

# Using Charts in Excel 2003

## What is a Chart?

A chart is a graphic representation of worksheet data. Presenting information in the form of a chart is often one of the best ways to analyze data as well as call attention to specific entries.

With Excel, you can create several different types of charts. Each type, in turn, can be displayed in a number of different subtypes. Some of the most common chart types include:

- Column In a Column chart, vertical bars represent values.
- Bar In a Bar chart, horizontal bars represent values.
- Cylinder In a Cylinder chart, vertical or horizontal cylinders represent values.
- Line In a Line chart, points on a line represents values.
- Scatter In a Scatter chart, two sets of values are represented by points (usually on two lines).
- Area In an Area chart, shaded areas represent values.
- Pie In a Pie chart, values are represented by slices of a pie (percentages of the whole).

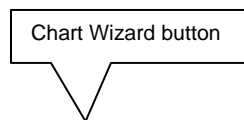
## Plotting a basic chart...

With Excel's Chart Wizard, you can quickly plot a basic chart—that is, a chart containing data markers, a title and a legend. The chart can appear on the worksheet containing the source data or it can appear on a separate chart sheet of its own.

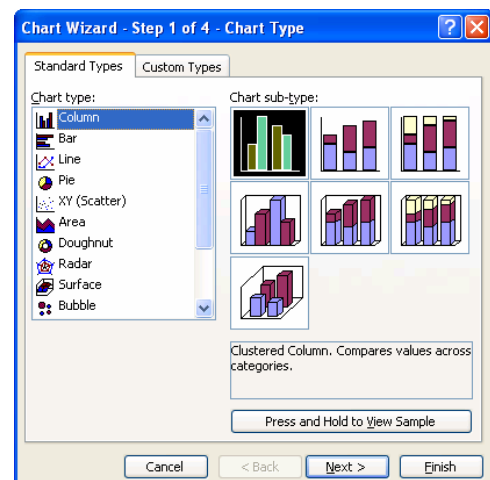
## Objective 1: Create a Chart

### To Create a Chart using the Chart Wizard

1. Highlight the data you want to chart, including any headers or labels
2. Click the **Chart Wizard button** on the Standard toolbar



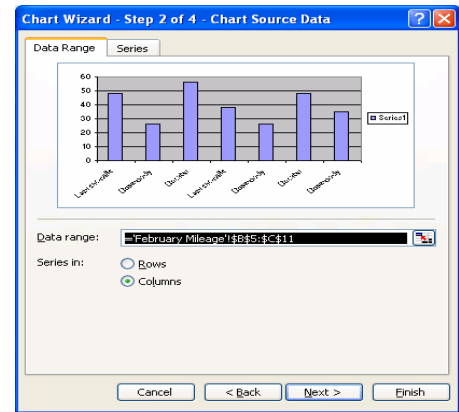
3. From the **Chart type list**, click type of chart you wish to create
4. From the **Chart sub-type list**, click the sub-type you wish to use
5. Click the **Next button**



## Objective 2: The Chart Source Dialog box.

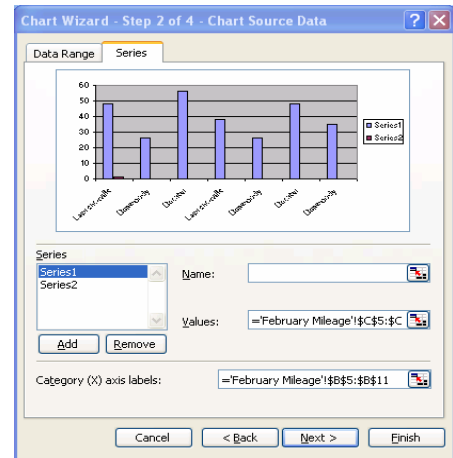
Lets you choose the data being charted and whether the series are in rows or columns. If you selected the data before clicking the Chart Wizard button, Excel converted the range to absolute values and the correct range displays in the Data range text box.

Shows Data Range selected. Series are shown in columns.

