# Chapter 3
# Adding Elements to A Workbook

In this chapter you will learn how to add images, charts, formula and functions and perform mathematical calculations. Charts help us to quickly understanding the data by plotting the data in graphs. Formulas are used for simple addition, subtraction, multiplication and division as well as for complex calculations. To make a calculation, you must write a formula. Functions are built in formulas.

## 3.1 ADDING IMAGES

Follow these steps to add a picture, photo or graphic from an existing file:

**Step 1:** Click on **Insert** Tab

**Step 2:** From **Illustrations** Group, Click **Picture**

**Step 3:** Select a picture from the location of the picture (where you have stored the picture) and press enter or click on insert button

**Step 4:** The picture is added on the excel sheet

**Step 5:** Click on the picture to activate **Format** tab

**Step 6:** Use appropriate options to make necessary changes in the picture appearance
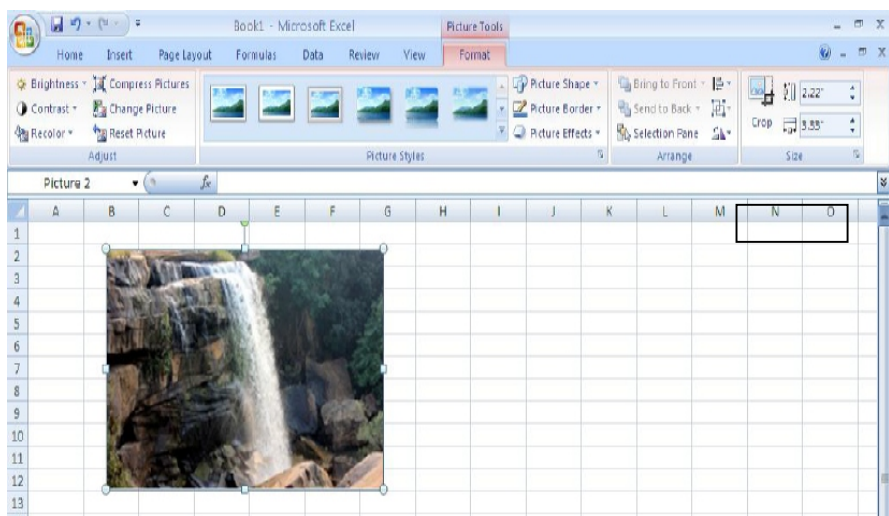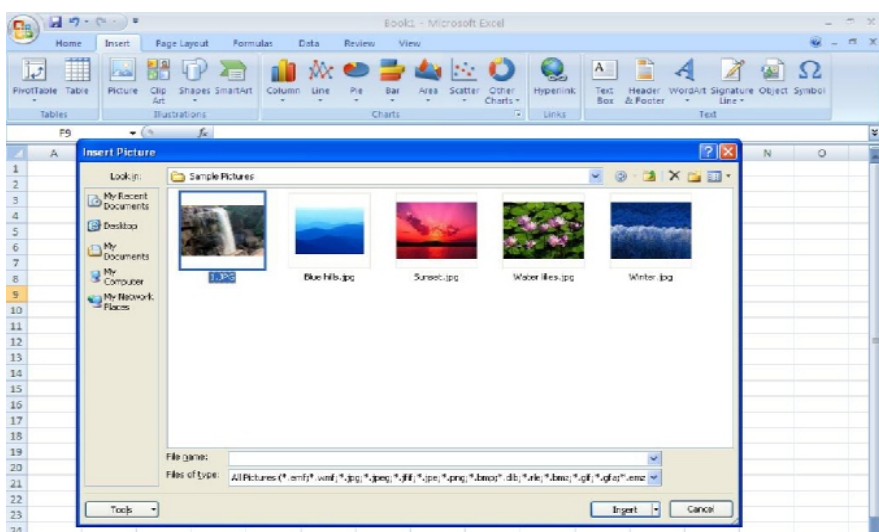
## 3.2 MODIFYING IMAGE

When an image is selected, Excel adds the Picture Tools Format tab to the Ribbon. Use the commands on the Picture Tools Format tab if you need to modify images in your worksheets. The Picture Tools Format tab is divided into four groups: Adjust, Picture Styles, Arrange, and Size. You can use options of Adjust group to modify image brightness, contrast, color, and to compress it. To modify orientation and style of images use the options of Picture Styles group. Click a thumbnail on the Picture Styles gallery to select a new orientation and style for the

selected image. You can also modify Border shape of a selected image by using Picture Shape button's drop-down list. To modify Border color you can use Picture Border button's drop-down color list and to add picture effects use Picture Effects button's drop-down list.

## 3.3 CHARTS

Charts allow you to present data entered into the worksheet in a visual format using a variety of graph types. Numeric information is often easiest to understand when it is presented graphically in an excel chart. In Excel, you can represent numbers in a chart. The basic procedure for creating a chart is the same no matter what type of chart you choose. As you change your data, your chart will automatically update. To create a chart, you must first enter data into worksheets. In this section you will learn to create simple charts from the data.

### Element of a chart

A chart has many elements. By default some elements are visible, others can be added as per requirement. You can also remove chart element that you do not want to display.
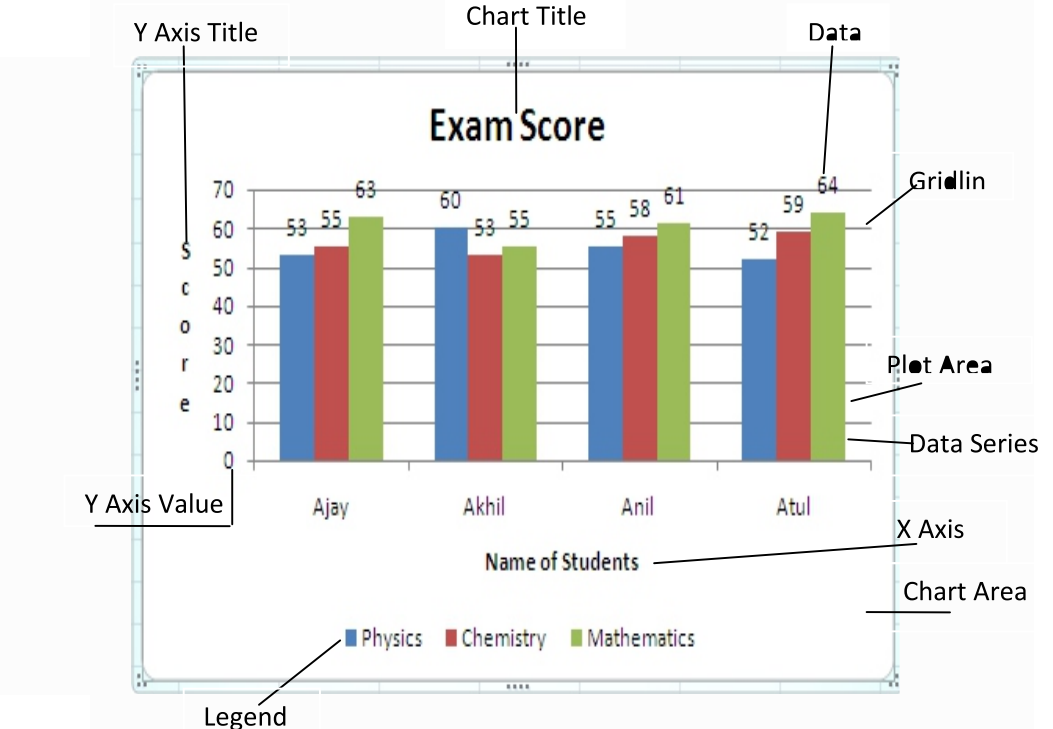
- **Chart Area**: Is the entire area that is reserved for accommodating the charts and other components such as titles, legends etc.
- **Plot Area**: Is the part of chart area which contains the chart
- **Chart Title**:A title is given to whole chart
- **Chart Axis Titles**:
    X-Axis Title - A title given to the X-axis data range.
    Y-Axis Title - A title given to the Y-axis data range.
- **Legends**: Are some sort of labels that identify different series that are being plotted in a chart. These labels are attached to a symbol or color or pattern, that is associated with series of chart.
- **Horizontal** (X) and **Vertical** (Y) **Axis**
- **Data Labels**:The values of the data series plotted.
- **Gridlines**: Displays lines at the major intervals on the category (x) axis and/or Y-axis

Excel chart wizard helps you to create charts in excel. You have to select data first before launching the chart wizard. Following are the steps to launch chart wizard:

**Step 1:** Goto **Charts** group of **Insert** tab

**Step 2:** Select **Chart** sub-type

# 3.4 TYPES OF CHARTS

MS Excel 2007 supports many types of charts to help you display data in different ways that are meaningful to your audience. You can create a new chart or can change the existing chart, from the variety of chart types and their subtypes. You can also create a combination chart using more than one chart type in your chart.

