
MICROSOFT EXCEL 2003

CREATING/EDITING CHARTS

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CREATING/EDITING CHARTS

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LESSON 1 - CREATING CHARTS

USING CHARTS

Discussion

A chart uses values in a worksheet to create a graphic representation of their relationship to one another. You can use charts to make it easier to spot trends, highlight important changes, and compare individual figures. For example, when comparing sales amounts, a column chart dramatically illustrates differences between two or more sales amounts. Using charts in reports and presentations displays numbers in a format that is easy to understand.

When you create a chart, each row or column of data on the worksheet becomes a data series. Each individual value within the row or column is called a data point.

The range you chart can include row and column headings. These headings are used as the category labels and legend text. If the range does not include headings, Excel creates default headings.

In Excel, you can either embed a chart in the worksheet, or you can create it on a chart sheet. An embedded chart is a chart object in the worksheet. When you want the chart and the worksheet data viewed or printed together, you should use an embedded chart.


A chart sheet is a separate worksheet in the workbook that contains only the chart. If you want to use the chart by itself (for example, in a presentation), you should use a chart sheet. Both types of charts are linked to the worksheet data and update automatically if the data is changed.


CREATING CHARTS WITH THE CHART WIZARD

Discussion

The Chart Wizard assists you in creating a chart by leading you through a series of dialog boxes that allow you to choose options for the chart. You can use the Chart Wizard to quickly learn the essentials of creating a chart. For example, if you have never created a chart to demonstrate monthly sales by representative, the Chart Wizard will guide you through the process.

The Chart Wizard contains four steps. In the first step, you select the chart type and sub-type. In the second step, you select or verify the data that will be used to create the chart. The third step allows you to select various chart options. The last step determines whether the chart will be embedded in the worksheet or displayed in its own chart sheet.

 After you have created a chart, you can edit it to change any chart feature.


 You can preview the selected chart type and sub-type by clicking and holding the **Press and Hold to View Sample** button in Step 1 of the Chart Wizard.



To modify an existing chart, you can access any one of the four Chart Wizard pages by right-clicking the chart you want to edit and selecting the **Chart Type**, **Source Data**, **Chart Options**, or **Location** command.



Procedures

1. Select the range containing the data you want to chart.
2. Click the **Chart Wizard** button  on the **Standard** toolbar.
3. Select the desired chart type from the **Chart type** list box.
4. Select the desired chart sub-type under **Chart sub-type**.
5. Select **Next >**.
6. Select the desired **Series in** option.
7. Select **Next >**.
8. Select the desired chart options tab.
9. Select the desired chart options.
10. Select **Next >**.
11. Select the desired chart placement.
12. Select **Finish**.

MOVING AND RESIZING CHARTS



Discussion

After a chart has been placed on a worksheet, it can be moved and resized. You can move a chart to place it in a desired location. For example, if you have created an embedded chart that hides your data, you can move it to a more appropriate location.

Resizing a chart allows you to create a larger or smaller chart. For example, you may want to increase the size of a chart so that its labels are more legible.



To select a chart, click any blank area within the chart. If you click the legend or the title inside of a chart, only the object you clicked is selected, not the entire chart.



Procedures

1. Select the chart you want to move.
2. Drag the chart to the desired location.
3. To resize a chart, point to the desired sizing handle.
4. Drag the sizing handle to the desired location.

IDENTIFYING CHART OBJECTS



Discussion

Excel charts are composed of elements called objects. You can use chart tips to identify each object in a chart. A chart tip displays the name of an individual object. Being able to identify each object helps you when creating and editing charts.

The various chart objects and their descriptions are listed in the following table:

Object	Description
Chart area	The entire area within the chart border, including the chart itself and all related elements.
Plot area	The area in which Excel plots data.
Category axis (x axis)	The axis that contains the categories being plotted. It is usually the horizontal axis.
Value axis (y axis)	The axis that contains the values being plotted. It is usually the vertical axis.
Chart title	Text describing the chart; it is automatically centered and placed at the top of the chart.
Legend	Describes the data series being plotted.
Series markers	Graphic elements that make up your data plot, such as bars or lines. The chart tip names each series using the name displayed in the legend.
Data points	The individual parts of a data series. Data points can be bars, points on a line, a slice of a pie, a circle, etc. Data points are identified in chart tips by the series name and the value of the data point.
Gridlines	Lines that extend from an axis across the plot area to help guide the eye from the data point to its corresponding value.