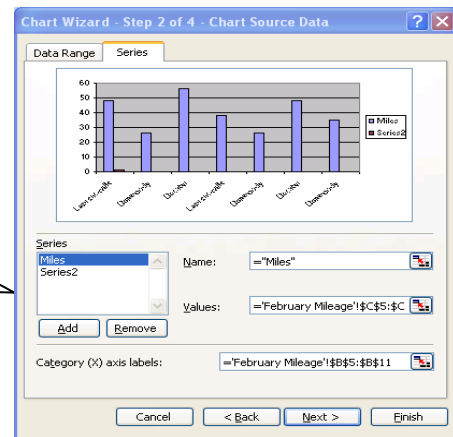


Note: By selecting the Series tab, you can change the title of Default Series to specific series names

1. Click the **Series** Tab
2. Under the **Series** dialog box, Select the Series that you would like to change
3. Click into the **Name** Dialog box and type the new name for the Series
4. Add or Remove Series names by selecting the buttons located under the **Series** dialog box
5. Click **Next**

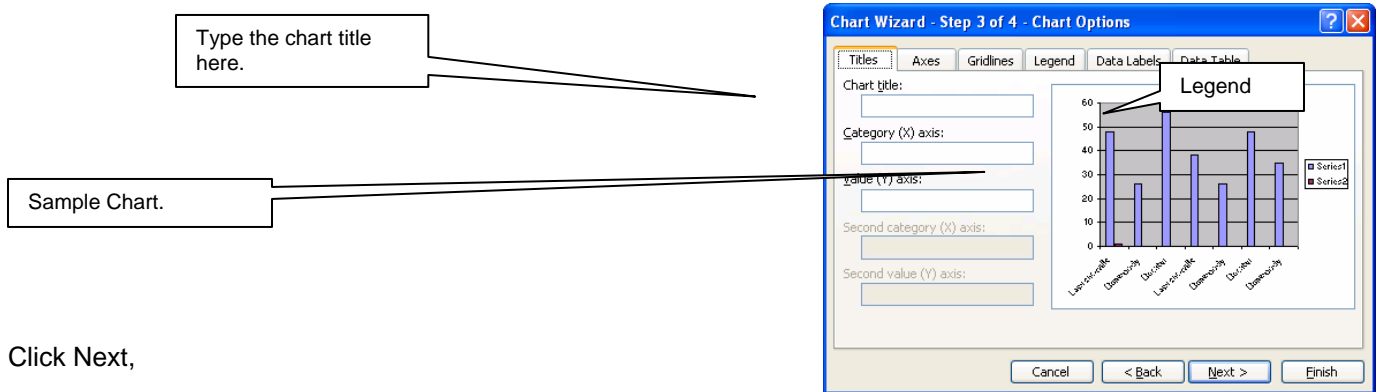


Shows new Series names



### Objective 3: The Chart Options Dialog Box

This dialog box shows a sample chart using the data you selected. Here, you can choose to keep the legend, add a chart title, gridlines, data labels, data table, and add axis titles.

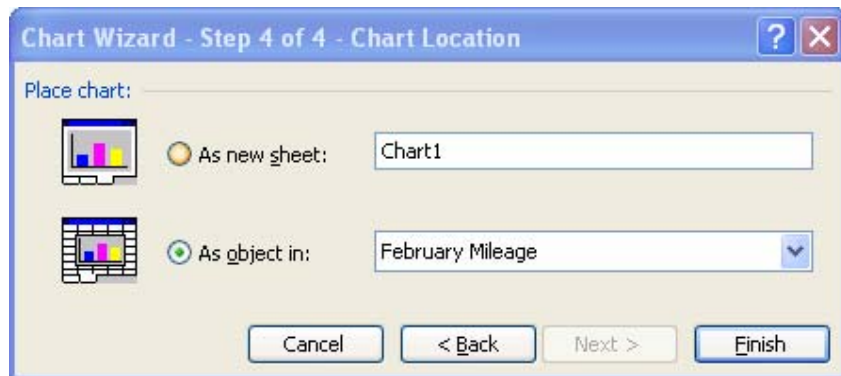


Click Next,

### Objective 4: Chart Location Dialog Box

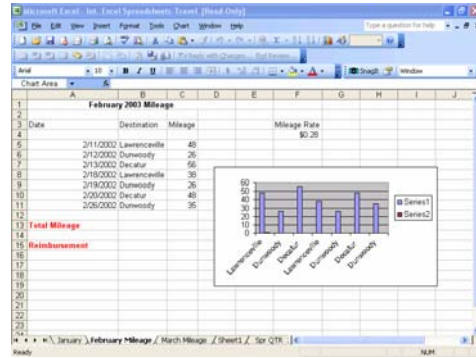
In the Chart Wizard, Step 4 of 4, you determine the placement of the chart in the workbook. You can display a chart as an object on the current sheet, on any other existing sheet, or on a newly created chart sheet.