## Column Charts

The Column Charts are very used to compare values across categories by using vertical bars. In a Column Chart, the vertical axis (Y-axis) always displays numeric values, and the horizontal axis (X-axis) displays time or other category.

## Line Charts

Line charts can be used to display continuous data over time with respect to a common scale. Thus Line Charts are best suitable for displaying data trends. The horizontal (X) axis is used to represent time or other category data and the vertical (Y) axis represents numeric values.

## Pie charts

As name the implies, pie charts are shaped like a pie, and are useful in a situation where one has to show the relative proportions or contributions to a whole. A Pie Chart can only display one series of data.

**Bar Charts**

A bar Chart is the horizontal version of a Column Chart, i.e., bar chart is like a column chart lying on its side. Bar Charts do tend to display and compare a large number of series better than the other chart types.

**Area Charts**

Area Charts are like Line Charts except that the area below the plot line is solid. Like Line Charts, Area Charts are used primarily to show trends over time or other category.

**XY (Scatter) charts**

The purpose of a Scatter Chart is to observe how the values of two series compares over time or other category. The point of difference between XY charts and other types of charts is that in XY charts both axes display values i.e. they have no category axis. Such type of charts is generally used to show the relationship among two variables.

**Other charts types**

Excel offers other chart types, but the average user will not use this type of charts. Other available chart types in excel are: Stock, Surface, Doughnut, Bubble, and Radar.

## 3.5 CHART TOOLS

Whenever you click on some component of chart, you observe that the Chart Tools are displayed to the ribbon. Chart tools include three chart context tabs: Design, Layout, and Format. These tabs are called context tab, as these tabs only appear when you need them. These tabs become available when you create a new chart or when you click on a chart. You can also use these tabs to modify your chart. Design tab is used to modify the shape of chart. Layout tab, is used to add all sorts of elements related to chart or change the way they are shown in the chart. Format tab is used to apply special effects, such as the bevel effect etc.
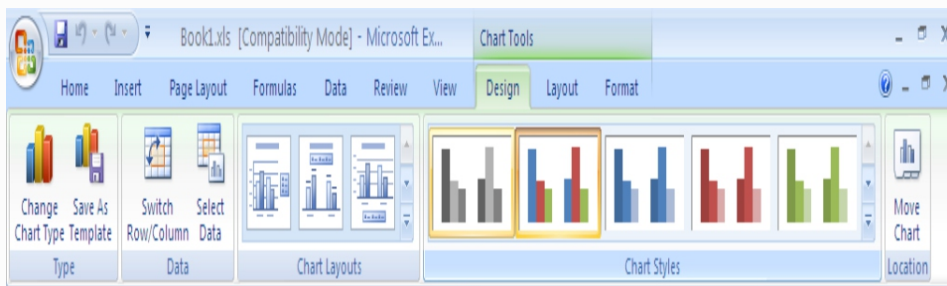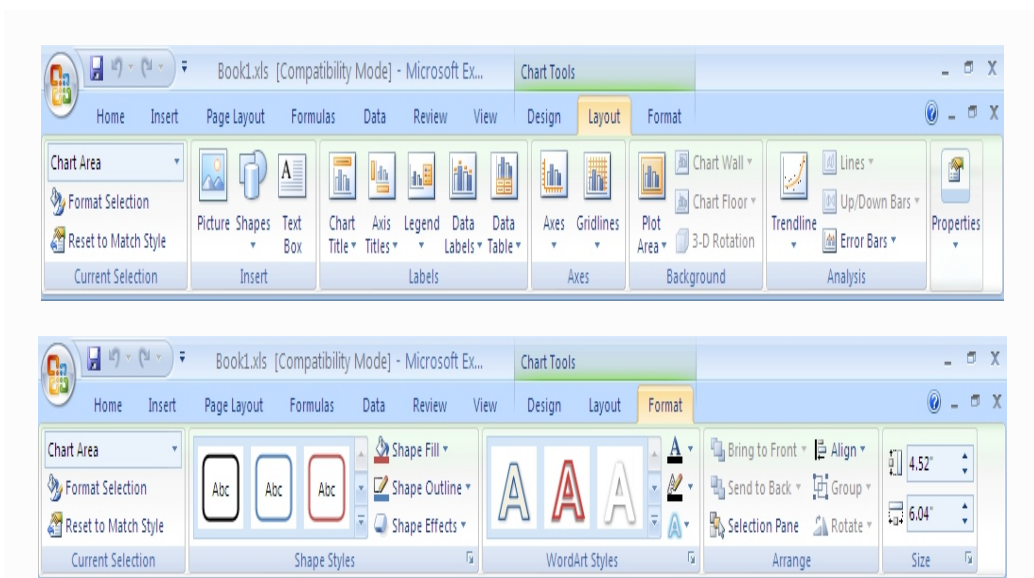
## 3.6 CREATING CHARTS

The basic procedure for creating a chart is the same no matter what type of chart you choose. As you change the data, your chart will automatically change. On the Insert tab, you can choose from the variety of chart types such as: line, pie, area, column etc. Use following steps to draw a Chart:

**Step 1**: First enter the data in the work sheet of which you want to plot the chart

**Step 2**: Select all the cells containing the data you want in your chart

**Step 3**: Click **Insert** tab

**Step 4**: Select a **Chart Type** from the chart group and sub type of chart

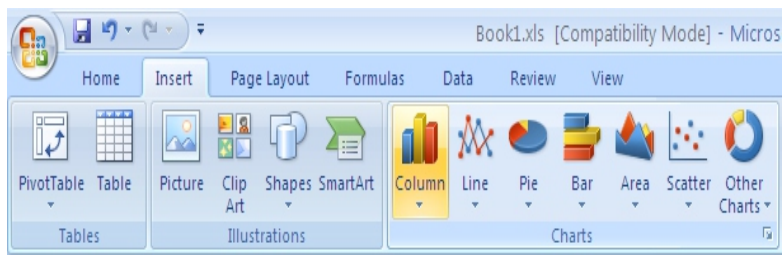**Step 5**: Select the Title of the chart

      a. To give a title to a chart, click on the chart. Now you can see layout tab available. Click on Layout tab

      b. Choose(click) on chart title option available in the Label group

**Step 6**: Click on the chart title and write a title

**Step 7**: Similarly set other elements of chart

# 3.7 MODIFYING CHARTS

You can use chart context tabs to modify your chart. These tabs become available when you click on a chart. You can right click on an element of the chart for quick access to specific features with respect to that particular element e.g. if you right click on plot area, you will get Format Plot Area dialog box, similarly if you right click on any chart axis, you will get Format Axis dialog box. Using these format dialog boxes, you can modify your chart.

## Modifying the chart Type
Excel provides many chart types to help you display data in a way that will best communicate its meaning. Use following steps to modify the chart type:
**Step 1**: Click the chart
**Step 2**: Select chart type from chart tab
**Step 3**: Choose appropriate type from chart type dialog box
**Step 4**: Click ok

## Modifying the chart area
The chart area is the background of the sheet on which the chart is drawn. Use following steps to modify the chart area:
**Step 1**: Double click on chart area
**Step 2**: In the Format chart area dialog box, click the pattern tab and enter new settings to changes the border surrounding the chart area, its color, and any fill effects
**Step 3**: Click the Font tab and enter new settings to changes the font characteristics of the axis labels
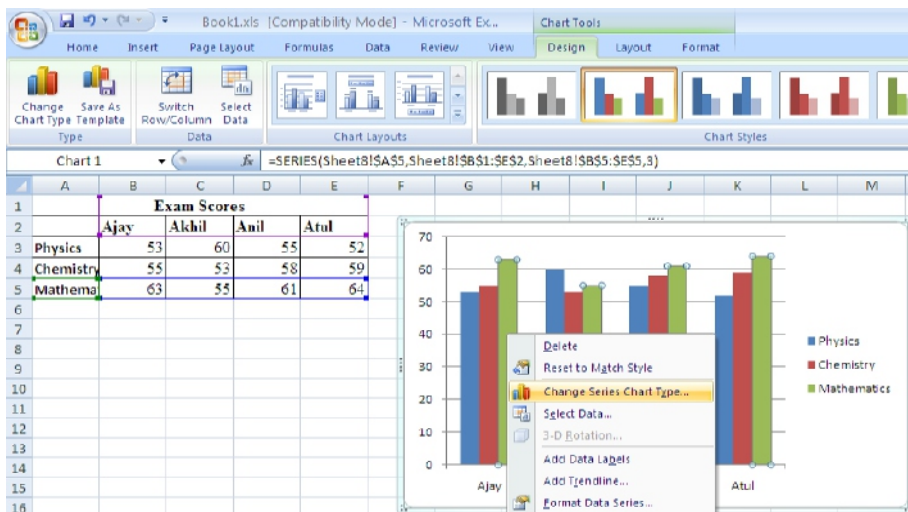
**Resizing the Chart**

To resize the chart, click on its border and drag any of the eight black handles to change the size. Handles on the corners will resize the chart proportionally while handles along the lines will stretch the chart.