Not all objects appear in every chart type. For example, pie charts do not have axes.



If the chart tips are not visible, you can select the **Show names** option on the **Chart** page in the Options dialog box.



You can use the **Chart Objects** list on the **Chart** toolbar to select any available chart object.



Procedures

1. Point to any chart object to display its chart tip.

CHANGING THE CHART TYPE




Discussion

You can change the chart type to one of a number of types, including column, bar, line, pie, XY (scatter), area, doughnut, radar, surface, bubble, stock, cylinder, cone, and pyramid.

Changing the chart type changes the way your data is represented. For example, if your sales data appears in a line chart, it clearly demonstrates sales trends. Using the same data in a pie chart provides a clear picture of what percentage of the total sales each amount represents.



Procedures

1. Select the chart.
2. Click the arrow on the **Chart Type** button  on the **Chart** toolbar.
3. Select the desired chart type.

CHANGING THE CHART TYPE AND SUB-TYPE



Discussion

You can use the Chart Type dialog box to change the chart type and sub-type. You can select from a number of different chart types. In addition, you can choose from a number of sub-types for each chart type. The sub-types are variations of the main chart type. For example, you can display a bar chart with a stacked, clustered, or 3-D effect.



You can also right-click a chart and select the **Chart Type** command or use the **Chart** toolbar to change the chart type.



You can preview the selected chart type and sub-type by clicking and holding the **Press and Hold to View Sample** button in the Chart Type dialog box.



Procedures

1. Select the chart.
2. Select the **Chart** menu.
3. Select the **Chart Type** command.
4. Select the desired chart type from the **Chart type** list box.
5. Select the desired chart sub-type under **Chart sub-type**.
6. To remove custom formatting and apply the default chart formatting, select the **Default formatting** option.
7. Select **OK**.

CHANGING THE PLOT DIRECTION





Discussion

You can use the **By Row** and **By Column** buttons on the **Chart** toolbar to change the plot direction of the data. For example, you can change a sales chart that displays the representatives names along the category axis and the month names in the legend to a sales chart that displays the month names along the category axis and the representatives names in the legend. The **By Row** button changes the chart so that the data series is taken from rows of data. The **By Column** button changes the chart so that the data series is taken from columns of data.



Procedures

1. Select the chart.
2. To change the plot direction from columns to rows, click the **By Row** button  on the **Chart** toolbar.
3. To change the plot direction from rows to columns, click the **By Column** button  on the **Chart** toolbar.

REMOVING/ADDING A LEGEND



Discussion

In a chart, a legend is used to label the data series. When you create a chart with the Chart Wizard, the legend automatically appears. However, you can remove the legend if you want more room in the chart, if you want to make the chart smaller, or if you want to identify the data series in some other way. For example, if you are going to add a data table, the legend is redundant and takes up valuable space on the chart.



You can also reposition the legend by selecting it and dragging it to a new location.



Procedures

1. Select the chart.
2. Click the **Legend** button  on the **Chart** toolbar.

MOVING THE LEGEND



Discussion

You can use the Chart Options dialog box to change the placement of the legend. By default, the legend is placed to the right of the chart, but it can be moved above, below, to the left, or to a corner of the chart. Changing the placement of the legend can improve the overall appearance of the chart.



Procedures

1. Select the chart.
2. Select the **Chart** menu.
3. Select the **Chart Options** command.
4. Select the **Legend** tab.
5. Select the **Show legend** option, if necessary.
6. Select the desired placement option.
7. Select **OK**.

CHARTING NON-ADJACENT RANGES




Discussion

You can chart non-adjacent ranges in a worksheet. This option allows you to select only the data you want to chart and is especially useful when you want to plot only one data series, as in a pie chart.



Procedures

1. Select the first range you want to chart.
2. Hold [**Ctrl**] and select the non-adjacent range(s).
3. Click the **Chart Wizard** button  on the **Standard** toolbar.
4. Select the **Standard Types** tab.
5. Select the desired chart type from the **Chart type** list box.
6. Select the desired chart sub-type under **Chart sub-type**.
7. Select **Next >**.
8. Select the desired **Rows** or **Columns** series option, if necessary.
9. Select **Next >**.
10. Select the desired chart options tab.
11. Select the desired chart options.
12. Select **Next >**.
13. Select the desired chart placement.
14. Select **Finish**.