1. Click the **Radio Button** for your choice
2. Click **Finish**



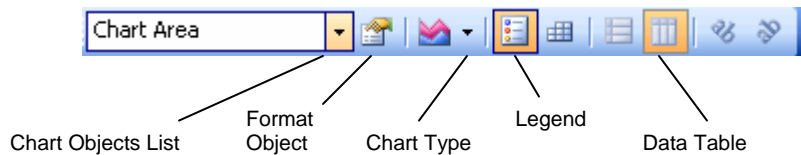
## Objective 5: Moving & Resizing a Chart

1. Click the Chart to Select it
2. Click, Hold, and Drag the chart to the desired position until it docks
3. Release the left mouse button
4. Click the legend to select it
5. Drag the legend until it is aligned with the plot area.

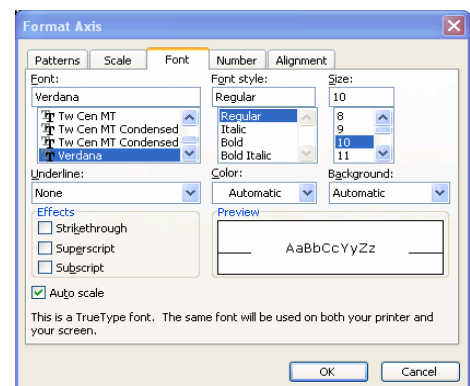
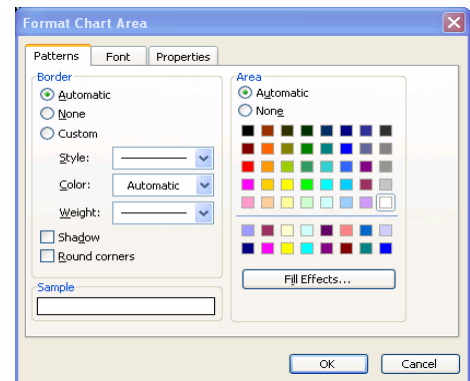
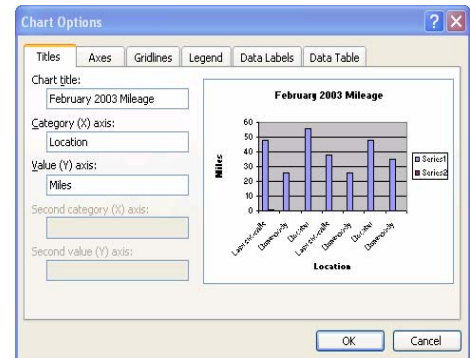


## Objective 6: Editing & Enhancing a Chart

Once you have created a chart, it's easy to modify it to make it easier to read and understand. You can create titles for the x-axis and y-axis, add graphics, add background color, or format the text you use in a chart.



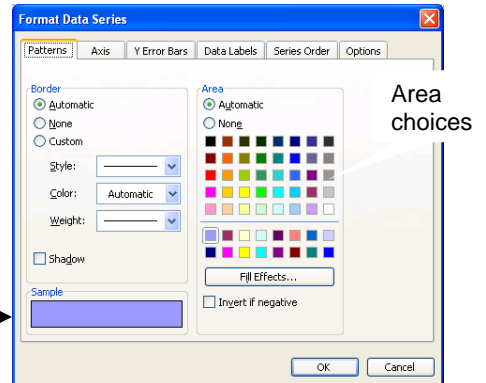
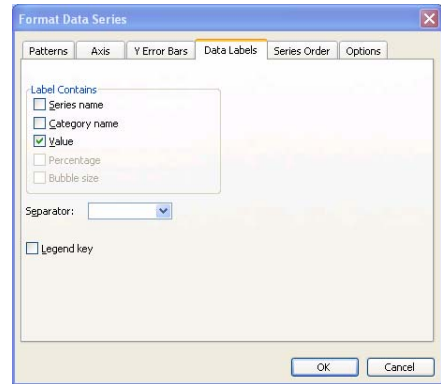
1. Make sure your Chart is selected
2. Click **Chart** from the Chart Main Menu or Use the Chart Toolbar **View, Toolbars, Chart**
3. Click **Chart type**
4. Click a **Chart sub-type**
5. Click the **Press and Hold to View Sample** button to preview selection
6. Click **OK**
7. Click **Chart** from the Main Menu
8. Click **Chart Options**
9. Click **Titles** tab in the Chart Options dialog box, then type a title in the Category (X) axis box
10. Click the **Value (Y) axis text box**, type a title, then click **OK**
11. Press **ESC** to deselect the Value-axis title
12. Click the **Chart Title** to select it
13. Click the **Format Chart Title** button on the Chart toolbar to open the Format Chart Title dialog (If Chart toolbar is not present, Go to **View, Toolbars, Chart**)
14. Make sure the **Patterns** tab is selected, and then click the **Shadow** checkbox.
15. Click the **Font** tab in the **Format Chart Title** dialog box, make changes, Click **OK**
16. Click the **Category Axis Title**, Click the **Format Object** button, click the **Font** tab, make changes to the Font selection and/or Font Sizes, Click the **Alignment** tab, then go to the **Orientation** tab to adjust the text, then click **OK**
17. Click the **Value Axis Title**, Click the **Format Object** button, Click the **Font** tab, make changes to the Font selection and/or Font Sizes, Click the **Alignment** tab, then go to the **Orientation** tab to adjust the text, Click **OK**, then press **[ESC]** to deselect the title



