

Charts

Excel 2003















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Charts

- Charts are a powerful feature of Excel because they give the user a graphic representation of numbers.
- The chart available in Excel are grouped into the following types:

Standard Types of Charts		
Name	Icon	Description
Column (vertical)		Use to compare totals over time and to show a trend.
Bar (horizontal)		Use to compare totals over time and to show a trend.
Line		Use to show change over time, emphasizing the rate of change and shows trends.
Pie		Use to show relationships and portions of the whole.
Doughnut		A variation of the pie chart.
X Y (Scatter)		Use to compare trends over uneven intervals of time.
Area		Use to show change over time, emphasizing the amount of change.
Radar		Use to show data relative to a central point.
Surface		Use to show relationships of two sets of data, especially large amounts of data.
Bubble		Similar to a Scatter Chart, the size of the bubble indicates the size of the third variable.
Stock		Shows four values for a stock: open, high, low, and close.
Cylinder		A column chart showing cylinder shapes.
Cone		A column chart showing conical shapes.
Pyramid		A column chart showing pyramid shapes.

Sub-types of Charts

- Each type of chart has 2D and 3D sub-types, as well as specialized sub-types based on the special characteristics of the chart type.

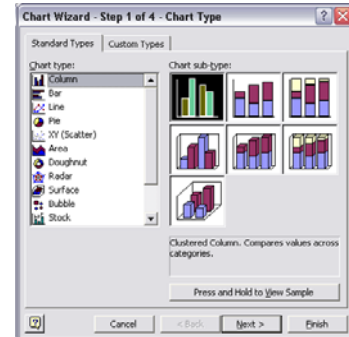
Chart Wizard

- The **Chart Wizard** quickly creates a chart from the selected data.
- Select the data for the chart.
- Click on the **Chart Wizard Button** on the **Toolbar**.



Step 1

- Click on the **Standard Types** tab.
- Choose the chart type (see the table above.)
- Choose the chart subtype.
 - The simplest form of the chart type is in the upper left corner.
 - Additional drag and drop subtypes provide variations such as 3-D views.
- Click and hold on the **Press and hold to view sample** button to see what the chart looks like.
- Click on the **Next** button.
- **Note** - The **Custom Types** tab offers several additional options.



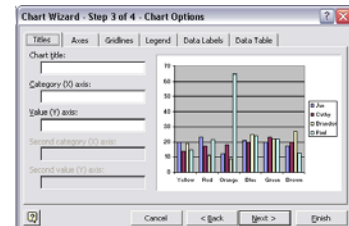
Step 2

- Check to make sure that the desired data is included.
- **To change the data set** -
 - Click on the arrow at the end of the **Data range** box.
 - Click and drag to choose the desired data.
 - Press the **Enter** key.
- The series can be viewed as either **Rows** or **Columns**. Try each one to see which one displays the desired chart.
- Click on the **Next** button.



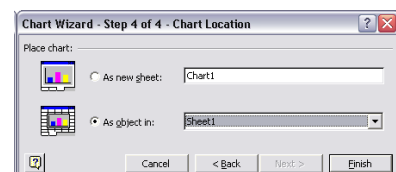
Step 3

- Click on the **Title** tab.
- Type in a name for the chart.
- Click on the **Axes** tab.
- Make the desired adjustments.
- Click on the **Gridlines** tab.
- Choose which gridlines to display.
- Click on the **Legend** tab.
- Choose where the legend is displayed or choose to not show the legend.
- Click on the **Data Labels** tab.
- If data labels are desired, choose to display the series name, category name, or the value.
- Click on the **Data Table** tab.
- Choose whether to show the data table or not.
- Click on the **Next** button.



Step 4

- Choose where to place the chart.
- **As a new sheet:** will place the chart on a new sheet in the workbook.
- **As object in:** will place the chart on the active page just like clipart.
- Click on the **Finish** button.



Working with the Chart

Moving a Chart

- Click on a blank corner area of the chart and drag it to the desired location.

Resizing a Chart

- Click on the chart.
- Place the cursor over a handle (the square boxes on the edge). The cursor changes to a two-headed arrow.
- Click and drag the chart to the desired size.
- **Note** - By using the corner, the chart can be made wider and taller at the same time.

Copying and Pasting a Chart

- Click on the chart.
- Hold down the **Control** key and press **C**.
- Navigate to the desired location to paste the chart. (This could be in another program such as **Word** or **PowerPoint**.)
- Hold down the **Control** key and press **V**.

Deleting a Chart

- Click on the chart and then press the **Delete** key.