CHANGING THE CHART RANGE



Discussion

When a chart is selected, colored borders appear around the labels and data used in the chart. You can add or remove data from a chart by changing the border surrounding the data to include or exclude one or more series of data. For example, if you want to remove a sales representative from a chart, you can drag the border surrounding the sales data so that it does not include that representative. You can only redefine the range to include or exclude adjacent data.



If the chart is on a separate chart sheet, you can use the Source Data dialog box to change the data range. You can change a data range by right-clicking the chart, selecting the **Source Data** command, and selecting the **Data Range** page. Then, enter the new range into the **Data range** box.



Procedures

1. Select the chart.
 2. Point to the fill handle in the border surrounding the data used in the chart.
 3. Drag the fill handle to include or exclude data as desired.
-

CHANGING THE DATA SOURCE



Discussion

You can use the Source Data dialog box to change the data source used in a chart. You can add or remove data from a chart by including or excluding one or more data series. For example, you can remove a sales representative from a chart that displays monthly sales by representative.

Changes made to the source data appear in a sample chart in the Source Data dialog box. You can use this sample chart to preview your chart before you accept any of the changes.



Procedures

1. Select the chart.
2. Select the **Chart** menu.
3. Select the **Source Data** command.
4. Select the **Series** tab.
5. Select the data series you want to remove from the **Series** list box.
6. Select **Remove**.
7. Select **OK**.

CHANGING THE CHART LOCATION



Discussion

You can use the Chart Location dialog box to change the location of a chart. The chart can be placed on an existing worksheet or in its own chart sheet. For example, you may want to use the worksheet without the chart. Placing the chart on a chart sheet retains the chart as part of the file, but removes it from the worksheet. Chart sheets are inserted to the left of the worksheet containing the data represented by the chart. Charts on chart sheets are still linked to the data in the worksheets and update automatically whenever the data changes.



Procedures

1. Select the chart.
 2. Select the **Chart** menu.
 3. Select the **Location** command.
 4. Select the **As new sheet** option.
-

5. Select **OK**.

PRINTING A CHART



Discussion

Charts embedded in a worksheet print automatically when you print the worksheet. If you want to print just the chart, you can select it before you print. For example, you may want to print the chart to use as a slide overhead for a presentation.





You can also print a chart from the Print dialog box. When a chart is selected, the **Selection** option in the Print dialog box changes to **Selected Chart**.



You can also print a chart sheet by first selecting it and then clicking the **Print** button.



Procedures

1. To print the chart without the worksheet data, select the chart.
2. Click the **Print** button .
3. To print the chart with the worksheet data, click outside the chart in the worksheet area.
4. Click the **Print** button .

LESSON 2 - FORMATTING CHARTS

In this lesson, you will learn how to:

- Format charts
- Add chart titles
- Format chart objects
- Change the text orientation
- Add a data table
- Create an exploded pie chart
- Adjust the 3-D view
- Delete a chart

FORMATTING CHARTS

Discussion

You can edit an existing chart to improve its appearance and modify how data is charted.

You can use the Chart Options dialog box to add or hide chart objects. You can add titles to the chart, display or hide the chart axes and/or axis gridlines, position the legend, and add data labels and/or a data table.

Each object in a chart can be formatted. The formatting options vary, depending upon the chart object selected. Chart objects can be formatted using either the Format dialog box for the corresponding chart object or the **Formatting** toolbar. For example, you can change the appearance of the text in the chart title by opening the Format Chart Title dialog box or by using the buttons on the **Formatting** toolbar.

ADDING CHART TITLES

Discussion

You can use the Chart Options dialog box to add titles to a chart. You can add a chart title that is centered at the top of a chart and identifies the basic information conveyed in the chart.

In addition, you can add titles to the chart axes. Each axis title will appear along the corresponding axis. For example, you may want to add a title to the value axis, indicating the scale of the numbers represented (e.g., thousands).

Procedures

1. Select the chart.
 2. Select the **Chart** menu.
 3. Select the **Chart Options** command.
 4. Select the **Titles** tab.
 5. Select the desired title box.
 6. Type the desired title text.
 7. Select **OK**.
-

FORMATTING CHART OBJECTS

Discussion

You can use the **Format** button on the **Chart** toolbar to format a selected chart object. Formatting changes the appearance of the chart. For example, if you are using the chart in a presentation, you may want to change the font of the chart text to match the font used throughout the presentation.