**Delete a Chart**

To delete a chart that has just been created, click the Excel Undo button. To delete an existing chart, select the chart and press the Delete key.

## 3.8 MOVING CHARTS

To move a chart to a different place on the worksheet, select the chart and drag it to the desired location. To move a chart to a new or different spreadsheet in the same workbook, select the chart, right-click, and select Move Chart. Move Chart dialog box will appear. Then choose the sheet or type in a new sheet name, and click OK. Elements within the chart such as the title and labels may also be moved within the chart. Click on the element which you want to move, and use the mouse to drag the element to move it.

## 3.9 ORGANIZATIONAL CHARTS

An organizational chart graphically represents the management structure of an organization, such as department managers and non-management employees within a company. By using a SmartArt graphic in MS excel, you can create an organizational chart and include it in your worksheet. To create an organizational chart quickly and easily, you can type or paste text in your organizational chart and then have the text automatically positioned and arranged for you. Use following steps to create an organizational chart:
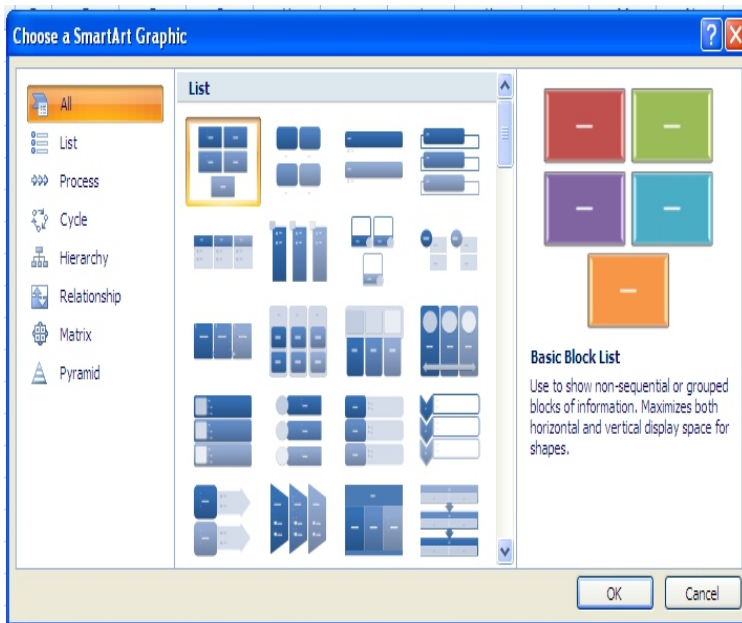
**Step 1**: Go to the **Insert** tab, in the **Illustrations** group, click **SmartArt**
**Step 2**: Click **Hierarchy** on the **Choose a SmartArt Graphic** window
**Step 3**: Select the chart design to use and click OK
**Step 4**: Click on the word **Text** in the first shape and type the name or title of the corresponding employee. Repeat with the remaining shapes
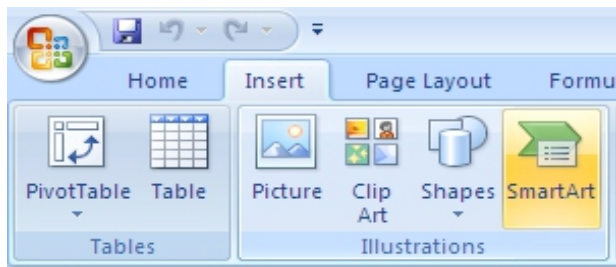
You can add more shapes by right-clicking a related shape and clicking **Add Shape**. Choose **Add Shape Before** or **Add Shape After** to add another employee on the same level as the selected one. Choose **Add Shape Above**to add an employee one level up from the selected person or **Add Shape Below** to add someone who reports to the selected employee. To delete a shape, click on the border of the shape that you want to delete, and then press delete. Similarly, you can also apply colors, change line styles etc, using different available options.

## 3.10 SPARK LINE

A sparkline is a very small line chart that is typically drawn without axes or coordinates. Sparklines are small enough to be embedded in text or several sparklines may be grouped together as elements of a small multiple. Data presented in a row or column is useful, but patterns can be hard to spot at a glance. The context for these numbers can be provided by inserting sparklines next to the data.

Using following steps to create a sparkline:
**Step 1**: Select all the cells containing the data you want create sparkline for and go to **Insert** tab then click the **Charts** group
**Step 2:** Click the **Line** option and select the **2D** line chart
**Step 3:** Select the **Legend** and press delete key
**Step 4:** Select **Horizontal Axis** and **Vertical Axis** and press delete key

**Step 5:** Select the **horizontal grid lines** and press delete key
**Step 6:** Select the chart and drag the handles to the desired size

| 1 | Exam Scores | | | | |
|---|---|---|---|---|---|
| 2 | Ajay | Akhil | Anil | Atul | |
| 3 | 53 | 60 | 55 | 52 | |
| 4 | 55 | 53 | 58 | 59 | |
| 5 | 63 | 55 | 61 | 64 | |
| 6 | 66 | 44 | 70 | 68 | |
| 7 | 80 | 69 | 78 | 51 | |
| 8 | 56 | 75 | 65 | 79 | |
| 9 | 76 | 80 | 59 | 73 | |
| 10 | 79 | 52 | 60 | 66 | |
| 11 | | | | | |
| 12 | | | | | |

The sparkline in the above figure shows the scores that Ajay achieved in his tests. By looking at this sparkline, you can quickly figure out how Ajay's scores are going up and down along the time.

## 3.11 FORMULAS AND CALCULATIONS

### DEFINITION AND EXPLANATION OF FORMULAS AND CALCULATIONS

Excel performs calculations using formulas and functions. A formula is a structured piece of text that tells Excel what it has to calculate. A function is a pre-written formula. When there is some change in the data, such formulas automatically calculate the updated results with no extra efforts on the part of the user. In excel a formula always starts with the 'equal to' = sign. It a sign that tells excel that what is in the cell is a formula and not a text or a number. 'Equal to' = sign can be followed by numbers, mathematical operators (like a + for addition, / for division, logical operator [<, >] etc) and build in excel functions. For example in the below figure, cell B2 contains a formula that multiplies 3 by 4 and then adds 7 to that result to come up with the answer 19.
=3*4+7

Formula Bar
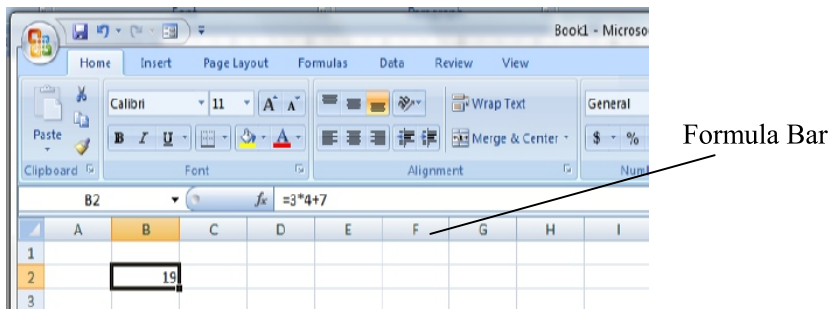
Here are some more examples of formulas that you can enter in a worksheet.

- **=A1+A2+A3+A4**     Adds the values in cells A1, A2, A3, and A4.
- **=SUM(A1:A8)**     Uses the SUM function to return sum of the values in A1 through A8.
- **=AVERAGE(A1:A10)** Uses the AVERAGE function to return average of the values from A1 through A10.
- **=TODAY()**     Returns the current date.

