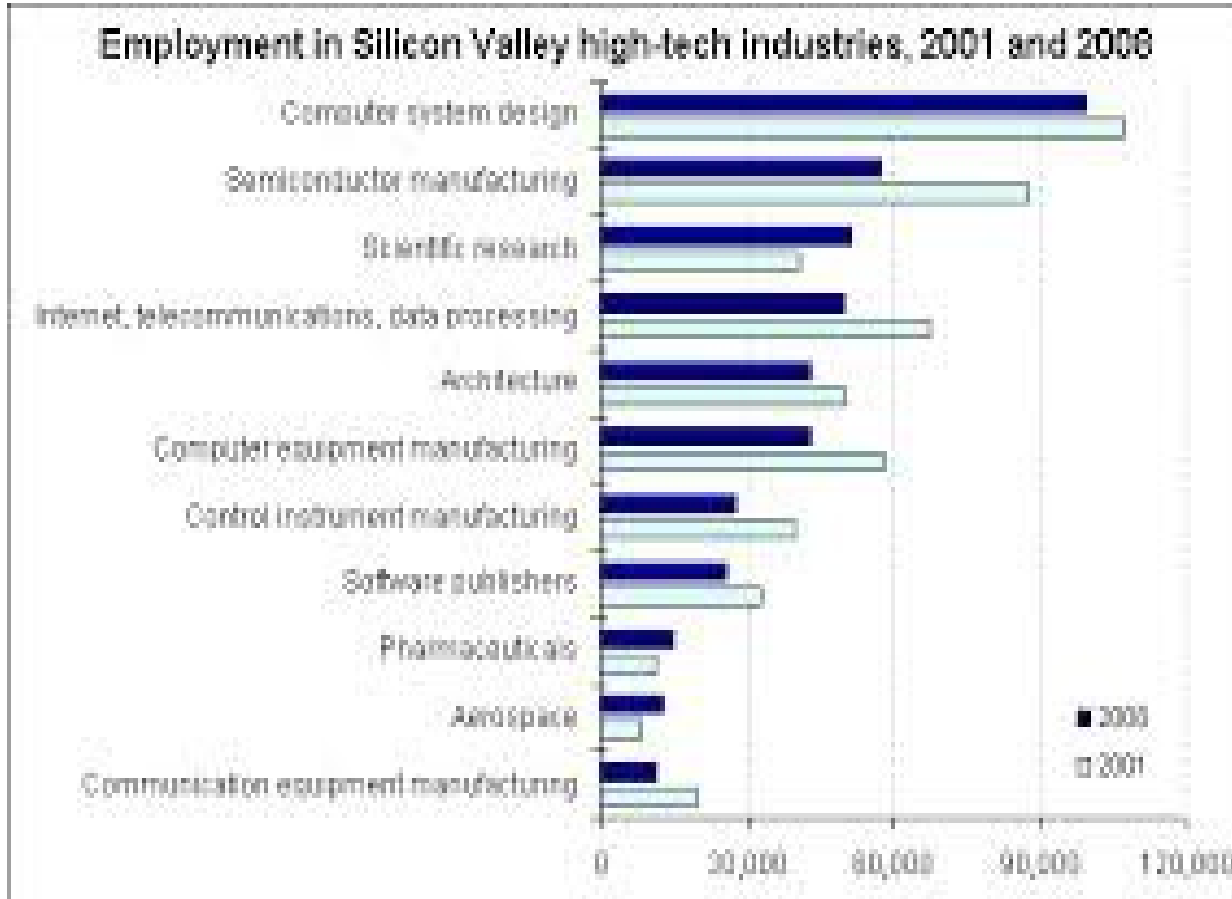


Some Info on Silicon Valley

Silicon Valley Financing History: Investment Deals and Dollars  
 Q1 2009 - Q3 2013



More info about Silicon Valley





## Result of a Research Study



Once I was trying to study mathematical literacy among the students. In order to know the role of a graph in the newspaper I asked “What for the graphs are included in the newspapers?” Some of the answers received were as follows:

- ! To fill the space in the newspaper
- ! To support what has been said in the news item
- ! To decorate the newspaper
- ! To enable reader to get the pictorial representation of the data
- ! To facilitate understanding of the information given



## Meaning of Graphs



Whenever verbal problems involving a certain situation is presented visually before the learners, it makes easier for the learner to understand the problem and attempt its solution.

Similarly, when the data are presented pictorially (or graphically) before the learners, it makes the presentation eye-catching and more intelligible.

The learners can easily see the salient features of the data and interpret them.

## The Inventor of Graphs

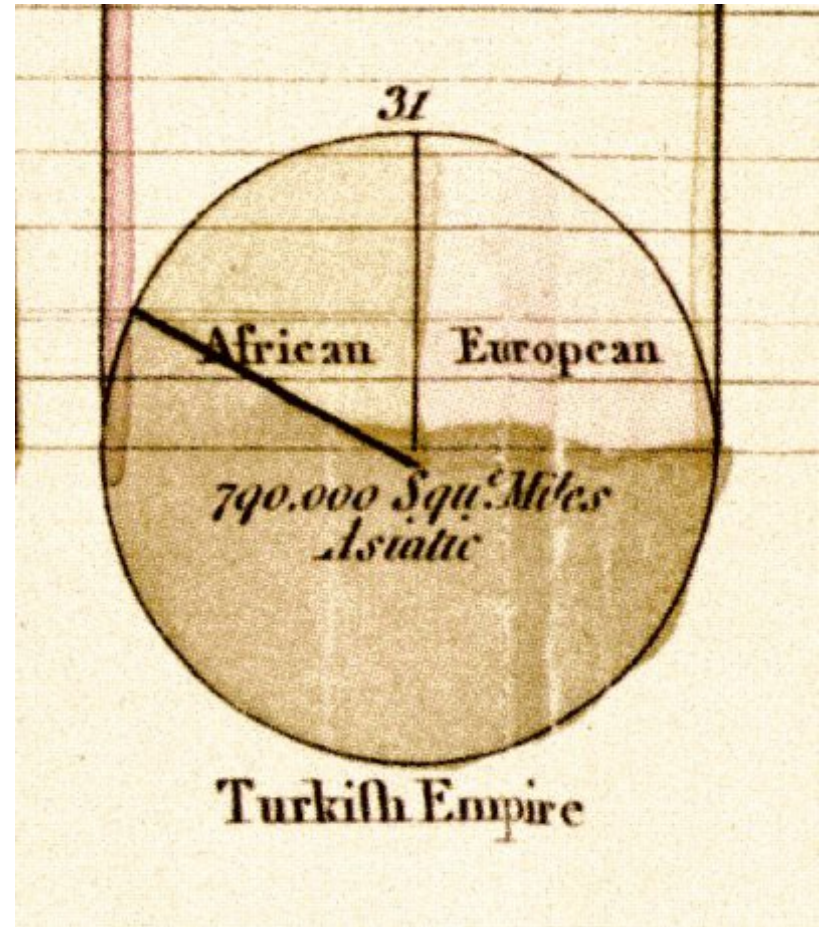
William Playfair (1759-1823), Scottish engineer and political economist, is the principal inventor of statistical graphs.

In 1786, he published “Commercial and Political Atlas” that contained 44 charts. Playfair invented three of the four basic forms of graph:

The statistical line graph

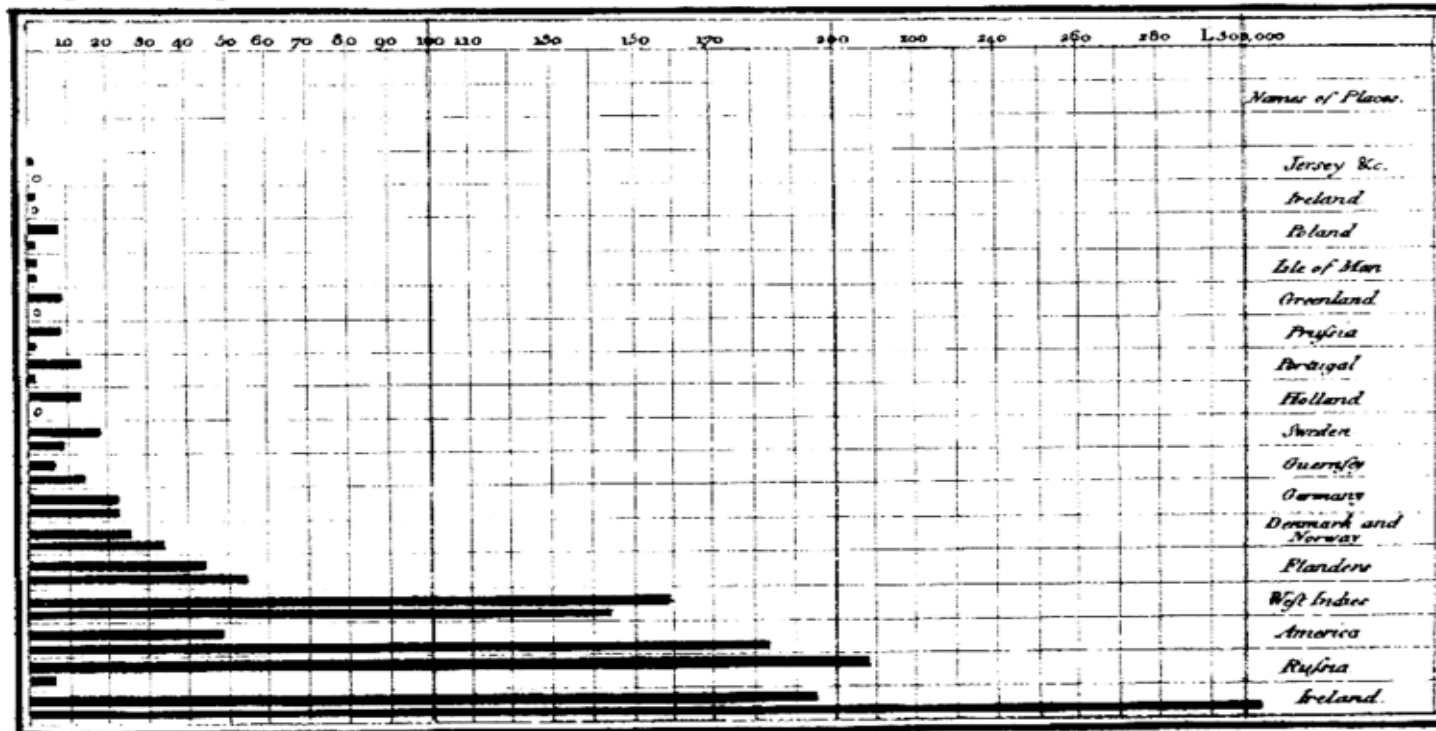
The bar graph

The pie graph



# Playfairs Graphs

Exports and imports of SCOTLAND to and from different parts for one Year from Christmas 1780 to Christmas 1781.