The Chart Toolbar

- The **Chart Toolbar** is a powerful tool for quickly formatting the chart.

Using the Chart Toolbar

- Click on the part of the chart to work with.
- The **Chart Object** box displays the name of the object.
- Click on the **Format** _____ button. The name of the object displayed in the **Chart Object** box is added to the name of the button.
- Make the desired changes to the object.
- Click on **OK**.

Changing the Chart Type

- Click on down arrow next to the **Chart Type** button on the **Chart Toolbar** and choose the desired chart.

Showing/Hiding the Legend

- Click on the **Legend** button.
- If the legend is showing, it will be hidden. If the legend is hidden, it will be displayed.

Showing/Hiding the Data Table


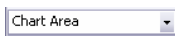








- Click on the **Data Table** button.
- If the data table is showing, it will be hidden. If the data table is hidden, it will be displayed.

By Row or By Column

- Data is charted by rows or by columns. The button with the color background indicates which way the data is being charted.
- To change from charting by rows to charting by columns, click on the **By Column** button.
- To change from charting by columns to charting by rows, click on the **By Row** button.

Angling the Text

- The text on the X axis and the Y axis can be turned quickly clockwise or counterclockwise.
- Click on the axis to be angled. (The name of the axis, value (Y) or category (X) is displayed in the **Chart Object** box.)
- Click on the **Angle Clockwise** button or the **Angle Counterclockwise** button as desired.
- To remove an angle from the text:
 - Click on the axis to be changed.
 - Click on the **Format** button.
 - Click on the **Alignment** tab.
 - Enter 0 in the **Degrees** box.
 - Click on **OK**.

The Chart Toolbar		
		
Name	Icon	Description
Chart Object		Click on the down arrow and choose the chart object to work with.
Format _____		Click on the chart area to be formatted and then click on the Format _____ button to format the area. The name of the object displayed in the Chart Object box is added to the name of the button.
Chart Type		Click on the Chart Type down arrow and choose the desired type of chart.
Legend		Click on the Legend button to add or remove the legend.
Data Table		Click on the Data Table button to add or remove the data table.
By Row		Click on the By Row button to chart the data by information in the rows.
By Column		Click on the By Column button to chart the data by information in the columns.
Angle Clockwise		Click on the text to be changed, such as the X axis, and then click on the Angle Clockwise button to turn the text clock wise.
Angle Counterclockwise		Click on the text to be changed, such as the X axis, and then click on the Angle Counterclockwise button to turn the text counter clock wise.

Editing the Chart

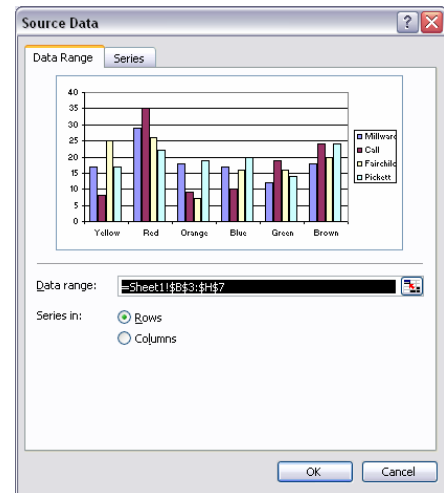
- Completed charts can easily be edited, including changing the type of chart, the source of the data, and other options.

Changing the Chart Type

- Click on the chart.
- On the **Menu Bar**, click on **Chart → Chart Type....**
- Click on the desired type of chart.
- Click on the desired sub-type of chart.
- To view the selected information in the selected type and sub-type of chart, click on the **Press and Hold to View Sample** button.
- Click on **OK**.

Changing the Source of the Data

- Click on the chart.
- On the **Menu Bar**, click on **Chart → Source Data....**
- Click on the **Data Range** tab.
- Click on the button with the red dot at the end of the **Data range**: box.
- Click and drag to select the cells to be included in the chart.
- Press the **Enter** key.
- The series can be viewed as either **Rows** or **Columns**. Try each one to see which one displays the desired chart.
- Click on **OK**.



Changing a Series of Data

- A series is a group of information used to make the chart.
- Click on the chart.
- On the **Menu Bar**, click on **Chart → Source Data....**
- Click on the **Series** tab.
- In the **Series** box, click on the series to be changed.
- The **Name** box indicates which cell has the name for the series.
- Click on the button with the red dot at the end of the **Name** box.
- Click in the cell with the name of the series.
- Press the **Enter** key.
- The **Values** box indicates the cells the values or numbers are in.
- Click on the button with the red dot at the end of the **Values** box.
- Click and drag to select the cells with the values or numbers for the series.
- Press the **Enter** key.
- The **Category (X) axis labels** box indicates the cells the labels for the X axis are in.
- Click on the button with the red dot at the end of the **Category (X) axis labels** box.
- Click and drag to select the cells with the labels for the X axis.
- Press the **Enter** key.
- Click on **OK**.