After the formula is completely entered in the cell, it will display the result. Also, when you select or click on a cell which is having some formula, the formula will appear in the formula bar. If you want to change the formula, you can click on the Formula bar to edit it. Alternatively, you can press the F2 key or double click the cell for it. In Excel 2007, the formulas are available in the Formulas Tab. If you click on the Formulas tab, you can see the corresponding ribbon display with available formulas, as shown below.
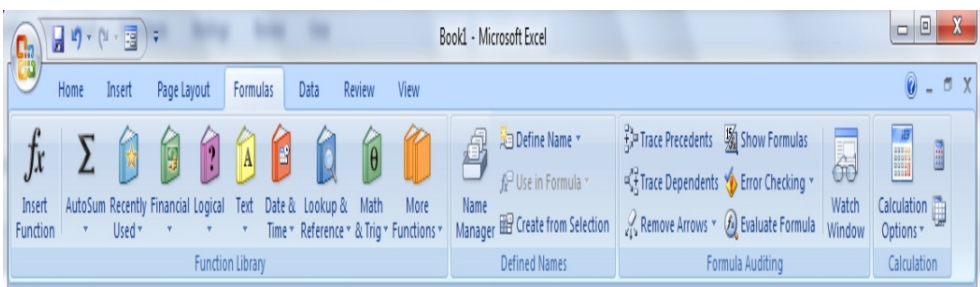


## 3.12 MATHEMATICAL OPERATORS

Mathematical operators play fundamental role to create a formula and calculation of data values in the spreadsheet. Basically operators specify the type of calculation that you want to perform on the elements of a formula, like addition, subtraction, multiplication or division. There is a default order in which calculations occur, but you can modify this default order of calculation as per your

requirement using parentheses. To change the order of calculation, enclose in parentheses the part of the formula to be calculated first. For example, the following formula produces 12 because Excel calculates multiplication before addition. This formula multiplies 2 by 3 and then adds 6 to the result.
=6+2*3

In contrast, if you use parentheses to change the syntax, Excel adds 6 and 2 together and then multiplies the result by 3 to produce 24.
=(6+2)*3

## 3.13 CREATEING A FORMULAS

To create a simple formula that adds two numbers use following steps:
**Step 1**: Click the cell where you want to insert the formula (A3, for example)
**Step 2**: Type the 'equal to' sign (=)
**Step 3**: Type the first number to be added (e.g., 20)
**Step 4**: Type the **addition sign (+)**
**Step 5**: Type the second number to be added (e.g., 10)
**Step 6**: Press **Enter** to complete the formula
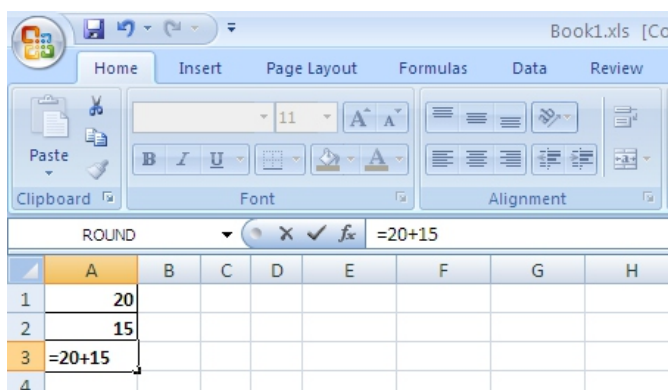


For creating a simple formula that adds the contents of two cells: in previous example type the cell addresses in place of first and second numbers. Alternatively, in place of typing the cell addresses yourself in the formula, you can click on the cell to be included in the formula.

## 3.14 CREATING FUNCTIONS

A predefined formula is called a function, which uses a specific value in a particular order to execute calculation. Functions enable you to add thousands of numbers together in an instant, calculate averages and many other things. All

functions have a function name. For example, the function that adds together numbers is called 'SUM' and the function that calculates averages is called 'AVERAGE'. Function name is followed by one or more arguments, which may be numbers or cell references. If there are more than one arguments in function, they are separated by semicolon ';'. Each function has a specific order, known as syntax that strictly followed for the function to work correctly. Following figure shows an example of 'AVERAGE' function with one argument i.e. the range of cells, A3 to C3.
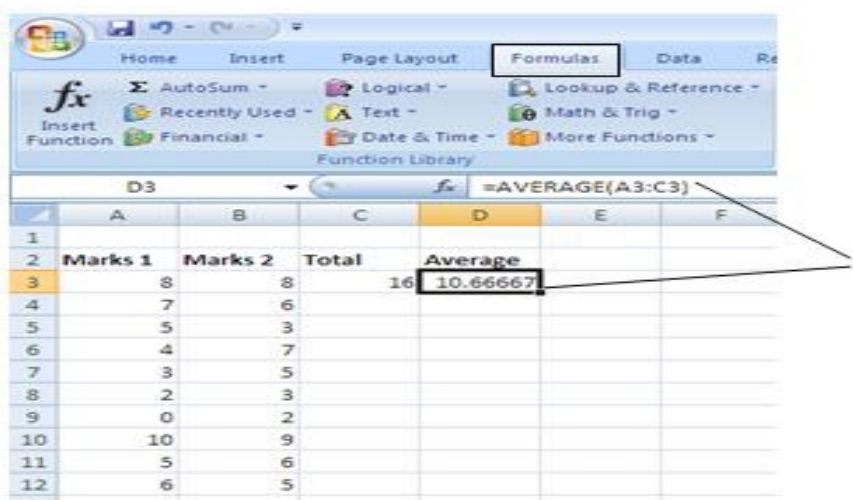


## 3.15 REFERENCES

References are an important part of creating formulas in Excel. Cell references allows your formulas to update automatically if the value in a particular cell changes and can also assist you in updating formulas as cells are copied or moved. There are two types of cell references: relative and absolute. Relative and absolute references behave differently when copied and filled to other cells. Relative references change when a formula is copied to another cell. Absolute references, on the other hand, remain constant no matter where they are copied.

By default, a cell reference is relative, e.g., =A1. By adding a dollar sign ($) before either the column or row location or both, that reference becomes absolute. When adding dollar signs to cell references, only the portion of the reference directly following the dollar sign is absolute. To keep the entire cell reference constant, place a dollar sign before both the column and row location. e.g., =$A$1. Relative and absolute cell references can be used in all situations that require cell references, including cell ranges and formulas.

You can also create mixed references, in such references the column is absolute and the row is relative or vice versa. To create a mixed reference, you use the dollar sign in front of just the column letter or row number, e.g., =$A1.

## COPYING A FORMULA

Excel makes it easy to copy your formula across an entire row or column, but you don't always get the results you want. To copy a formula into multiple cells by dragging, use following steps:

**Step 1**: Enter the formula into one cell
**Step 2**: Press enter to calculate the formula
**Step 3**: Click on the lower right corner of the cell to be propagated
**Step 4**: Hold and drag along the column or row you're copying to
**Step 5**: Double click the plus sign to fill the entire column

## 3.16 EXCEL FORMS

If your spreadsheet is too big to manage, and you constantly have to scroll back and forward just to enter data, then a Data Form could be very helpful. A data form provides a convenient means to enter or display one complete row of information in a range or table without scrolling horizontally. The data form displays all the columns so that you can see all the data for a row at one time. To create a data form use following steps:

**Step 1:** You must add labels to the top of each column in the range or table, since excel uses these labels to create fields on the form

**Step 2:** Select a cell in the range or table to which you want to add the form

**Step 3:** Click **Form** button on the **Quick Access Toolbar**

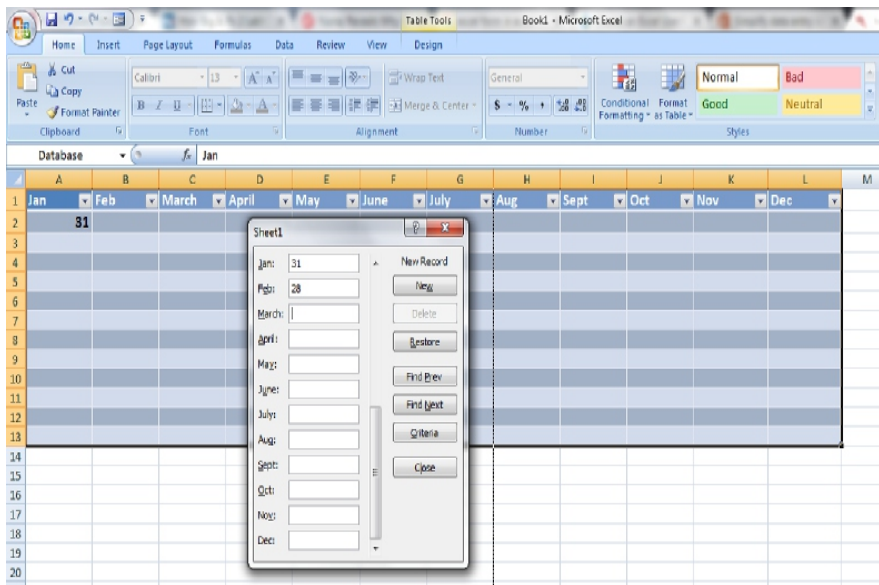If **Form** button is not available on Quick Access Toolbar, then you can add it as follows:

**Step 1:** Click on **Customize Quick Access Toolbar** and select **More Commands** from menu

**Step 2:** Choose **All Commands** from **Choose commands from** drop down list, and then select **Form** in the below list,