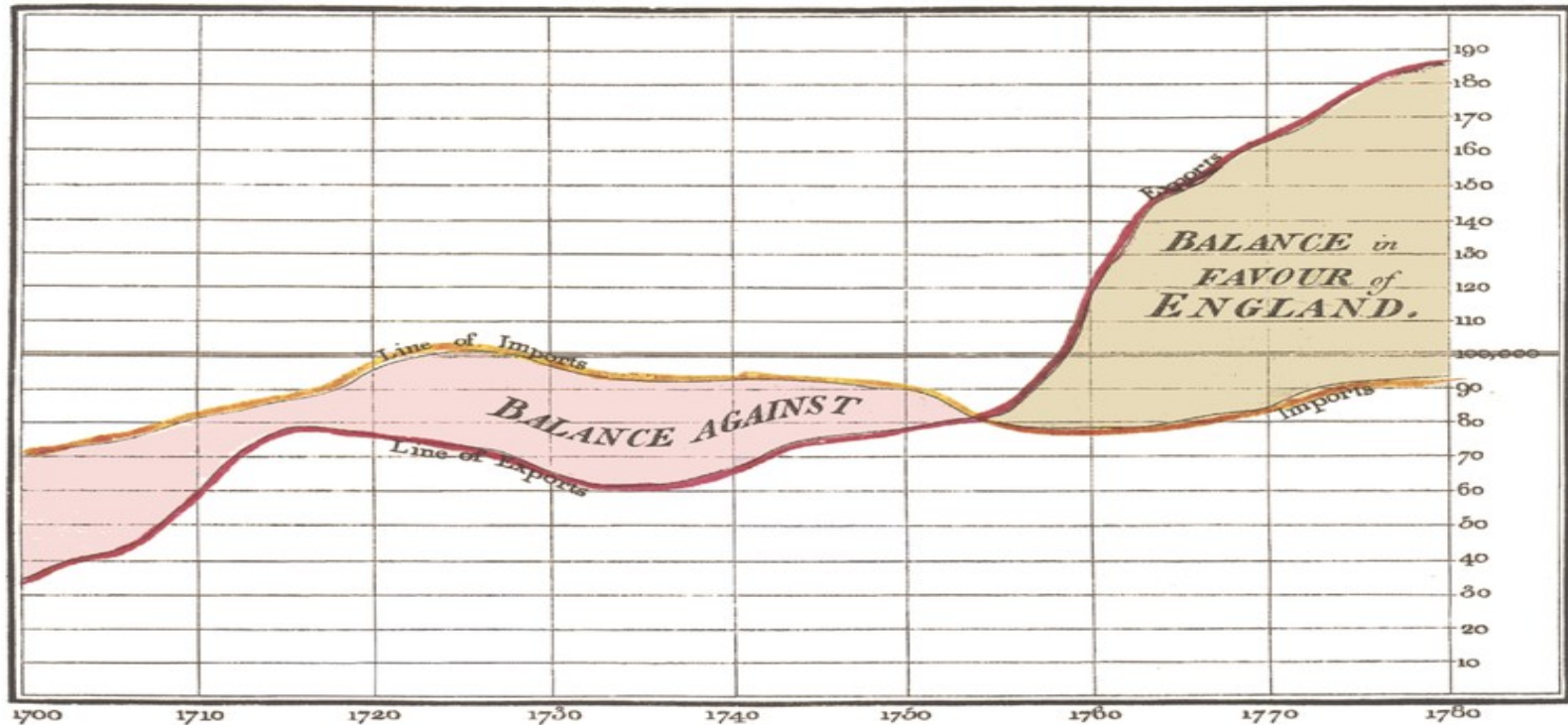
The Upright divisions are Ten Thousand Pounds each. The Black Lines are Exports the Ribbed Lines Imports.

Published as the Act done June 9<sup>th</sup> 1781 by W<sup>m</sup> Playfair

Made comp<sup>t</sup> 352 Strand. London.



Exports and Imports to and from DENMARK & NORWAY from 1700 to 1780.