The formatting options available depend on the selected object. For example, if the chart area is selected, you can change the patterns, fonts, and chart area properties. If the category axis is selected, you can change the patterns, scale, font, number, and alignment. You can click to select the desired chart object, or you can select it from the **Chart Objects** list on the **Chart** toolbar.

You can also use the buttons on the **Formatting** toolbar to format text and values, as well as data point and data series fill colors and patterns.



The name of the **Format** button changes depending on the object selected. For example, if the chart area is selected, the button name changes to **Format Chart Area**. If the category axis is selected, the button name changes to **Format Axis**.




You can also double-click a chart object to open the corresponding Format dialog box.



Clicking a series object (such as a column in a column chart) selects the entire series. The **Format** button then opens the Format Data Series dialog box and any changes are applied to all the objects in the series. However, clicking a series object a second time selects only that data point. The **Format** button then opens the Format Data Point dialog box and any changes are applied only to that single object.

Procedures

1. Select the chart object you want to format.
2. Click the **Format** button  on the **Chart** toolbar.
3. Select the desired tab.
4. Make the desired changes.
5. Select **OK**.

CHANGING THE TEXT ORIENTATION

Discussion

You can use the **Angle Clockwise** or **Angle Counterclockwise** buttons on the **Chart** toolbar to change the orientation of selected text in a chart. The **Angle Clockwise** button angles selected text downward at a 45-degree angle. The text is

angled so that the first letter appears at the top and the last letter at the bottom. The **Angle Counterclockwise** button angles selected text upward at a 45-degree angle. The text is angled so that the first letter appears at the bottom and the last letter at the top.



You can angle text to provide room for long labels on the category axis or to improve the appearance of the chart. For example, if a chart contains multiple entries for sales representatives along the category axis, you can angle the labels to make them easier to read.



If the text is already angled, clicking the **Angle Clockwise** or **Angle Counterclockwise** button returns the text to its default alignment.



Procedures

1. Select the text you want to angle.
2. To angle the text downward, click the **Angle Clockwise** button  on the **Chart** toolbar.
3. To angle the text upward, click the **Angle Counterclockwise** button  on the **Chart** toolbar.

ADDING A DATA TABLE



Discussion

A data table displays the chart values in a grid below the chart. Whereas charts are useful for providing a visual display of relative amounts, data tables are useful for displaying the actual chart values. For example, a chart showing monthly sales by representative allows you to compare the amounts earned by each representative. If you add a data table to the chart, the actual sales values for each month also appear.

You can use the **Data Table** button on the **Chart** toolbar to add or remove the data table.




Data tables can require a large amount of space in the chart area and may significantly reduce the amount of space available for your chart. You can resize the chart to accommodate the data table, if desired.



You can attach the data table to a chart by changing the chart to a 3-D chart.



Procedures

1. Select the chart.
 2. Click the **Data Table** button  on the **Chart** toolbar.
-

CREATING AN EXPLODED PIE CHART

Discussion

Pie charts are useful to show how individual data compares to a total. The total pie represents one data series, and each slice of a pie represents the data for a single category within the series. You can use pie charts to make visual comparisons, such as how the sales of baseball equipment compare to the sales of soccer equipment for the year. Pie charts are also used to compare an individual item of data to the whole, such as hockey equipment sales to the total sporting equipment sales for the year.

Slices can be pulled away from the rest of the pie chart to call attention to individual data items. This process results in what is called an exploded pie chart. You can explode all the slices of a pie chart or just selected ones. You can create an exploded pie chart with all slices separated by selecting a 2-D or 3-D exploded pie chart sub-type. You can also explode pie slices by dragging them away from the pie chart.



You can rotate a 2-D or 3-D pie chart by double-clicking the pie chart, selecting the **Options** page in the Format Data Series or Format Data Point dialog box, and using the **Angle of first slice** spin box to rotate the pie chart.

Procedures

1. Click any slice of the pie chart to select the chart.
2. Click the pie slice you want to explode.
3. Drag the pie slice to the desired location.

ADJUSTING THE 3-D VIEW

Discussion

You can change the elevation, rotation, and perspective of a 3-D chart. Elevation tilts a chart so that you appear to be viewing it from different heights. Rotation moves a chart around a vertical axis. Perspective elongates a chart from front to back, making it appear as if its depth is changing.