**Step 3:** Click **Add>>**, and then click ok (Form button will be added to Quick Access Toolbar)
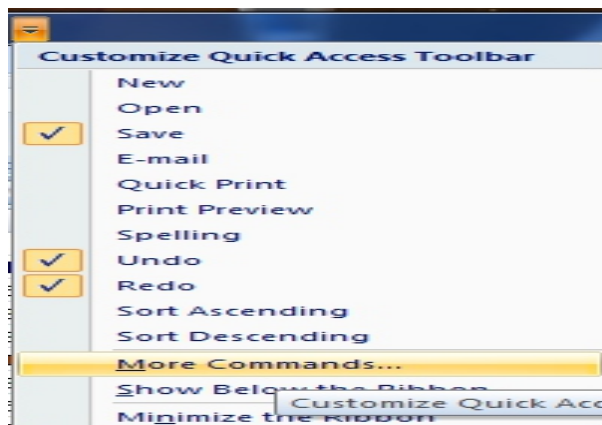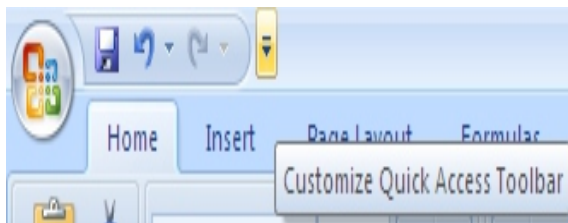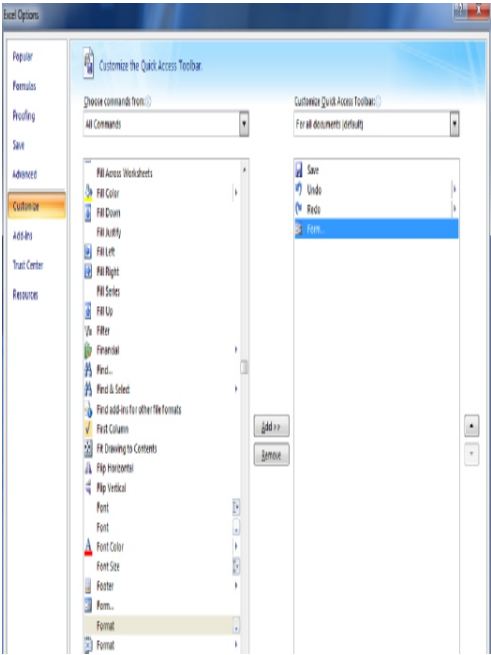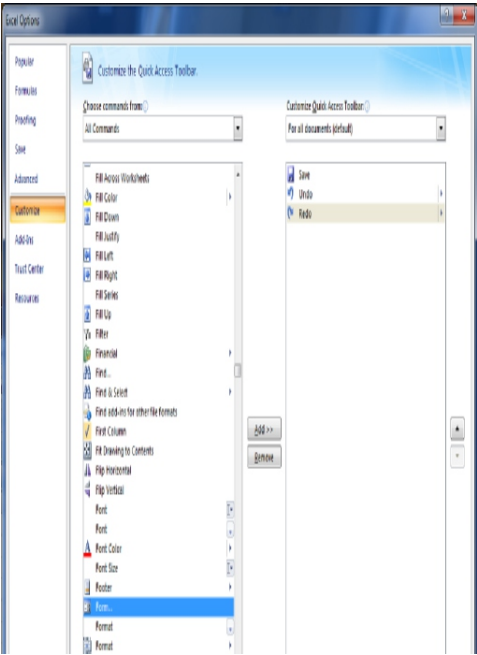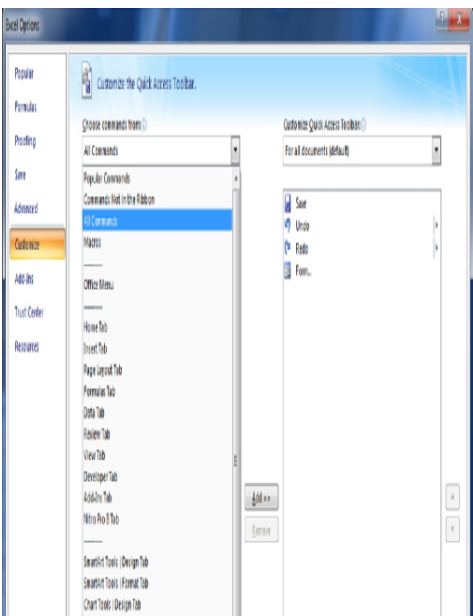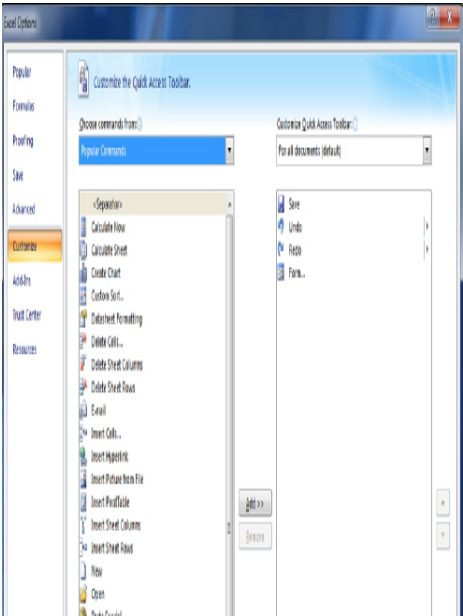
To start a new row in your spreadsheet, you just click the **New** button on the right. Click **Find Prev** or **Find Next**,or  Press [Up Arrow or Down Arrow] to move to the desired row that you want to change or delete.

## 3.17 TABLES

In excel, basically everything is table except the diagram. Here by excel table we mean a defined region in the spreadsheet with a group of data. Excel Tables are used to analyze and manage a group of related data easily and quickly. It contains related data in a series of worksheet rows and columns that have been formatted as a table. The purpose of an Excel table is not so much to calculate new values but rather to store lots of information in a consistent manner, making it easier to format, sort, and filter worksheet data.

## 3.18 CREATING A TABLE

Use following steps to create a table:
**Step 1**: Select the range of cells you want included in the table (cells can be empty or can contain data)
**Step 2**:  Click **Table** in **Tables** group of **Insert** tab
**Step 3**: If the top row of the selected range contains data you want to use as table headers, check the **My table has headers** box
**Step 4**: Click ok
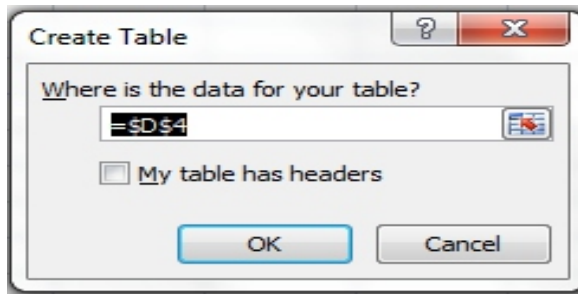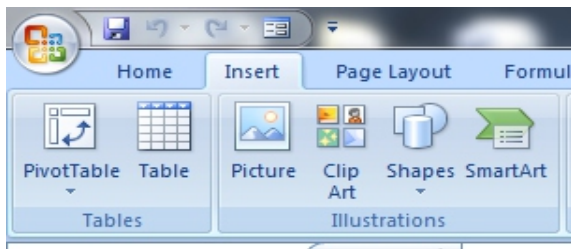
If you don't check the **My table has headers** box, table headers with default names like Column1 and Column2 are added to your table above its data. You can modify default header names at any time.

## 3.19 INSERTING ROWS AND COLUMNS INTO A TABLE

You can insert rows above a selected row and columns to the left of a selected column. You can also delete rows, and columns. For inserting rows and columns into a table use following steps:

**Inserting Rows**
**Step 1:** Select a row in table above which you want to insert a new row
**Step 2:** Right click on table row and select **Insert** from pop up
**Step 3:** Select **Table Rows Above**

Alternatively, select row and click **Insert** in the **Cells** group of **Home** tab and choose appropriate option from popup menu. If you select the bottom row of the table, then you will have one more option i.e. **Table Rows Below** to insert a row below the bottom row.

**Inserting Columns**
**Step 1:** Select a column in the table left of which you want to insert a new column
**Step 2:** Right click on table column and select **Insert** from pop up
**Step 3:** Select **Table Columns to the Left**

Alternatively, select column and click **Insert** in the **Cells** group of **Home** tab and choose appropriate option from popup menu. If you select the last column of the table, then you will have one more option i.e. **Table Columns to the Right** to insert a column right to the last column.