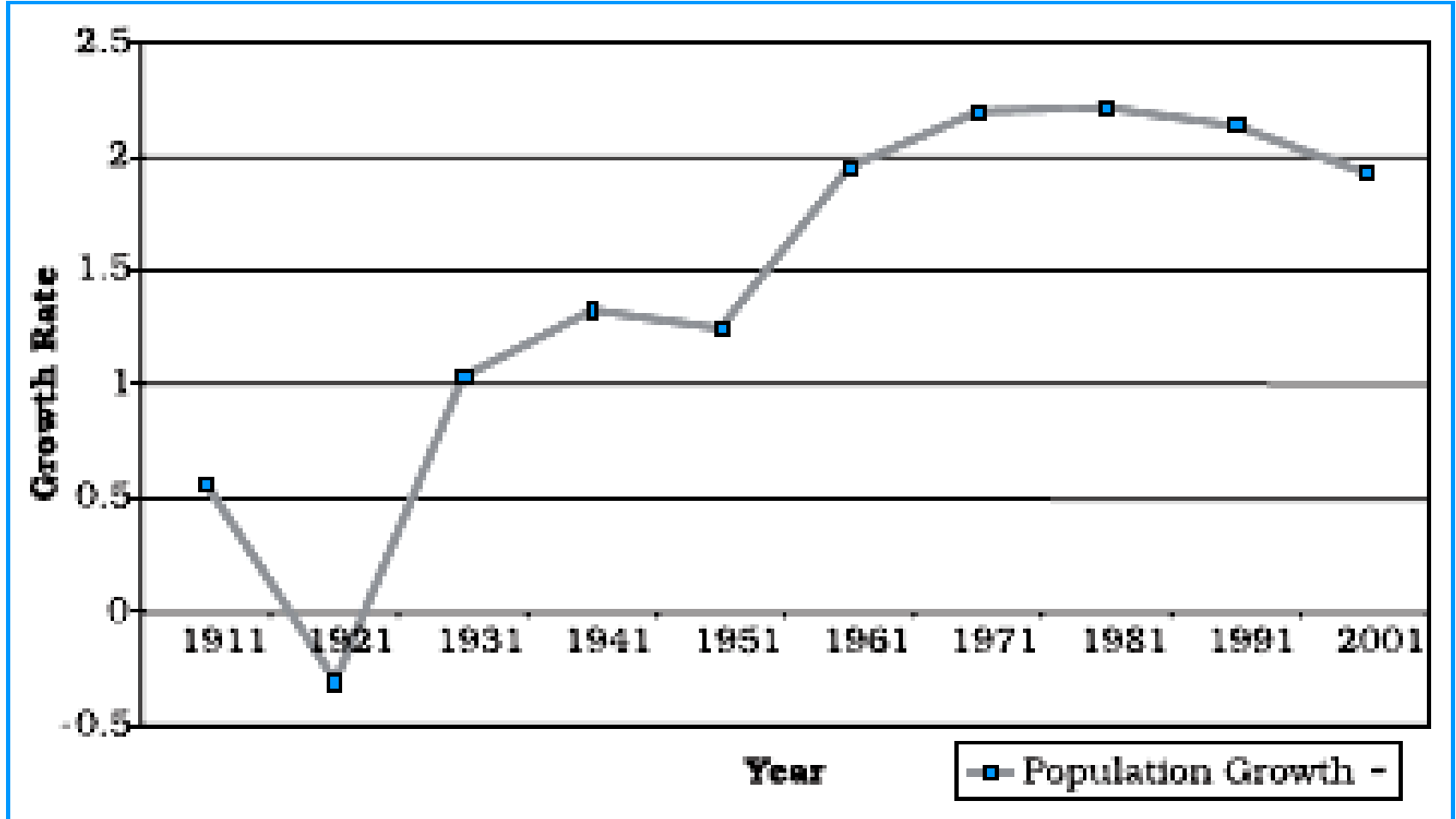


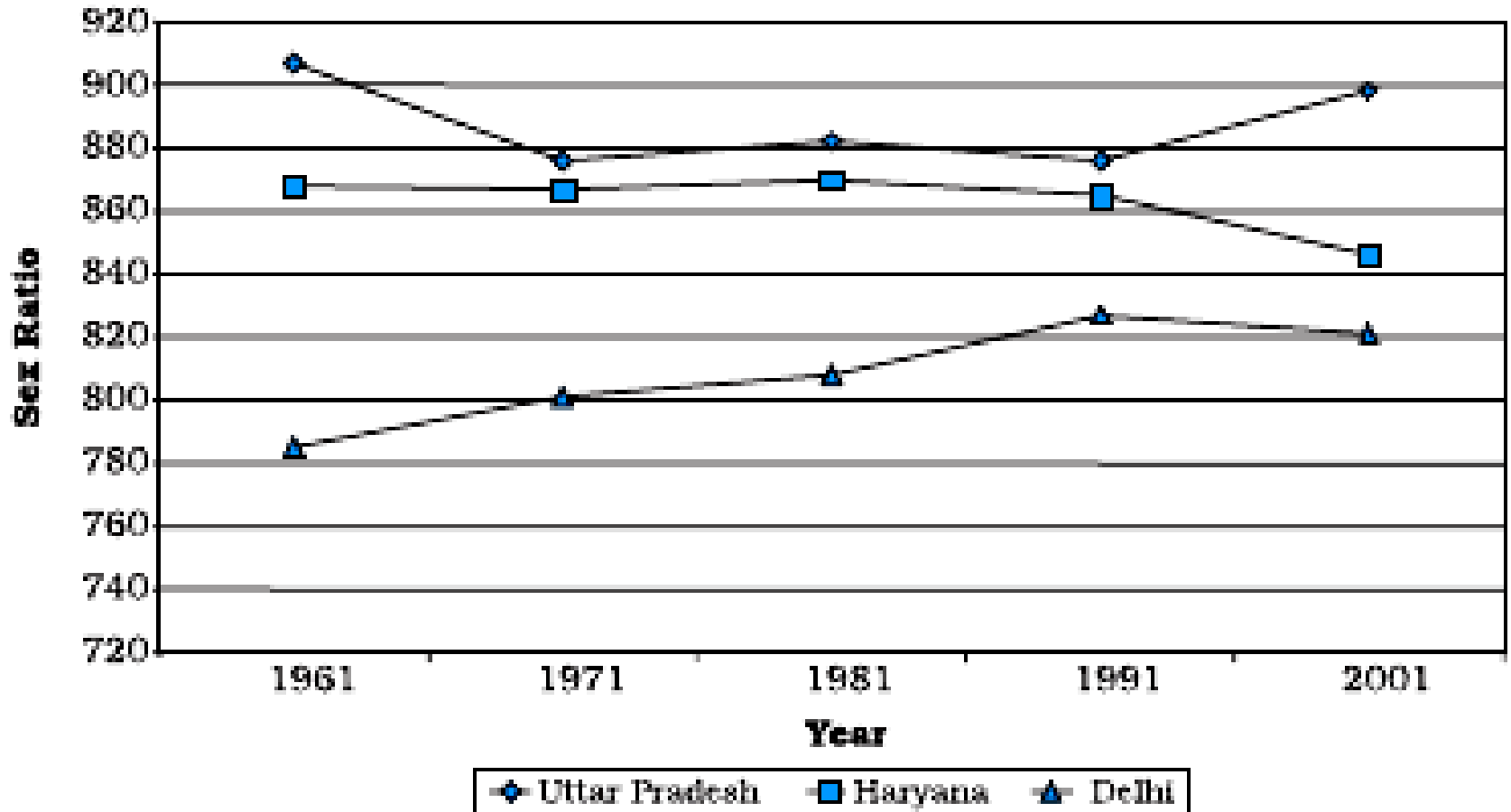
*The Bottom line is divided into Years, the Right hand line into £10,000 each.*

*Published as the Act directs, 1<sup>st</sup> May 1786, by W<sup>m</sup> Playfair*