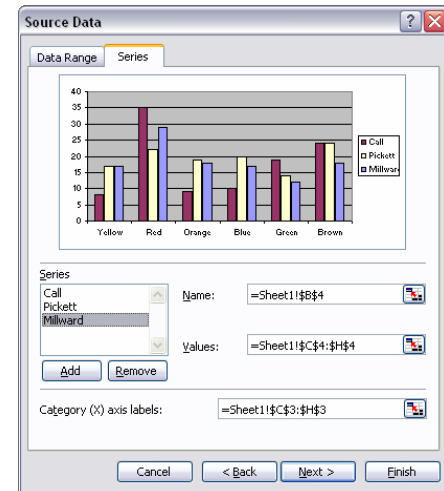


Chart Options - Titles

- Click on the chart.
- On the **Menu Bar**, click on **Chart → Chart Options...**
- Click on the **Titles** tab.
- Click in the **Chart title** box and enter the title.
- If desired, click in the **Category (X) axis** box and add a title for the axis.
- If desired, click in the **Value (Y) axis** box and add a title for the axis.
- Click on **OK**.

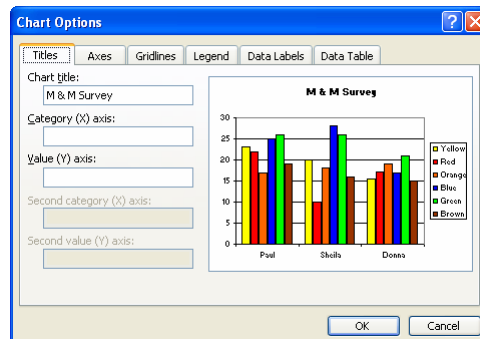


Chart Options - Axes

- Click on the chart.
- On the **Menu Bar**, click on **Chart → Chart Options...**
- Click on the **Axes** tab.
- Checkmarks indicate the axis is displayed. Click to remove the checkmark if desired.
- The X axis can be displayed as automatic, by category, or on a time scale. Make the desired choice.
- Click on **OK**.

Chart Options - Gridlines

- Click on the chart.
- On the **Menu Bar**, click on **Chart → Chart Options...**
- Click on the **Gridlines** tab.
- Checkmark(s) indicate gridlines that are displayed.
- Click to add or remove gridlines as desired.
- Click on **OK**.

Chart Options - Legend

- Click on the chart.
- On the **Menu Bar**, click on **Chart → Chart Options...**
- Click on the **Legend** tab.
- A checkmark in front of **Show legend** indicates it is showing.
- Click to add or remove the legend as desired.
- In the **Placement** section, click to place it at the bottom, the corner, the top, the right, or the left.
- Click on **OK**.

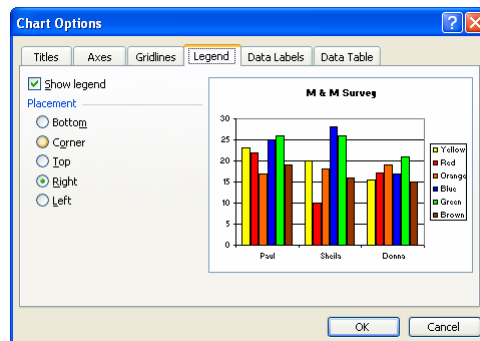


Chart Options – Data Labels

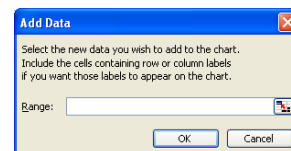
- Click on the chart.
- On the **Menu Bar**, click on **Chart → Chart Options...**
- Click on the **Data Labels** tab.
- Click to place a checkmark in front of the data label to be shown.
- Click on **OK**.
- **Note** – Data labels can be very useful in identifying the slices of a pie chart or the values of a column chart.

Chart Options – Data Table

- Click on the chart.
- On the **Menu Bar**, click on **Chart → Chart Options...**
- Click on the **Data Table** tab.
- Click place a checkmark to show or hide the data table.
- Click on **OK**.