## Objective 7: Customizing a Data Series

A **data series** is the information, usually numbers or values that Excel plots on a chart. You can customize the data series in a chart easily by altering the spreadsheet range that contains the chart data or by entering descriptive text, called a **data label** that appears above a data marker in a chart.

1. If necessary, Click the **Chart** to select it
2. Click the **Chart Objects list arrow** in the Chart toolbar, then click a **Series**
3. Click the **Format Object button** on the Chart toolbar,
4. Click the **Data Labels tab** in the Format Data Series dialog box
5. Under Data Labels, click either **Series Name/Category Name or Value** option button to select it then click **OK**.
6. Click the **Chart Objects list arrow** on the Chart toolbar; click a **Series**, click the **Format Object button**, then click the **Patterns tab** in the Format Data Series dialog box.
7. Under Area, click a color choice, click **OK**, and press [ESC] to deselect the data series, press [ESC] again to deselect the entire chart
8. Format other **Data Series** options by selecting the other tabs



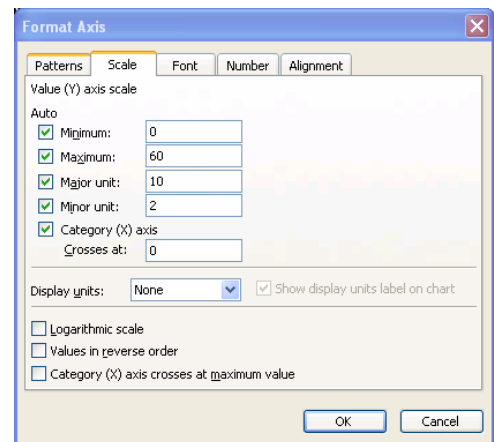
## Objective 8: Formatting a Chart Axis

Excel automatically plots and formats all chart data and places chart axes within the chart's **plot area**. Data values in two-dimensional charts are plotted on the value (y) axis and categories are plotted on the category (x) axis. You can override any of these settings by following these steps.

1. Click the **Chart**, click the **Chart Objects list arrow** on the Chart toolbar, then click **Value Axis**.
2. Click the **Format Object button** on the Chart toolbar, then click the **Scale tab**

Note: The check marks under Auto indicate the default scale settings. You can override any of these settings by entering a new value.

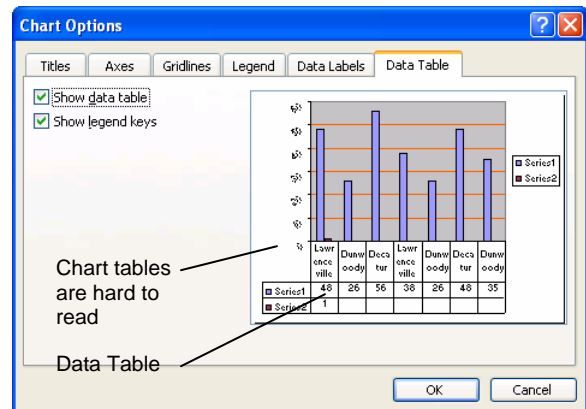
3. In the boxes, type desired values for Maximum, Minimum, and Increment units, then click **OK**.
4. With the **Value Axis** still selected, click **Format Object button** on the Chart toolbar, then click the **Number tab**
5. Under Category click **General**, click **OK**, press [Esc] twice



## Objective 9: Adding a Data Table to a Chart

A **data table**, attached to the bottom of a chart, is a grid containing the chart data. Data tables are useful because they highlight the data used to generate a chart, which might otherwise be difficult to find. They can be displayed in line, area, column, and bar charts, and print automatically along with a chart.