## 3.20 DATA VALIDATION

Through data validation you can restrict the type of data or the values that users enter into a cell. For example, we can use data validation to ensure that the user chooses one of the few given options, by creating a drop-down list. This kind of data validation allows you to build a powerful, fool-proof spreadsheet. Since users won't have to type in data manually, the spreadsheet will be faster to use, and there's a much lower chance that someone can introduce an error. Use following steps to add data validation to a cell or a range:

**Step 1**: Select one or more cells to validate

**Step 2**: Click **Data Validation** in the **Data Tools** group of **Data** tab

**Step 3**: On the Settings tab of **Data Validation** dialog box, select appropriate data validation type from **Allow** drop-down list

**Step 4**: Set parameters appropriately, as per your desired validation

**Step 5**: Use **Ignore blank** check box, to handle blank (null) values

**Step 6:** On the **Input Message** tab, choose whether to have Excel display an input message when the cell is selected

**Step 7:** On the **Error Alert** tab, choose whether to have Excel display an error alert after the user enters invalid data in the cell
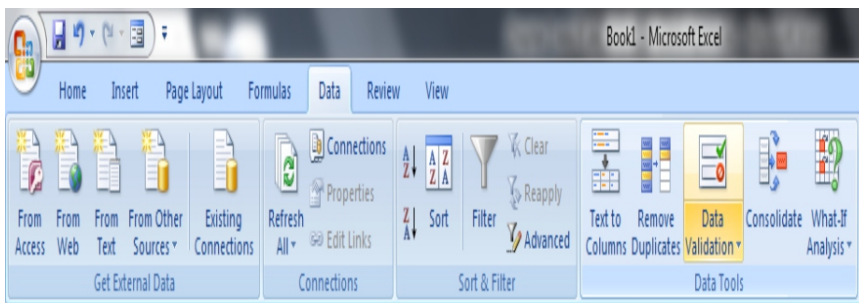
**Data Validation**

Settings | Input Message | Error Alert

Validation criteria

Allow:

Any value
☑ Ignore blank

Any value
Whole number
Decimal
List
Date
Time
Text length
Custom

☐ Apply these changes to all other cells with the same settings

Clear All | OK | Cancel

---

**Data Validation**

Settings | Input Message | Error Alert

☑ Show input message when cell is selected

When cell is selected, show this input message:

Title:

Input message:

Clear All | OK | Cancel

---

**Data Validation**

Settings | Input Message | Error Alert

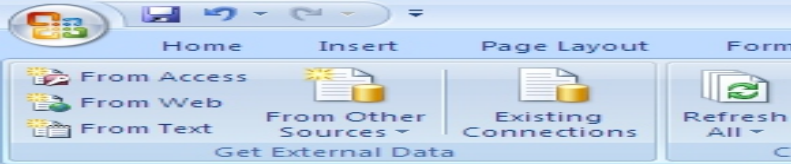☑ Show error alert after invalid data is entered

When user enters invalid data, show this error alert:
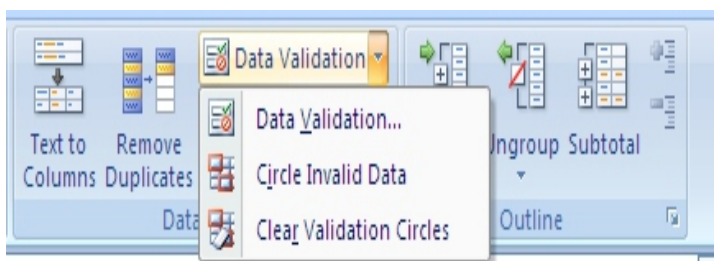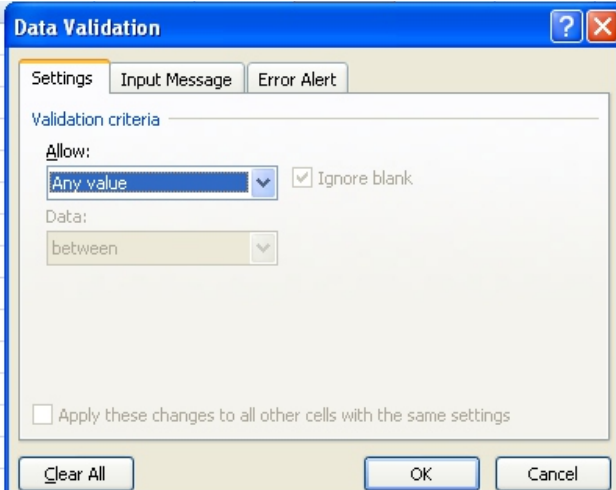
Style:

Stop

Title:

Error message:

Clear All | OK | Cancel

For example, to make sure user can enter marks between 0 and 20 only, the data validation can be applied as steps shown in following figures.

To remove data validation: select the cell or cells that contain the validation you want to delete, then go to **Data** tab and click **Data Validation** in **Data Tools** group then click **ClearAll** button in **Data Validation** dialog, and press ok.

## 3.21 FINDING INVALID ENTRIES AND AUDITING

You may want to audit your worksheets to look for invalid data entries that may cause inaccurate calculations or results. You can identify cells with data validation that contain invalid data by displaying a red circle around them so that you can easily find and correct any problems.

To circle invalid entries: On the **Data** tab, in the **Data Tools** group, click **Data Validation**, and then click **Circle Invalid Data**. All cells that don't meet their data validation criteria are circled. Excel displays a red circle around any cells that contain invalid data.

To hide validation circles: Either enter valid data in the cell or on the **Data** tab, in the **Data Tools** group, click **Data Validation**, and then click **Clear Validation Circles**.

## 3.22 PAGE MARGINS

In Excel, page margins are used to specify how much blank space should be left around the information in your worksheet. Margins are used to provide a visual border for your printed page and an area where the page can be held or bound. There are four margins you can specify: top, bottom, left, and right. Each margin refers to the distance from the edge of the paper to where the information in your worksheet can be printed. Thus, a one-inch top margin means there will be one inch of white space at the top of each page of your printout. There are three predefined margin settings. You can choose from them or you can also customize the margins as follow:
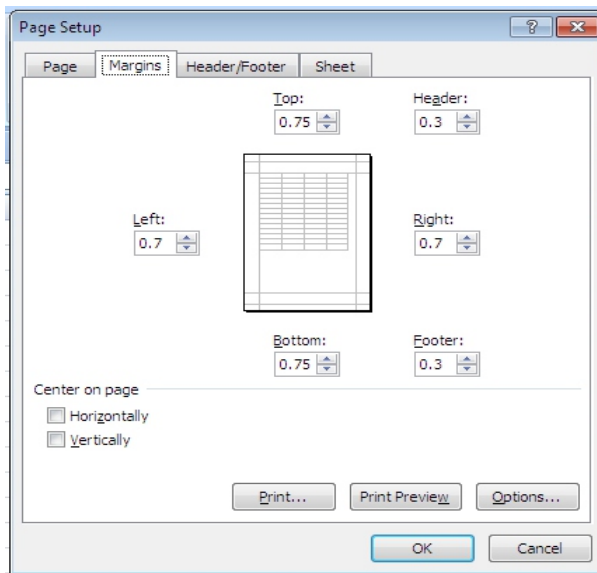**Step 1:** Go to **Margins** option from **Page Setup** group of **Page Layout** tab
**Step 2:** Click **Margins** and select **Custom Margins**
**Step 3:** Set the page margins as required
**Step 4**: Enter values in the header and footer fields to indicate how far from the edge of the page header and footer should appear
**Step 5:** Check the boxes for centering horizontally or vertically on the page
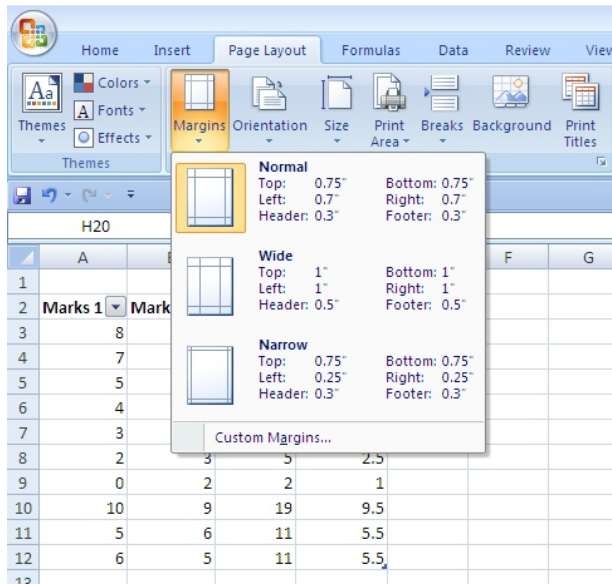
## 3.23 PAGE ORIENTATION