You can use the 3-D View dialog box to change the 3-D perspective of a chart. You can either use the **Elevation** and **Rotation** buttons or enter specific values into the corresponding boxes. The **Apply** button allows you to view how the changes will affect the chart without closing the 3-D View dialog box.



The 3-D view of a chart can also be adjusted by dragging any one of the chart sizing handles to the desired position.



Procedures

1. Select the **Chart** menu.
2. Select the **3-D View** command.
3. Click the desired **Elevation** button as needed.
4. Click the desired **Rotation** button as needed.
5. Select **OK**.

DELETING A CHART



Discussion

If you no longer need a chart, you can delete it from the worksheet. When you delete a chart, only the chart is deleted; the data from which the chart was created remains in the worksheet.



You can delete a chart sheet by right-clicking the desired chart sheet tab, selecting the **Delete** command, and then selecting **Delete**.



Procedures

1. Select the chart you want to delete.
 2. Press [**Delete**].
-

LESSON 3 - ADVANCED CHARTING

In this lesson, you will learn how to:

- Add and remove gridlines
- Format gridlines
- Format an axis
- Change the axis scaling
- Format the data series
- Add data - different worksheets
- Use a secondary axis
- Change data series chart types
- Add a trendline
- Create user-defined charts
- Apply user-defined charts

ADDING AND REMOVING GRIDLINES

Discussion

Gridlines are the lines that start at the tickmarks on an axis and extend through the plot area. Gridlines are usually added for a value axis since they make it easier to read the value of a data series. You can use gridlines for a category axis to create separations in the data.

Excel includes two types of gridlines: major and minor. For a value axis, major gridlines appear along the numbers on the value axis and minor gridlines appear between the numbers. By default, only the major gridlines of the value axis are included in a chart. You can add or remove major and minor gridlines to and from the category or value axis while creating the chart with the Chart Wizard, or after the chart is created.

Procedures

1. Right-click a blank area of the chart to which you want to add or remove gridlines.
2. Select the **Chart Options** command.
3. Select the **Gridlines** tab.
4. Select or deselect the desired title gridline option.
5. Select **OK**.

FORMATTING GRIDLINES

Discussion


You can change the line format of gridlines to differentiate between major and minor gridlines. The style of gridlines can be changed to dashed or dotted lines rather than solid lines. Additionally, you can change the color and weight (thickness) of gridlines.



You can use the **Chart Objects** list on the **Chart** toolbar to select the desired gridline if the major and minor gridlines are difficult to distinguish.

Procedures

1. Select the gridlines you want to format.
 2. Display the **Chart** toolbar.
-

3. Click the **Format** button  on the **Chart** toolbar.
4. Select the **Patterns** tab.
5. Select the desired list under **Line**.
6. Select the desired option.
7. Select **OK**.

FORMATTING AN AXIS



Discussion

You can change the formatting of the X or Y axis in the Format Axis dialog box.

Using the **Patterns** page, you can modify the style, color, and weight of the axis line. Additionally, you can display and format tick marks. Tick marks are small hatch lines that indicate the major and minor units on a Y axis or the categories on an X axis.

The axis text can be formatted using the options on the **Font**, **Number**, and **Alignment** pages. For example, if you want to display the Y axis with a currency symbol and zero decimal places, you can use the **Number** page to select the desired number format.



Procedures

1. Double-click the chart axis you want to format.
2. Select the **Patterns** tab.
3. Select the desired line or tick mark options.
4. Select the **Numbers** tab.
5. Select the desired format from the **Category** list box.
6. Continue selecting tabs and options as desired.
7. Select **OK**.

CHANGING THE AXIS SCALING



Discussion

When you create a chart, Excel creates a scale for the value axis automatically based on the data in the chart. You can change this scaling, if desired.

The options under **Auto** on the **Scale** page in the Format Axis dialog box are selected by default. When these options are selected, Excel overrides any manual settings. As soon as you manually change any of the scaling values, the

corresponding options under **Auto** are deselected, thereby allowing the manual values to be applied to the chart. You can restore the scaling to its original values by reselecting the appropriate options under **Auto**.

The **Minimum** and **Maximum** options control the lowest and highest numbers on the axis, while the **Major unit** and **Minor unit** options control how the axis is divided between the minimum and maximum values and the frequency of major and minor gridlines. You can also set the number where the category axis crosses the value axis. The default is 0, but you can change it to any number between the maximum and minimum values.