*Neale sculpt 352, Strand, London.*

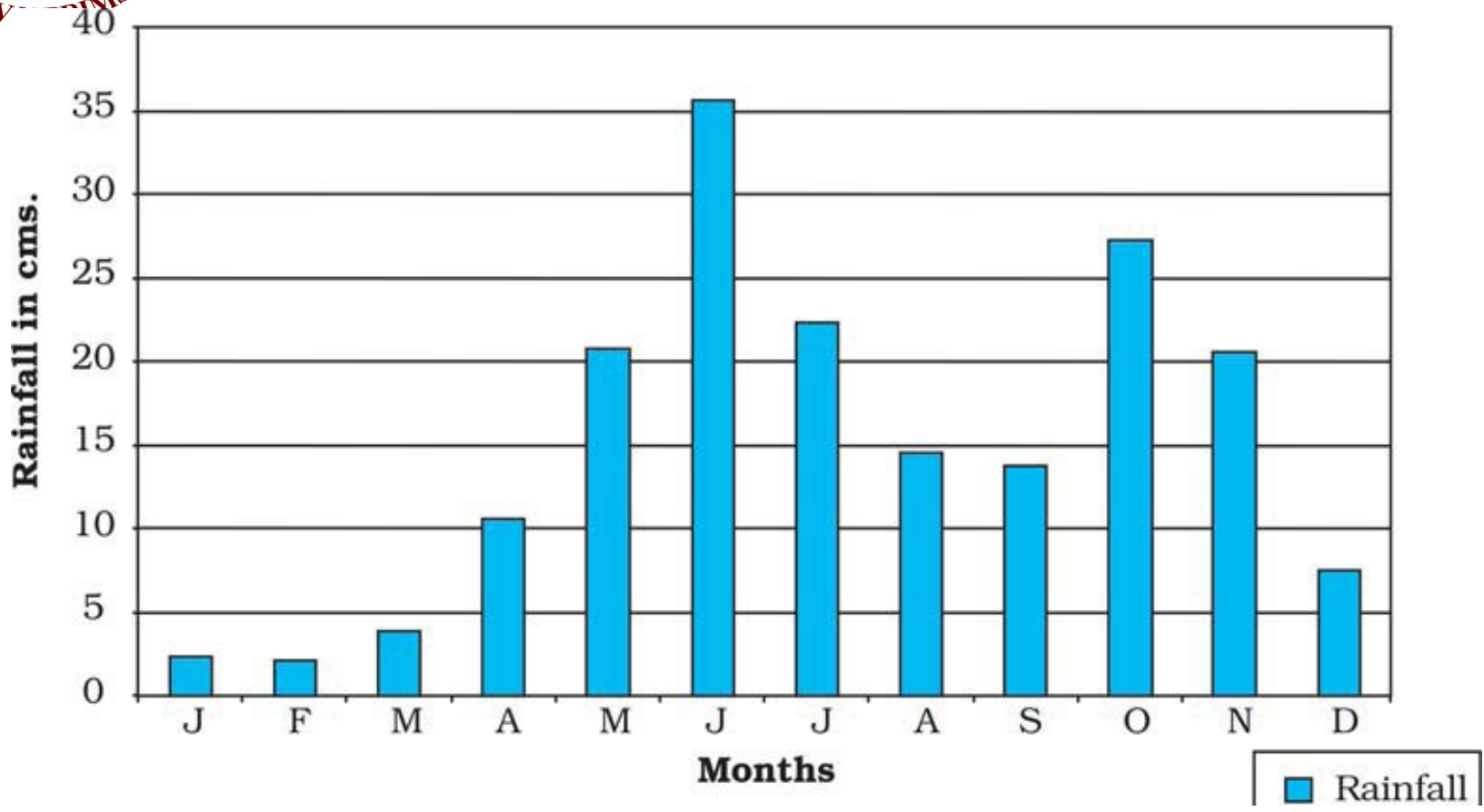
A Line Graph



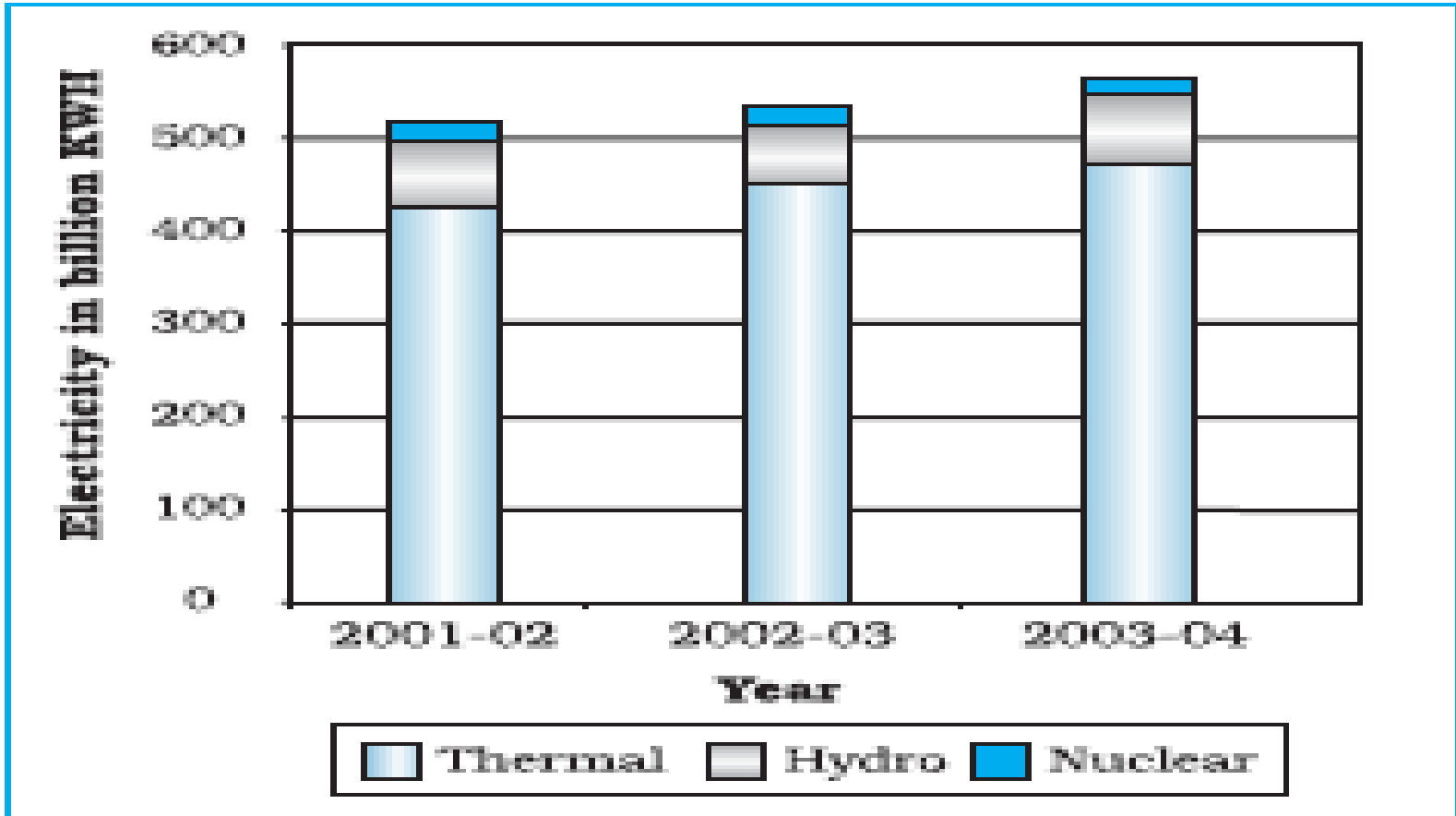




## Simple Bar Graphs

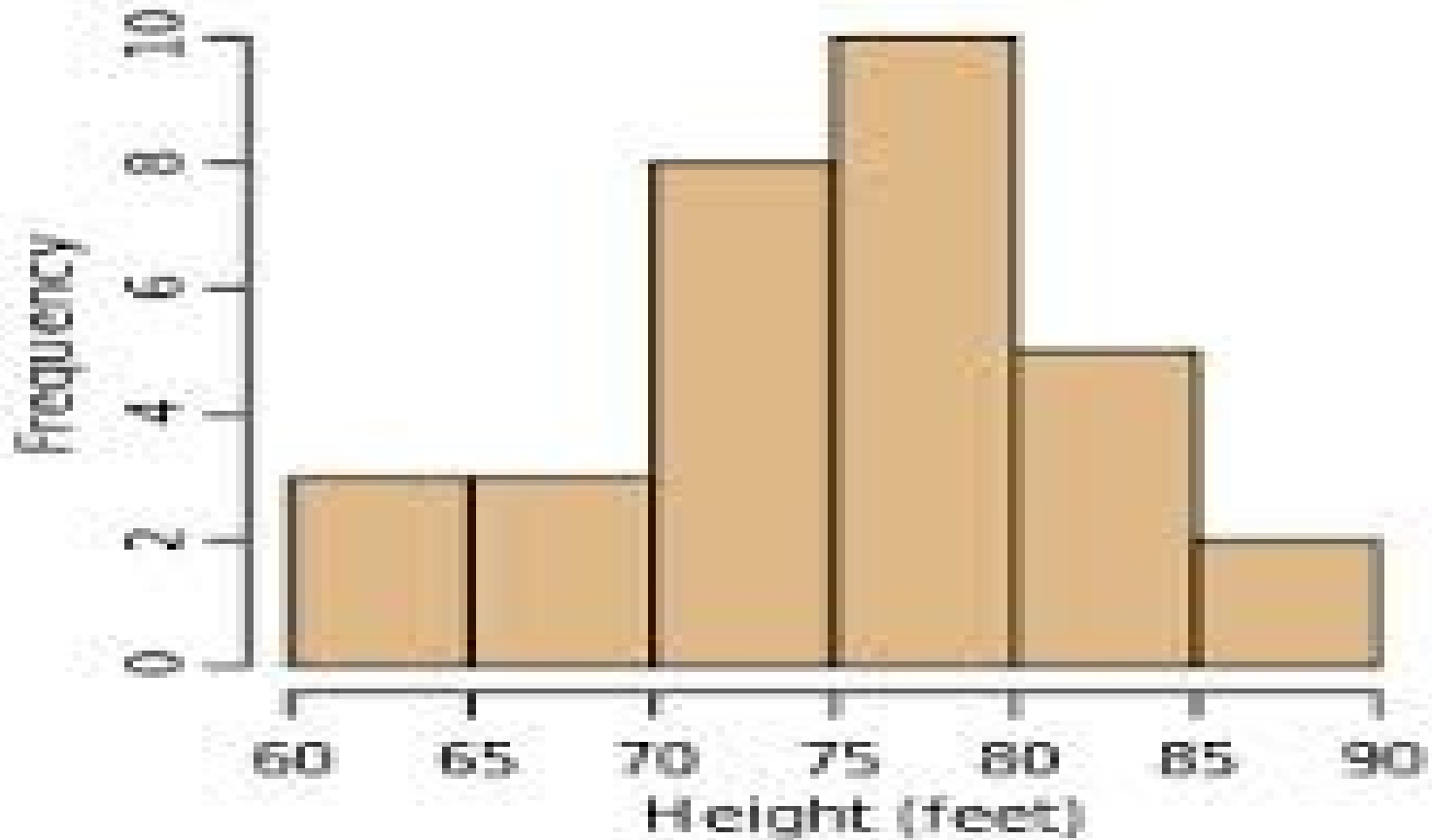


Compound Bar Graphs

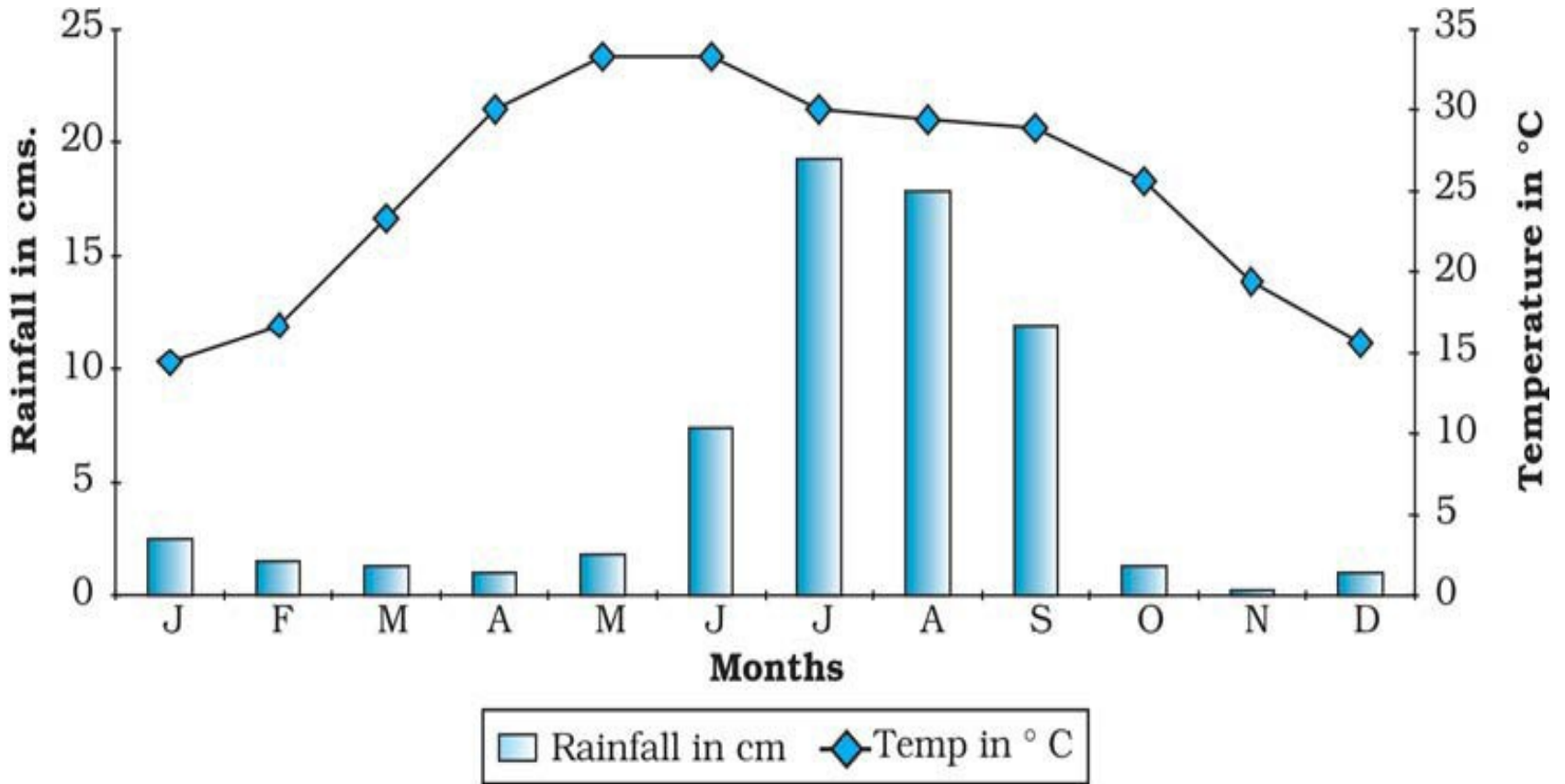


## Histograms

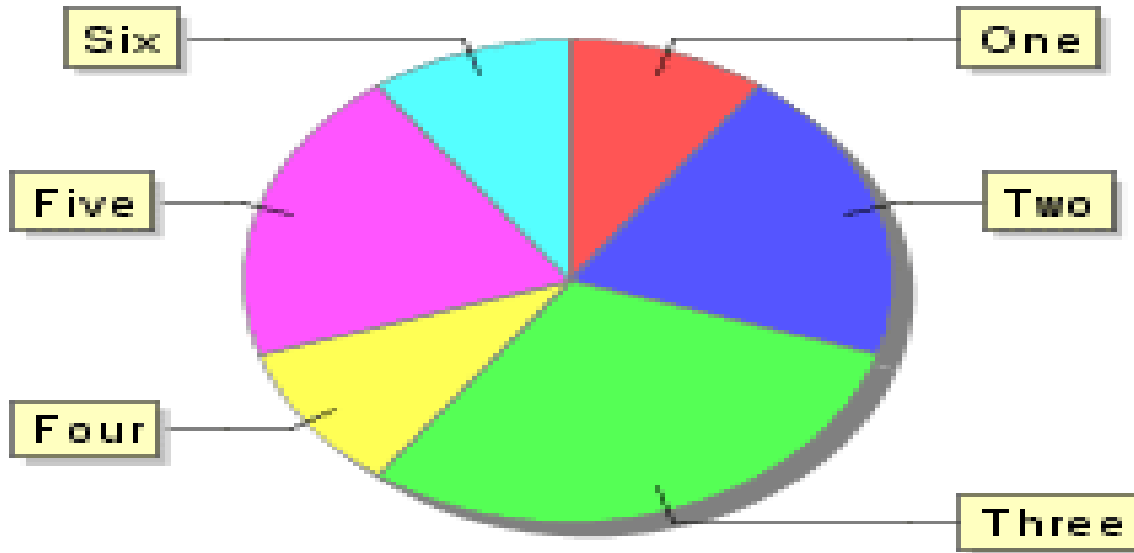
# Heights of Black Cherry Trees



Polybar Diagram



Pie Diagram