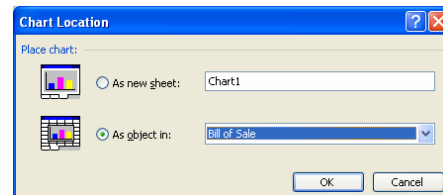
Adding Data to the Chart

- Click on the chart.
- On the **Menu Bar**, click on **Chart → Add Data...**
- Click on the button with the red dot at the end of the **Range** box.
- Click and drag to select the cells with the data to be added to the chart.
- Press the **Enter** key.
- Click on **OK**.



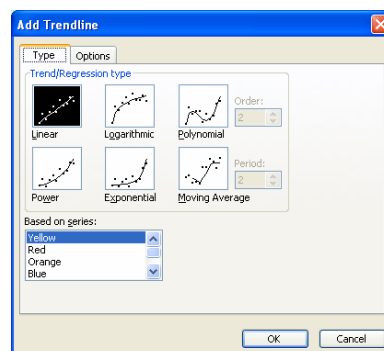
Changing the Location of the Chart

- Click on the chart.
- On the **Menu Bar**, click on **Chart → Location...**
- Choose the desired location of the chart, either as a new sheet or as an object on the current sheet.
- Click on **OK**.



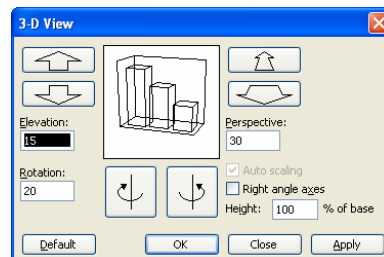
Adding a Trendline

- A trendline cannot be added to a 3-D chart.
- Click on the chart.
- On the **Menu Bar**, click on **Chart → Add Trendline...**
- In the **Trend/Regression Type** box, click on the desired type of trendline.
- In the **Based on series** box, click on the series on which the trendline is to be based.
- Click on **OK**.



Changing the View of 3-D View

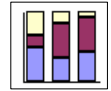
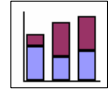
- The viewing angle of a chart which is in 3-D view can be changed.
- Click on the chart.
- On the **Menu Bar**, click on **Chart → 3-D View...**
- Click on the arrow buttons to change the angle of view as desired OR
- Enter the desired angle in the **Elevation** box, the **Rotation** box, and/or the **Perspective** box.
- In the **Height** box, enter the percentage the height of the chart is to be in relation to the base of the chart.
- Click on **OK**.
- **Note** – To apply changes and leave the **3-D View** window open for further changes, click on the **Apply** button rather than **OK**.



Special Features of Various Charts

Column Charts

- A **Stacked Column** chart compares the parts to the whole. The total number of items in the whole can also be seen in relation to other categories.
- A **100% Stacked Column** chart compares the parts as a percentage of the whole for easy comparison with other categories.



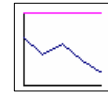
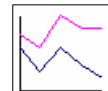
Bar Charts

- A **Stacked Bar** chart compares the parts to the whole. The total number of items in the whole can also be seen in relation to other categories.
- A **100% Stacked Bar** chart compares the parts as a percentage of the whole for easy comparison with other categories.



Line Charts

- Line charts show trends over time.
- A **Stacked Line** chart compares the parts to the whole over time. The total number of items in the whole can also be seen in relation to other categories.
- A **100% Stacked Line** chart compares the parts of the whole over time as a percentage for easy comparison.



Pie Charts

- Pie charts show the parts of a whole.
- **Pie of Pie** and **Bar of Pie** charts show information extracted from a slice of the pie.
- Exploded views show the pieces separated.

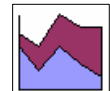


X Y Scatter Charts

- Choose between charts with dots, lines, or smooth lines as well as markers or no markers.

Area Charts

- Area charts show trends over time. They can be 3-D view.
- A **Stacked Area** chart compares the parts to the whole over time. The total number of items in the whole can also be seen in relation to other categories.
- A **100% Stacked Area** chart compares the parts of the whole over time as a percentage for easy comparison.



Doughnut Charts

- Exploded views show the pieces separated.

Radar Charts

- Radar charts can have markers or be filled.

Surface Charts

- Surface charts can be 2-D or 3-D in either a filled or wire-frame chart to show trends.

Bubble Charts

- Bubble charts compare sets of three values in either a 2-D or a 3-D chart.

Stock Charts

- Stock charts compare sets of three, four, or five values. These charts must have the specified number of values and be in the order indicated.

Cylinder, Cone, and Pyramid Charts

- A **Stacked Column** or a **Stacked Bar** chart compares the parts to the whole. The total number of items in the whole can also be seen in relation to other categories.
- A **100% Stacked Column** or a **100% Stacked Bar** chart compares the parts as a percentage of the whole for easy comparison with other categories.