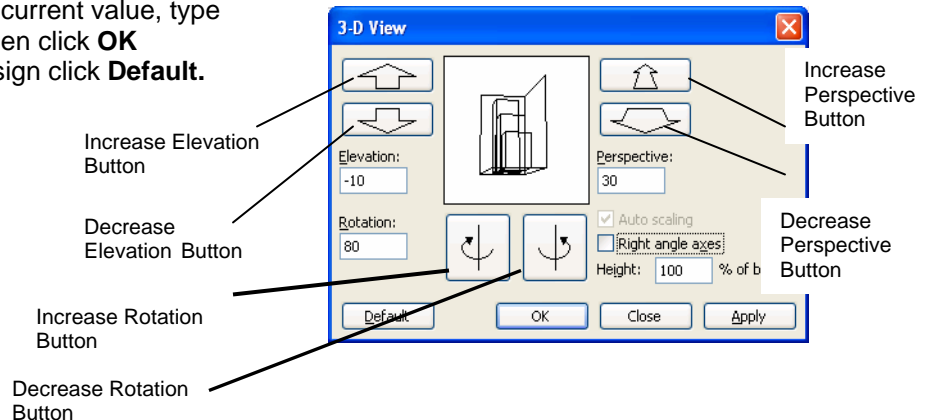
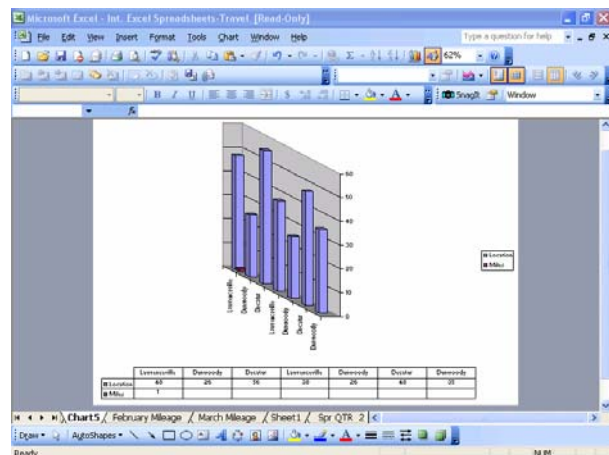
1. Click the **Chart** to select it, click **Chart** on the menu toolbar, click **Chart Options**, then click the **Data Table** tab
2. Click the **Show data table** check box to select it
3. Click **OK**, then, if necessary, scroll down to display the chart
4. If necessary, click the **chart** to select it, click **Chart** on the menu toolbar, then click **Location**, click the **As new sheet** option button under **Place chart**, click **OK**



## Objective 10: Rotating a Chart

Three-dimensional (3-D) charts do not always display data in the most effective way. In many cases, one or more of the chart's markers can hide data in these charts. You can make your chart easier to view by rotating and/or elevating the axes.

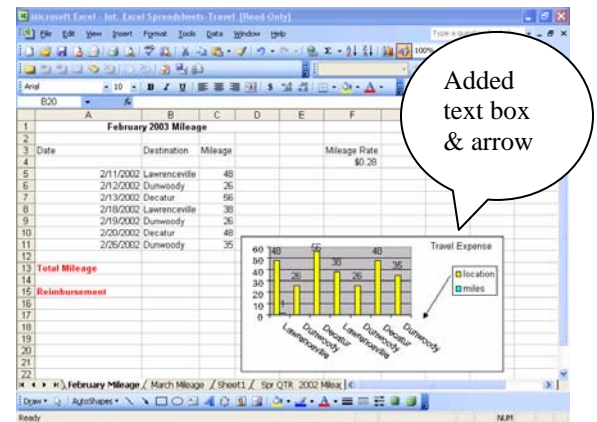
1. If necessary, create a 3-D chart, by clicking on **Chart Wizard**, then choose a **3-D chart** option from the **chart subtypes**.
2. Click the **lower-right corner handle** of the chart, press and hold the left mouse, then drag the chart right or left approximately 2 inches.
3. **Select** the 3-D chart then click **Chart** on the menu toolbar, click **3-D View**, then drag the **3-D View dialog box** to the upper right corner of the screen.
4. To the left of the preview box, click the **Increase** or **Decrease Elevation** button
5. Click **Apply**
6. In the Rotation box, select the desired value.
7. Click the **Right angle** axes to display the Perspective box, select the current value, then click **Apply**
8. In the **Height** box, select the current value, type desired value, click **Apply**, then click **OK**
9. To return to original chart design click **Default**.