## Summary



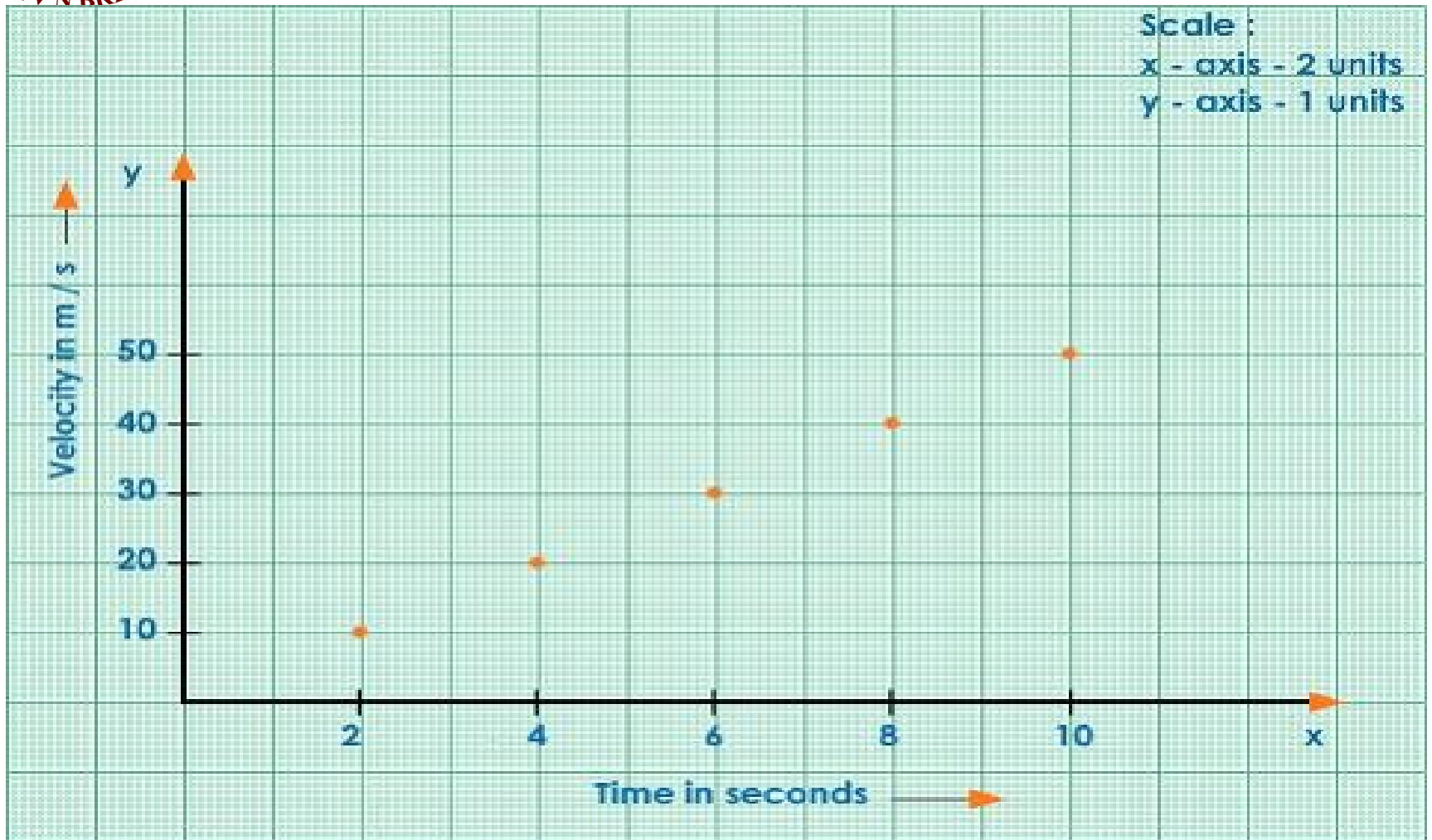
If the information is presented in tabular form or in a descriptive record, it becomes difficult to draw results.

Graphical form makes it possible to easily draw visual impressions of data.

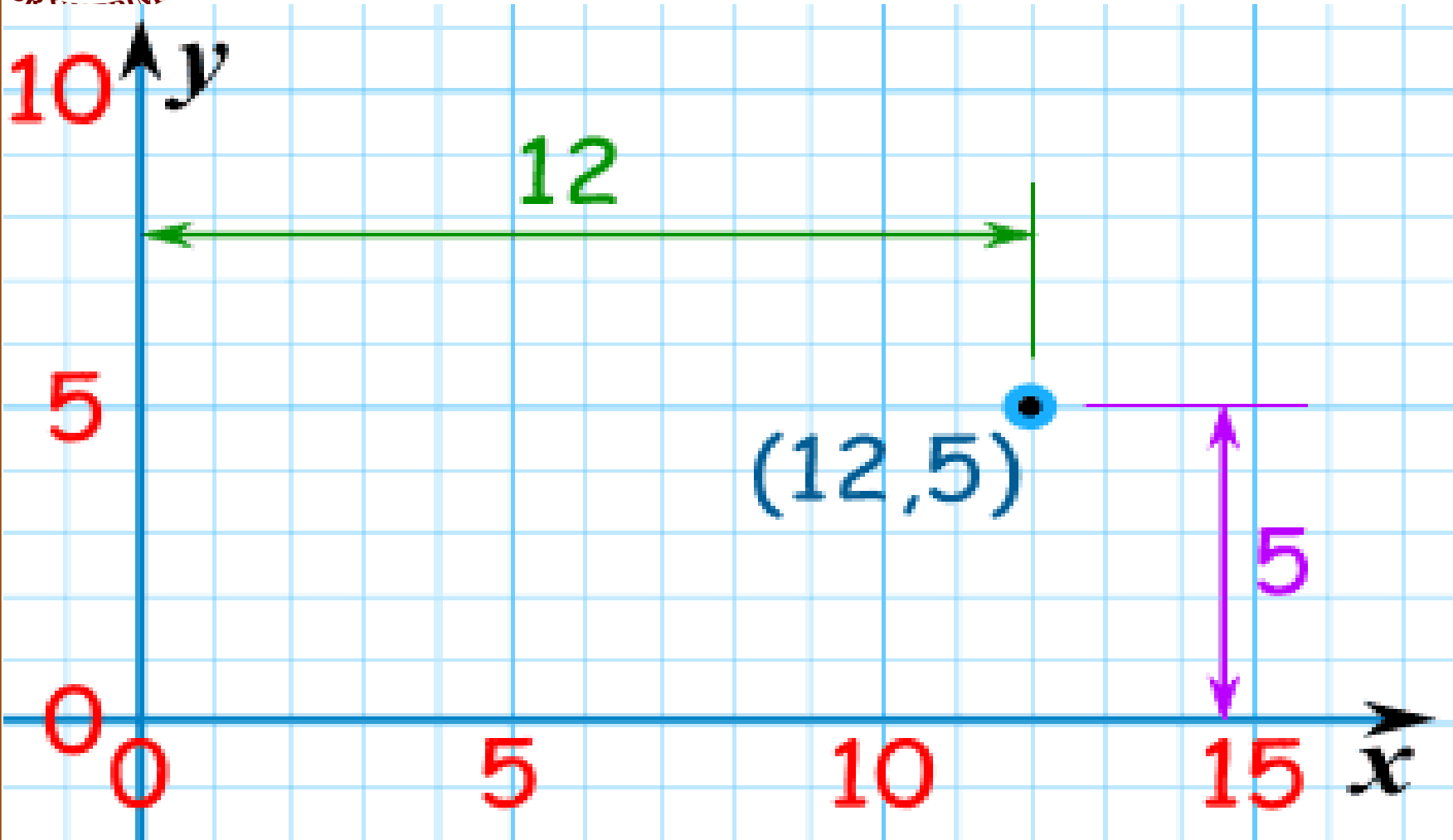
The graphic method of the representation of data enhances our understanding.

It makes the comparisons easy.

