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FACULTY OF ENGINEERING & TECHNOLOGY

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LECTURE- 6

BSc (AG)
2nd Year , IIIrd Sem.
Statistical Methods
AES-213

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Outline of lecture

- Graphical Representation of data
- Frequency Distribution Graphs
- Bar Graph
- Histogram
- Frequency Polygon
- Frequency Curve
- Cumulative Frequency Curve
- Suggested Readings & References

Frequency Distribution Graphs

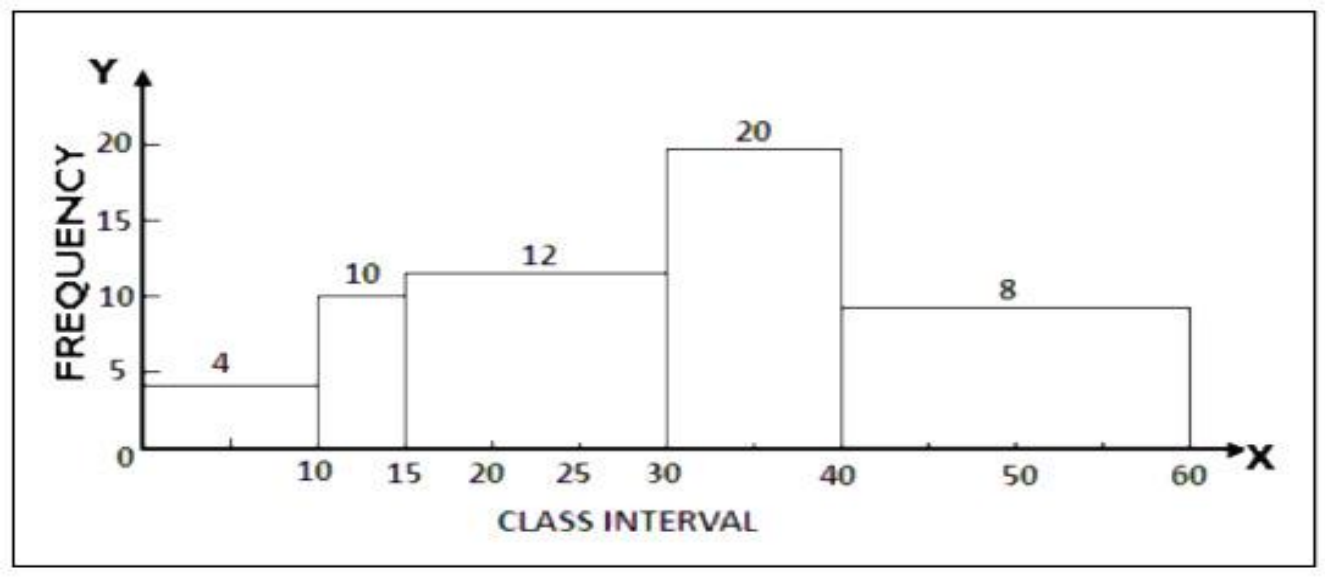
Let's look at the different types of frequency distribution graphs

Bar Graph

A bar graph is used to indicate and compare values in a discrete category or group, and the frequency or other measurement parameters (i.e. mean). Depending on the number of categories, and the size or complexity of each category, bars may be created vertically or horizontally. The height (or length) of a bar represents the amount of information in a category. Bar graphs are flexible, and can be used in a grouped or subdivided bar format in cases of two or more data sets in each category.