Excel offers two page orientation options: landscape and portrait. Landscape orients the page horizontally, while portrait orients the page vertically. Portrait is especially helpful for worksheets with a lot of rows, while landscape is best for worksheets with a lot of columns. By default, Excel prints worksheets in portrait

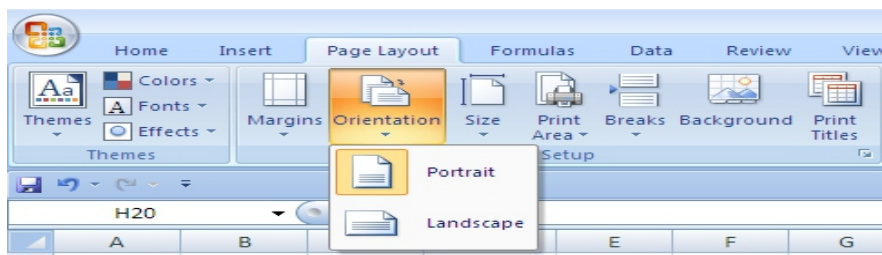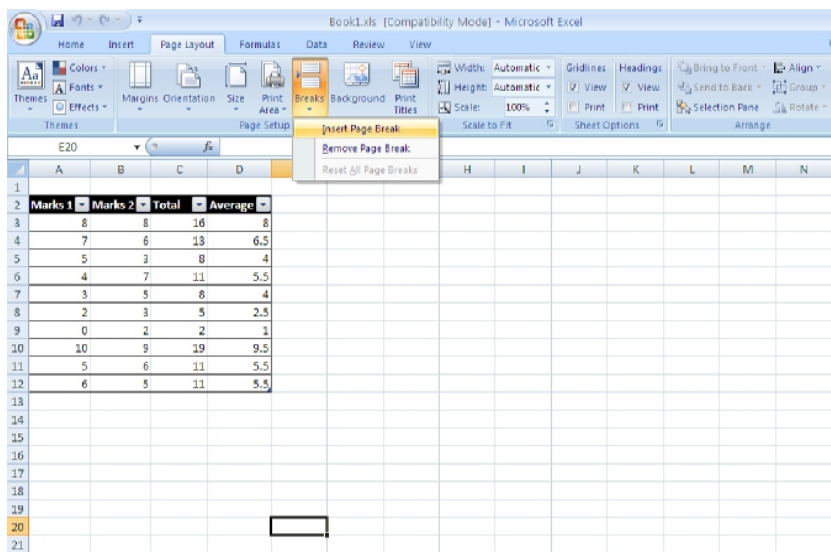orientation. You can change the page orientation to landscape on a worksheet-by-worksheet basis. To change page orientation use following steps:

**Step 1:** Click **Orientation** in **Page Setup** group of **Page Layout** tab

**Step 2:** Choose either **Portrait** or **Landscape** from the drop-down menu



## 3.24 PAGE BREAKS

Page breaks are dividers that break a worksheet into separate pages for printing. Excel inserts automatic page breaks based on the paper size, margin settings, scale options, and the positions of any manual page breaks that you insert. To print a worksheet with the exact number of pages that you want, you can adjust the page breaks in the worksheet before you print it. To set page breaks, select the row you want to appear just below the page break by clicking the row's label. Then choose **Page LayoutPage Setup GroupBreaksInsert Page Break** . Excel will start a new page from the selected row. Once you have inserted the page breaks you can remove them by choosing the Remove Page Breaks option. By choosing **Reset All Page Breaks** option, it will reset your page to the way you saved it last.

# 3.25 SHARING WORKSHEETS AND WORKBOOKS

If you share a workbook, you can work with other people on the same workbook at the same time. The workbook should be saved to a network location where other people can open it. As the owner of the shared workbook, you can manage it by controlling user access to the shared workbook and resolving conflicting changes. You can keep track of the changes other people make and accept or reject those changes. When all changes have been incorporated, you can stop sharing the workbook.

The way that you choose to share data depends on many factors, including how you want others to view or work with the data. For example, do you want to keep sensitive or important information from being modified, or do you want to allow users to change and edit the data? Use following steps for sharing workbook:

**Step 1:** Click **Share Workbook,** in the **Changes** group of the **Review** tab

**Step 2:** In the Share Workbook dialog box, on the Editing tab, check the box which says **Allow changes by more than one user at the same time. This also allows workbook merging**

**Step 3:** On the **Advanced** tab, select the desired options you want to use for tracking and updating changes, and then click ok

**Step 4:** Do one of the following:

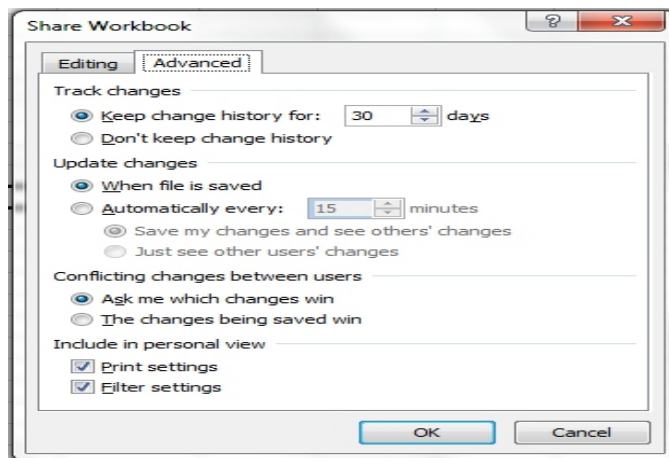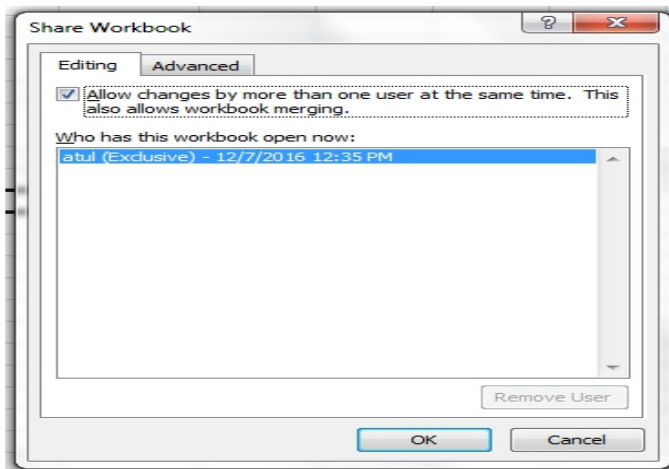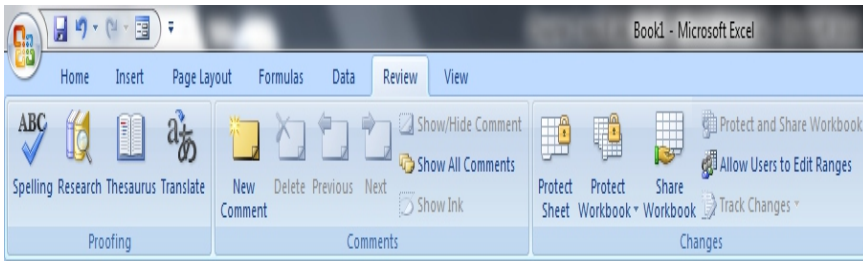        □  If this is a new workbook, type a name in the File name box

&#9744; If this is an existing workbook, click OK to save the workbook

**Step 5:** If the workbook contains links to other workbooks or documents, verify the links and update any links that are broken

**Step 6:** Click the **Office** button and then click **Save**

Or use keyboard shortcut, Press CTRL+S to save the workbook

## 3.26 IMPORTING AND EXPORTING DATA

Although you can copy and paste data from and to Excel, like you can in almost every other program. Excel lets you take this one step further using its Import and Export features. These features are useful when you have to share data with programs that don't work directly with Excel. In this section you will learn how to import or export text files. There are two commonly used text file formats:

- Delimited text files (.txt), in which the TAB character typically separates each field of text
- Comma separated values text files (.csv), in which the comma character (,) typically separates each field of text

There are two ways to import data from a text file by using Excel: You can open the text file in Excel, or you can import the text file as an external data range. To export data from Excel to a text file, use the Save As command. In the following given steps, we assume that in the text file, TAB character separates each field of text. To import a text file (in which the TAB character typically separates each field of text by opening it in Excel, use following steps:

**Step 1**: On the **Office** button, click **Open**

**Step 2**: Select **Text Files** from the Open dialog box then Locate and double-click the text file that you want to open
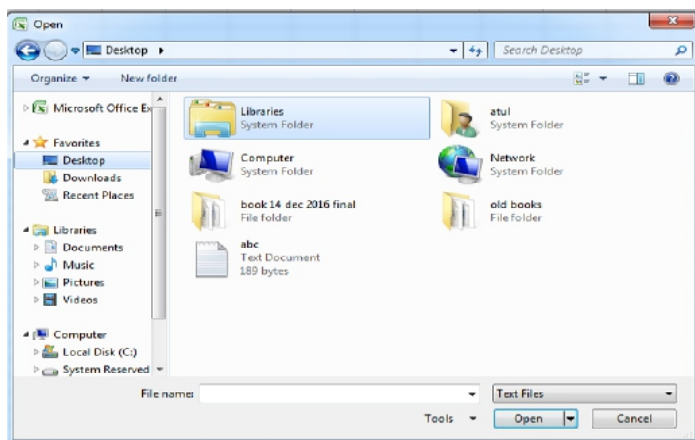
**Step 3a**: To import a .csv file, select the .csv file and click Open, That's all

**Step 3b**: To import a .txt file, select the .txt file and click Open, Excel launches the Text Import Wizard

**Step 4**: Choose **Delimited** and click Next

**Step 5**: Clear all the check boxes under Delimiters except for the Tab check box and click Next

**Step 6**:Click **Finish.**

## Text Import Wizard - Step 1 of 3

The Text Wizard has determined that your data is Delimited.