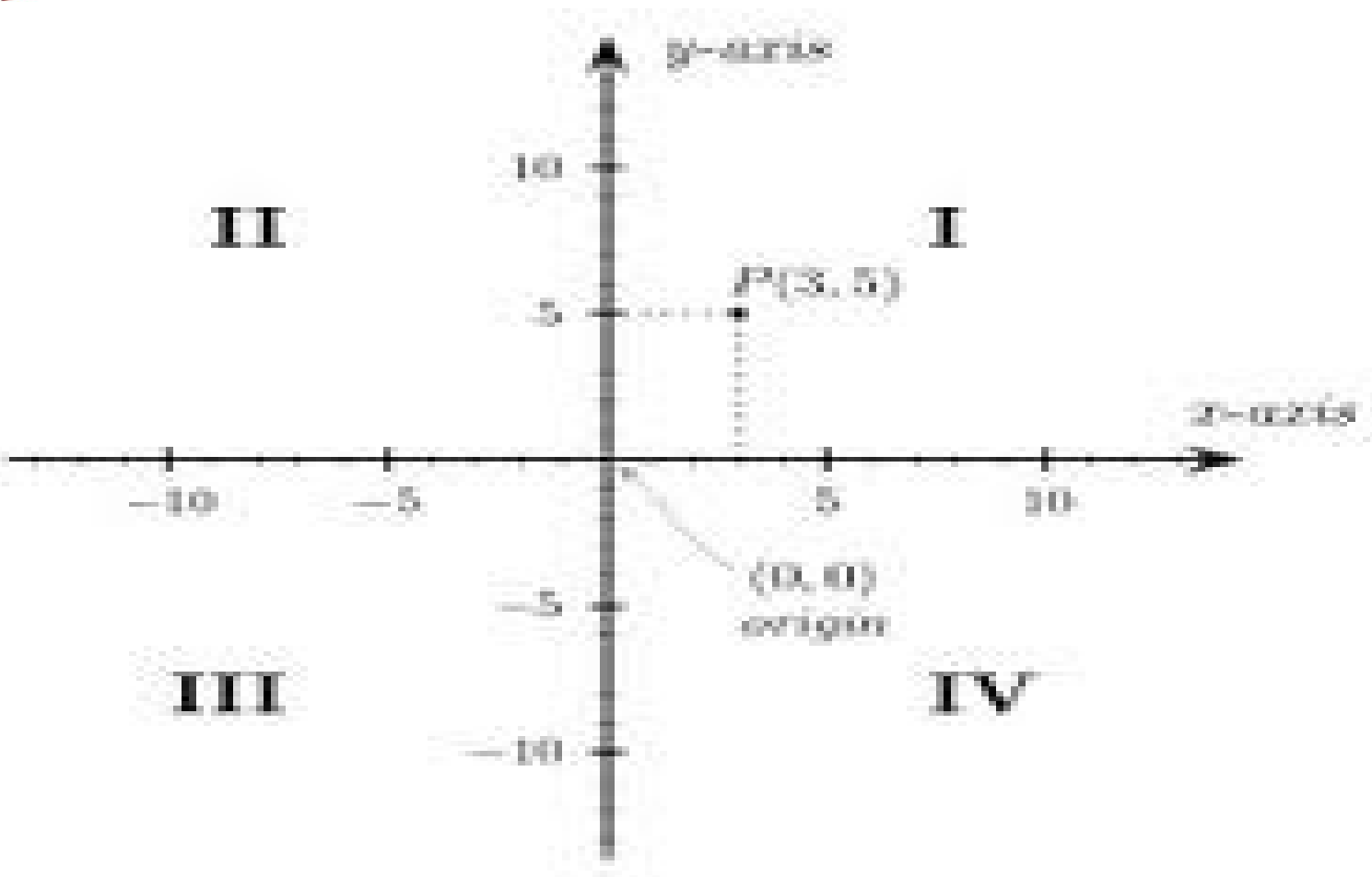
Besides, such methods create an imprint on mind for a longer time.