## Objective 11: Annotating and Drawing on a Chart

You can add arrows and text annotations to point out critical information in your charts.

1. Select your chart, if necessary.
2. Type new text in the formula bar (after you confirm the entry, the text appears in a selected text box within the chart window).
3. Point to an edge of the text box so the pointer changes to a 4-way arrow.
4. Go to the Drawing Toolbar or go to View, Toolbar, ✓ Draw



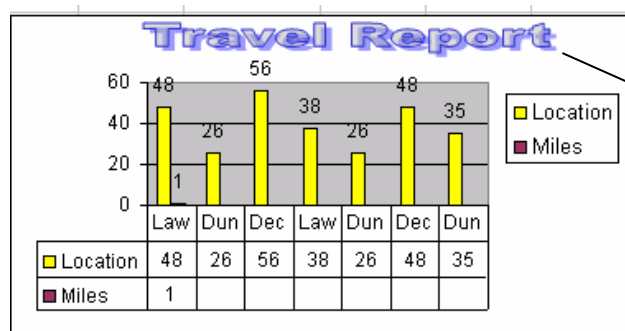
5.
  - Arrow Button
  - Insert a Word Art

6. Click the **Arrow button** on the Drawing toolbar (The pointer changes to + and the status bar displays "Click and drag to insert an AutoShape." When you draw an arrow, the point farthest from where you start will have the arrowhead.)
7. Position + under your text selection in the text box, press and hold the **left mouse button**
8. Drag the line to the designated point, then release the mouse button.
9. Click anywhere to close the Drawing toolbar.

## Objective 12: Enhancing a Chart with WordArt

You can enhance your chart or worksheet by adding specially formatted text using the WordArt tool on the Drawing toolbar.

1. Click the Insert a WordArt button on the Drawing toolbar
2. Select a WordArt style, Click OK
3. Type new text, Click the Font selection to change formatting, Click OK
4. Move & Resize Word Art where you like
5. Press [Esc] to deselect the WordArt



Word Art text  
Inserted

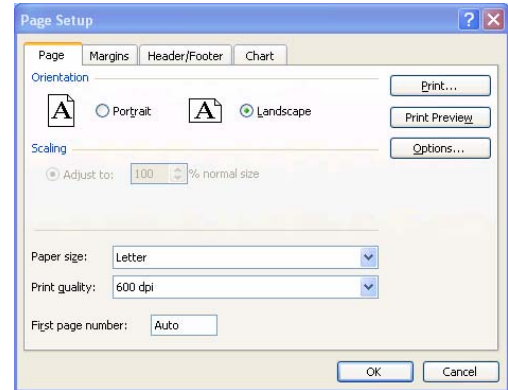
## Objective 13: Previewing and Printing a Chart

After you complete a chart to your satisfaction, you will need to print it. Previewing a chart gives you a chance to see what your chart looks like before you print it. You can print a chart by itself, or as a part of the worksheet.

Note: If you want to print only the chart without the date, leave the chart selected.

### Print Preview

1. Click the **Print Preview** button on the Standard toolbar, or go to **File, Print Preview**.
2. If you want to change the Orientation of the printout...
3. Click **Setup** on the Print Preview Toolbar
4. Click the **Page** tab
5. If necessary, Click the **Landscape** option radio button
6. Click **OK**
7. Click the **Print** tab to display the **Print** dialog box, then click **OK**



Note: When a chart is selected, you can accurately position a chart on the page by setting the desired margin lines.

### Change Margins

1. From the **Print Preview** Toolbar, Click the **Margins** tab
2. Press and hold the mouse button on the margin
3. Drag the lines to the exact setting you want
4. Click the **Print** tab to display the **Print** dialog box, then click **OK**