If this is correct, choose Next, or choose the data type that best describes your data.

**Original data type**

Choose the file type that best describes your data:

- ⦿ Delimited  - Characters such as commas or tabs separate each field.
- ○ Fixed width  - Fields are aligned in columns with spaces between each field.

Start import at row: 1  File origin: 437 : OEM United States

Preview of file C:\Users\atul\Desktop\abc.txt.

```
1 S. No.NameIDMarks
2 1Anil140275
3 2Ajay140369
4 3Amit140482
5 4Ankur140577
```

[ Cancel ]  [ < Back ]  [ Next > ]  [ Finish ]

## Text Import Wizard - Step 2 of 3

This screen lets you set the delimiters your data contains. You can see how your text is affected in the preview below.

**Delimiters**

- ☑ Tab
- ☐ Semicolon
- ☐ Comma
- ☐ Space
- ☐ Other:

☐ Treat consecutive delimiters as one

Text qualifier: "

**Data preview**

```
S. No.  Name   ID    Marks
1       Anil   1402  75
2       Ajay   1403  69
3       Amit   1404  92
4       Ankur  1405  77
```

[ Cancel ]  [ < Back ]  [ Next > ]  [ Finish ]

## Text Import Wizard - Step 3 of 3

This screen lets you select each column and set the Data Format.
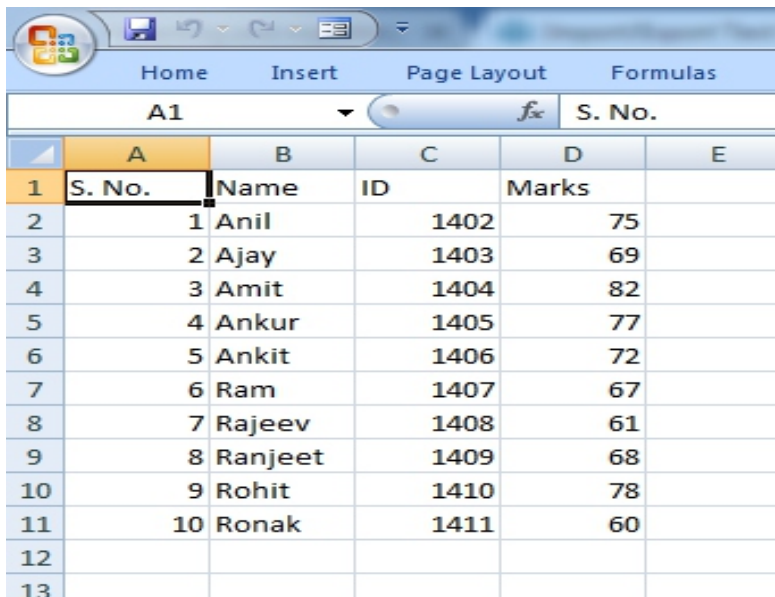
**Column data format**

- ⦿ General
- ○ Text
- ○ Date: DMY
- ○ Do not import column (skip)

'General' converts numeric values to numbers, date values to dates, and all remaining values to text.

[ Advanced... ]

**Data preview**

```
General General Gener General
S. No.  Name    ID    Marks
1       Anil    1402  75
2       Ajay    1403  69
3       Amit    1404  82
4       Ankur   1405  77
```

[ Cancel ]  [ < Back ]  [ Next > ]  [ Finish ]

To import a text file by connecting to it, use following steps:

**Step 1**: Click the cell where you want to put the data from the text file

**Step 2**: On the **Data** tab, in the **Get External Data** group, click **From Text**

**Step 3**: Locate and double-click the text file that you want to import, Excel launches the Text Import Wizard

**Step 4**: Choose **Delimited** and click Next

**Step 5**: Clear all the check boxes under Delimiters except for the Tab check box and click Next

**Step 6**: Click **Finish**, the **Import Data** dialog box will appear

**Step 7**: In the **Import Data** dialog box, do the following:

⬝ Optionally, click **Properties** to set refresh, formatting, and layout options for the imported data

⬝ Under **Where do you want to put the data**?, do one of the following:
 1) To return the data to the location that you selected, click **Existing worksheet**
 2) To return the data to the upper-left corner of a new worksheet, click **New worksheet**

**Step 8**: Click OK

To export text files, use following steps:

**Step 1**: Open an Excel file

**Step 2**: On the **Office** button, click **Save As**

**Step 3**: Select Text (Tab delimited) or CSV (Comma delimited) from the drop-down list

**Step 4**: Click **Save**

**Important Points:**

- Charts allow you to present data entered into the worksheet in a visual format using a variety of graph types.
- Legends are some sort of labels that identify different series that are being plotted in a chart.
- Pie charts are useful in a situation where one has to show the relative proportions or contributions to a whole.
- Column Charts are used to compare values across categories by using vertical bars.
- The purpose of a Scatter Chart is to observe how the values of two series compares over time or other category.
- To display the formatting dialog box appropriate for a chart element, double click on it.
- To move a chart to a different place on the worksheet, select the chart and drag it to the desired location.
- By using a SmartArt graphic in Excel, you can create an organization chart and include it in your worksheet.
- A sparkline is a very small line chart that is typically drawn without axes or coordinates.
- A formula is a structured piece of text that tells Excel what it has to calculate.
- A predefined formula is called a function, which uses a specific value in a particular order to execute calculation.
- The purpose of an Excel table is to store lots of information in a consistent manner, making it easier to format, sort, and filter worksheet data.

## Practice Questions

**Objective type questions:**

**Q1**.In order to edit a chart, you can

    a. Click the chart object

    b. Click and drag the chart object

c. Double click the chart object
d. None of above

**Q2.** Each excel file
a. can contain text and data
b. can be modified
c. can contain many sheets including worksheets and chart sheets
d. All of above

**Q3**. What do you use to create a chart?
a. Pie Wizard
b. Excel Wizard
c. Data Wizard
d. Chart Wizard

**Q4**.To insert a picture in Excel, use Picture option from
a. Illustrations Group
b. Arrange Group
c. Connections Group
d. Text Group

**Q5**.Which of the following is an absolute cell reference?
a. !A!1
b. $A$1
c. #a#1
d. A1

**Q6.** Which of the following options cannot be set in the page setup dialog box?
a. Printer selection
b. Vertical or horizontal placement
c. Orientation
d. Row and column titles

**Very short answer type questions:**
**Q1.** Excel chart wizard is used for?
**Q2.** Which Charts are best suitable for displaying data trends?
**Q3.** What is Legend?
**Q4.** Pie chart is useful in?
**Q5**.Define sparkline.

## Short answer type questions:
**Q1.** What is importance of chart?
**Q2.** Explain the type of charts in Excel.
**Q3**.What are chart tools?
**Q4**. Write different ways to modify charts.
**Q5**. How cell reference is useful in the calculation?
**Q6.** What is function in Excel?
**Q7**. Explain table insertion in Excel.
**Q8**. What is data validation?

## Essay type questions:
**Q1**. How you can create charts using Excel? Explain steps.
**Q2**. What is the use of chart? Explain the element of a chart.
**Q3**.Explain the organizational charts.
**Q4.** Explain functions in Excel.
**Q5**. Explain references in Excel.
**Q6.** What is Excel form? How you can create a data form in excel?
**Q7.** Write down the steps to add data validation to a cell or a range.
**Q8.** How you can share your worksheets and workbooks in Excel?
**Q9.** How you can import and export data in Excel?
**Q10**. What is sparkline? Write down the steps to create a sparkline.


### Answers key for objective questions

Q1: c
Q2: d
Q3: d
Q4: a
Q5: b
Q6: c