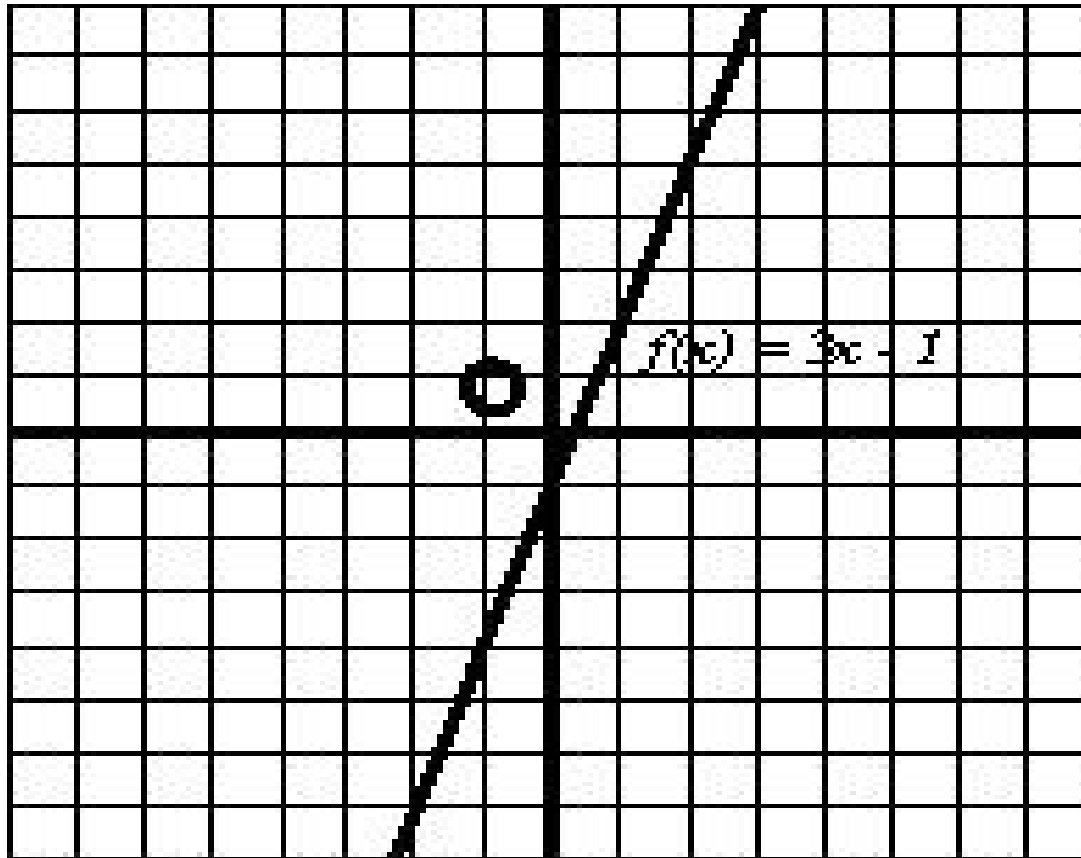
## Locating a Point



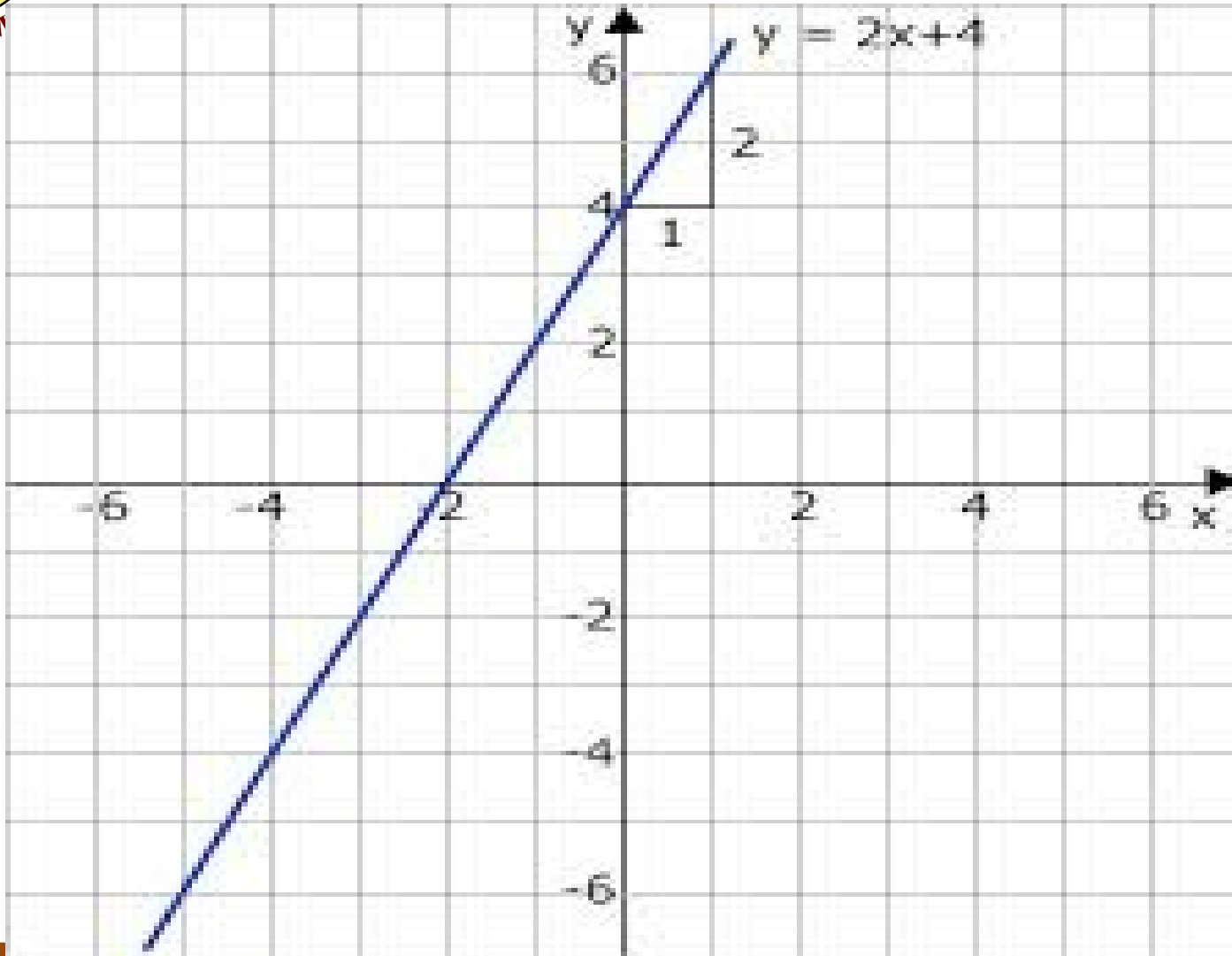
### Four Quadrants



Plot of a Line



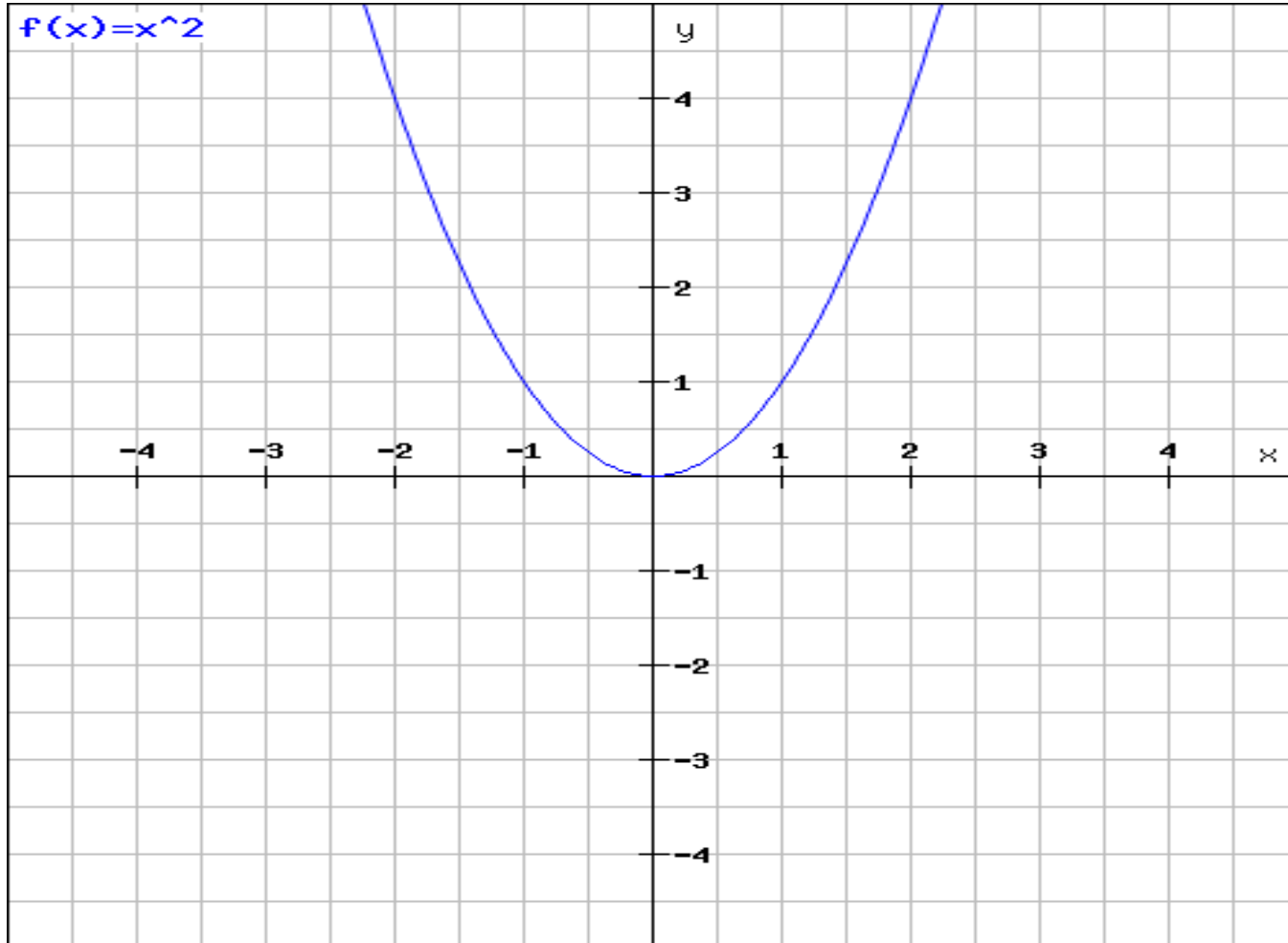
Another Line



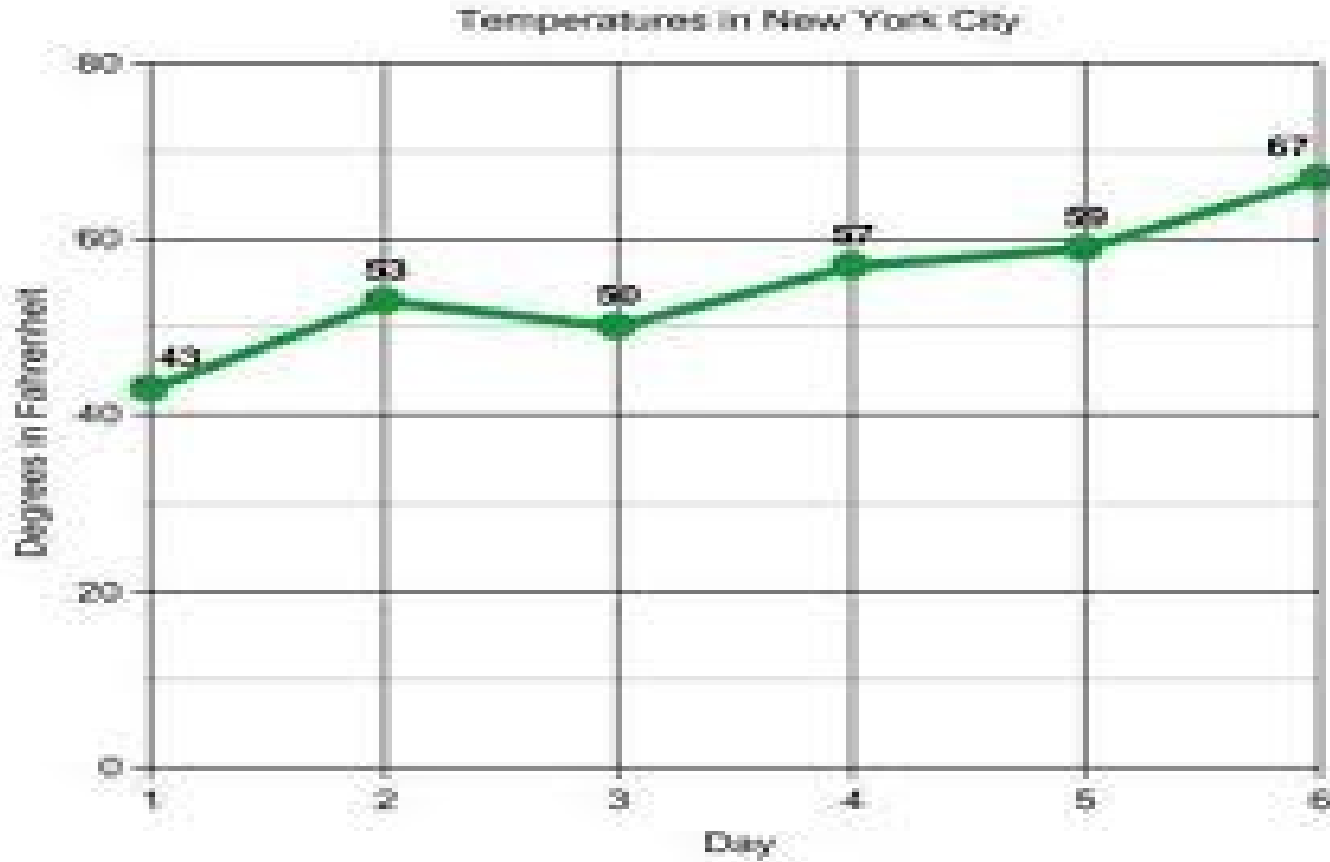


A Parabola

ISO 9001:2008 CERTIFIED



## Meaning of a Line Graphs







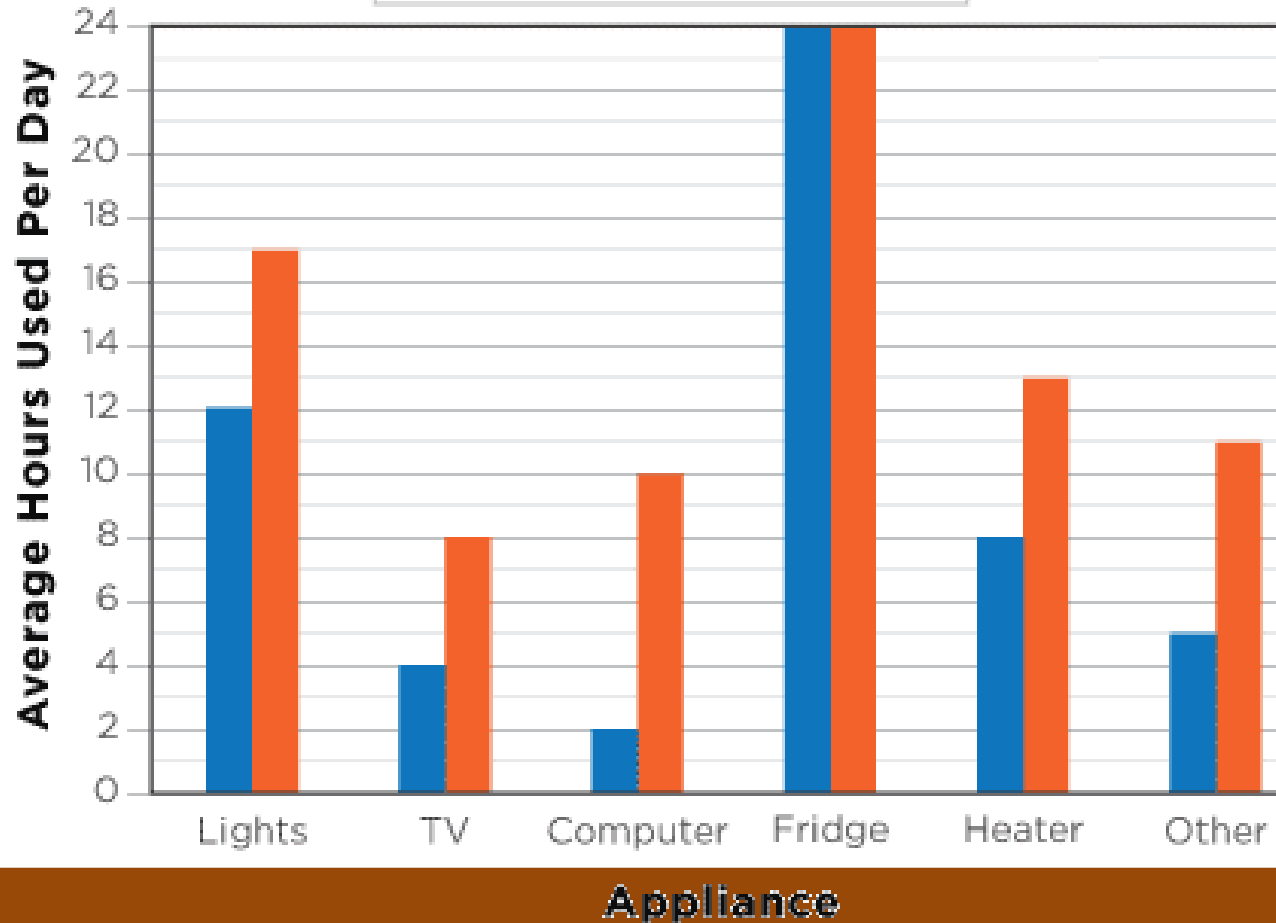
## Meaning of Bar Graphs

ISO 9001:2008 CERTIFIED

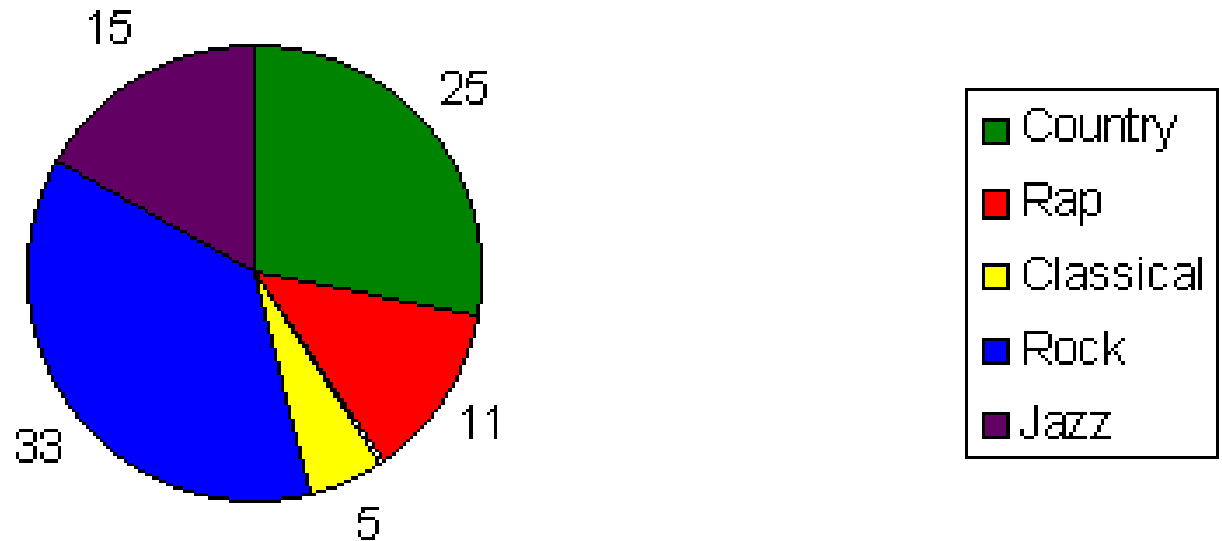


## Home Electricity Use

Key ■ Weekday ■ Weekend

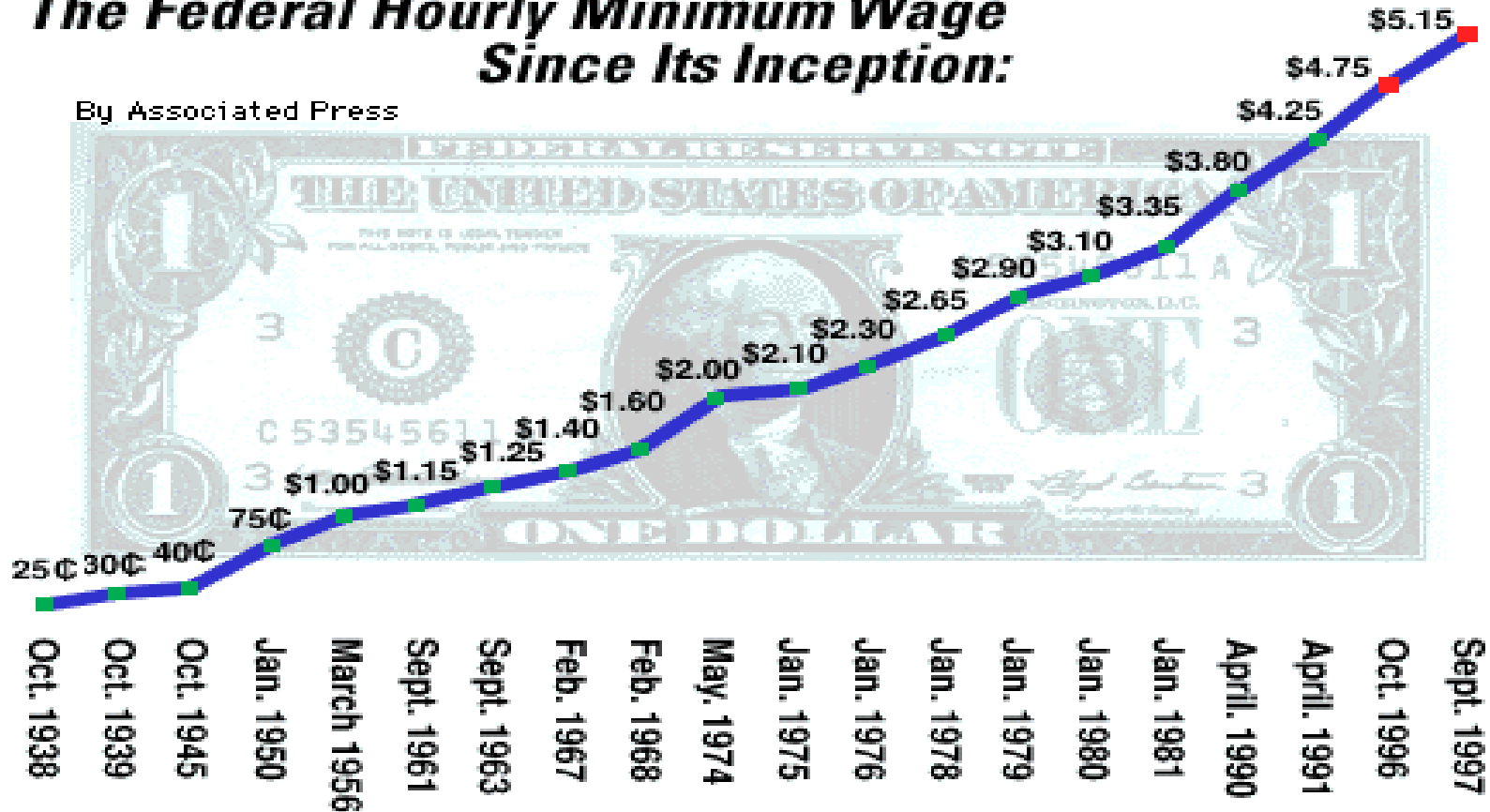


## Favorite Types of Music



# The Federal Hourly Minimum Wage Since Its Inception:

By Associated Press



# ● Conclusions

- Graphs are useful in everyday life like
  - School Results
  - Electricity Consumption
- Graphs are useful in Business and commerce like
  - Sales of the company
  - Growth of shares
- Graphs are useful in planning like
  - Requirement of resources
  - Distribution of wealth
- Graphs are useful in scientific research
  - To show the relationships of two variables
  - To show the trend in growth.



ISO 9001:2008 CERTIFIED



# Thank you

Any question?

[sagarkar@vpmthane.org](mailto:sagarkar@vpmthane.org)