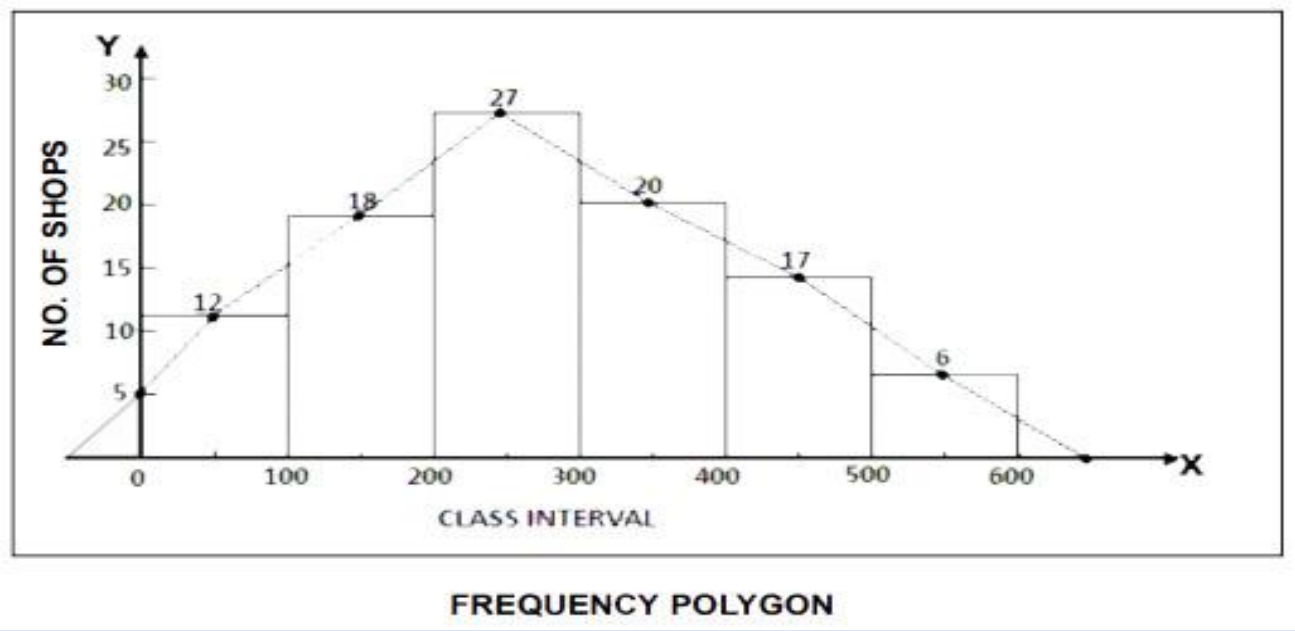
Histogram

If you have to show the net balance of income and expenditure or revenue and costs or imports and exports, etc., then you must use a net balance graph. You can use different colors or shades for positive and negative differences.



Frequency Polygon or Histograph

A frequency polygon or a Histograph is another way of representing a frequency distribution on a graph. You draw a frequency polygon by joining the midpoints of the upper widths of the adjacent rectangles of the histogram with straight lines.



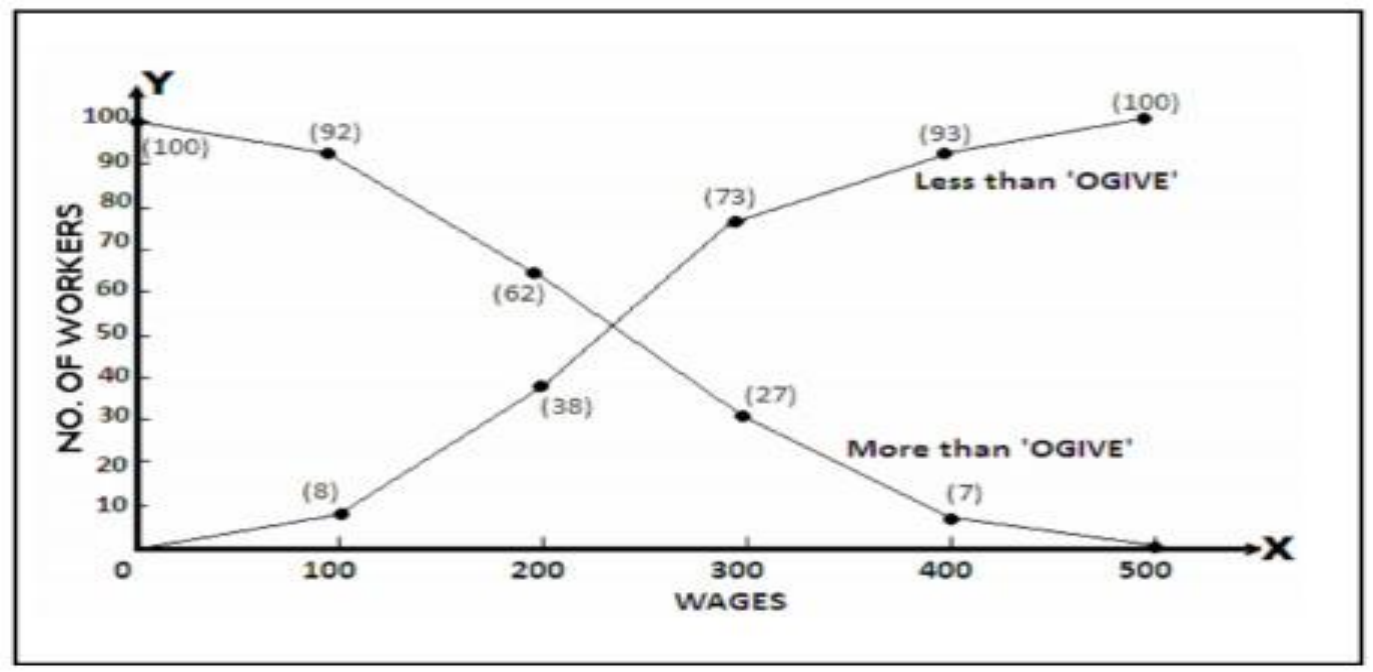
FREQUENCY POLYGON

Frequency Curve

When you join the verticals of a polygon using a smooth curve, then the resulting figure is a Frequency Curve. As the number of observations increase, we need to accommodate more classes. Therefore, the width of each class reduces. In such a scenario, the variable tends to become continuous and the frequency polygon starts taking the shape of a frequency curve.

Cumulative Frequency Curve or Ogive

A cumulative frequency curve or Ogive is the graphical representation of a cumulative frequency distribution. Since a cumulative frequency is either of a ‘less than’ or a ‘more than’ type, Ogives are of two types too – ‘less than ogive’ and ‘more than ogive’.



Suggested Readings & References

1) Statistical Methods: P.N. Arora, Sumeet Arora & S. Arora; S. Chand & Company Ltd.

2) Fundamental of Mathematical Statistics: S.C. Gupta & V. Kapoor; Sultan Chand & Sons.

3) Statistics: M.R. Spiegel; Schaum's Outline Series, Mc-Graw Hill Publication.

4) Advanced Engineering Mathematics: Erwin Kreyszig; John Wiley & Sons Inc.

5) Elements of Statistics: J.P. Chauhan & S. Kumar; Krishna Publication.

* THANK YOU *