

## I. Charts and Graphs used in Business

### A. Purpose of charts and graphs

1. Charts and graphs are used in business to communicate and clarify spreadsheet information
2. A graph is a graphical representation of data. It includes the plot area, gridlines, and values. A graph is used in a chart. A chart includes labels, legend information, titles, and color and adds meaning to the graph.
3. Whereas spreadsheet data is often filled with numbers, labels, and values that require time consuming analysis, a chart emphasizes and categorizes the spreadsheet information into a format that can be quickly and easily analyzed.
4. A chart is to a spreadsheet as a picture is to a thousand words

### B. Examples of charts used in business

1. Represent sales trends within different departments of a store
2. Represent the contribution of individual employee sales to the total sales for a company
3. Represent the percent of each expense to total expenses
4. Analyze stock prices and explain the fluctuations to stakeholders

## II. Components of Graphs and Charts

### A. Graph

1. The **y-axis** is the left vertical side of the graph. It contains the numerical data.
2. The **x-axis** is the bottom horizontal side of the graph. It contains the category information.
3. **Data markers** are used in a graph to indicate data values.
4. A **data series** is a collection of related values, such as one row or column from a spreadsheet.
5. A **gridline** is a horizontal or vertical line that extends across the plot area of the graph for the purpose of adding clarification to the data.
6. The **plot area** is the background portion of a graph. It is the area bound by the values (y) and categories (x) axes.
7. A **tick mark** is used in a graph to clarify data categories or values.

### B. Chart

1. A **legend** is an object that explains the symbols, colors, or patterns used to differentiate the data.
2. A **data label** is a single value or text explanation used to explain the data in a series.
3. A **chart title** is the main heading, which describes the purpose and content.
4. The **x-axis title** describes the horizontal data.

5. The **y-axis title** describes the vertical data.
- C. **Embedded and linked**
1. An **embedded chart** is one that appears on the same sheet as the spreadsheet it represents; otherwise, it is referred to as a separate chart.
  2. A **linked** chart is one that will change to reflect changes made to the spreadsheet it represents.

### III. **Common Charts Used in Business**

- A. A **column chart** is used to make comparisons and generalizations about groups of data, such as to compare the number of students from each class (Sophomores, Juniors, and Seniors) to their attendance at assemblies.
- B. A **stacked bar chart** is used to represent the sum of more than one value and compare the contribution of individuals to the whole, such as the total sales for three components to the whole sales for a store.
- C. A **line chart** is used to show trends or changes in data over time, such as growth in sales over several quarters.
- D. An **XY scatter chart** is used to show the correlation of two or more data sets, such as the correlation between stress rates and wait time in a doctor's office.
- E. A **pie chart** is used to represent the contribution of each component of one series of data to the whole, such as the percentage of expenditures to the total budget.
- F. An **exploded pie chart** is a pie chart in which the individual components are enhanced.