Procedures

1. Double-click the chart axis you want to scale.
2. Select the **Scale** tab.
3. Select the text in the box with the scale you want to change.
4. Type a new value.
5. Select **OK**.

FORMATTING THE DATA SERIES



Discussion

You can change the appearance of the data series in a chart using the Format Data Series dialog box. The options available in the Format Data Series dialog box depend upon the type of chart object used to display the data series.

The **Patterns** page contains options to change the border and color of a data series object. Different options appear for different chart types. Using the **Data Labels** page, you can display the exact value or name of a data series in the chart next to the graphic objects they represent. If the chart contains multiple data series, the **Series Order** page can be used to rearrange the plot order. Rearranging the data into logical groups may make the chart easier to read.

Other pages in the Format Data Series dialog box provide options to rotate a pie chart, change the overlap between columns, plot a data series on a secondary Y axis, and add error bars to indicate a percentage of error in the data.



You should make sure that when you open the Format Data Series dialog box, all the series objects are selected. If only a single data marker is selected, the Format Data Point dialog box opens instead of the Format Data Series dialog box.



Procedures

1. Double-click the data series you want to move.
 2. Select the **Patterns** tab.
 3. Select the desired border, area, or fill options.
-

4. Select the **Data Labels** tab.
5. Select the desired label option under **Label Contains**.
6. Continue selecting tabs as desired.
7. Select options as desired.
8. Select **OK**.

ADDING DATA - DIFFERENT WORKSHEETS



Discussion

You can add data series from different worksheets to the same chart by copying and pasting. This option is useful when you want to compare similar data from different locations. For example, you may want to compare the sales of similar products from different regions; however, each region's data is kept on separate worksheets. The product sales data series from each worksheet can be added to the same chart using the Source Data dialog box.



You should use the Paste Special dialog box if the data in the worksheet you are copying is arranged in the opposite direction of the data in the chart. The Paste Special dialog box contains options to specify rows or columns for plotting values and whether the series or category labels are included in the copied selection.



You can change the series name that appears in the legend by selecting the **Chart** menu and then the **Source Data** command. On the **Series** page in the Source Data dialog box, select the series name from the **Series** list box, select the text in the **Name** box, and type the name you want to appear in the legend.



Procedures

1. Select the data you want to add to the chart as a new series.
2. Click the **Copy** button  on the **Standard** toolbar.
3. Display the sheet containing the chart.
4. Click in the chart.
5. Click the **Paste** button  on the **Standard** toolbar.

USING A SECONDARY AXIS

Discussion

Charts can display two different types of data, such as volume of sales compared to square footage. When a chart contains mixed data types, you need to plot the second type of data on a secondary value (Y) axis (also known as the Z axis). The secondary (Y) axis appears on the right side of the plot area with its own measurement scale.

Procedures

1. Double-click the data series object you want to chart on the secondary (Y) axis.
2. Select the **Axis** tab.
3. Select the **Secondary axis** option.
4. Select **OK**.

CHANGING DATA SERIES CHART TYPES

Discussion

You can mix different chart types within a single chart to create a combination chart. For example, you can show the total sales for a product in a column format and, at the same time, show the number of retail outlets in a line format. Mixing chart types can help show the relationships between the data series more accurately and improves the chart's overall appearance and clarity.



You can also select a combination chart type from the **Custom Types** page in the Chart Type dialog box. Combination charts include **Column - Area**, **Line - Column**, and **Line - Column on 2 Axes**.

Procedures

1. Right-click the data series object you want to change.
 2. Select the **Chart Type** command.
 3. Select the **Standard Types** tab.
 4. Select the chart type you want to use from the **Chart type** list box.
 5. Select the desired sub-type under **Chart sub-type**.
 6. Select **OK**.
-

ADDING A TRENDLINE



Discussion

Because of the varying height of the bars in a column chart, it is sometimes difficult to determine the general direction of the action. Excel enables you to quickly add a trendline to a data series. A trendline has the effect of smoothing out the rough spots in a chart and giving you a better picture of the data series. Trendlines are commonly used for data charted over time.



Procedures

1. Right-click the data series to which you want to add a trendline.
2. Select the **Add Trendline** command.
3. Select the trendline type you want to use under **Trend/Regression type**.
4. Select **OK**.

CREATING USER-DEFINED CHARTS



Discussion

You may have a chart that contains all the basic formats and characteristics you want in all your charts. You can use this chart as a model for creating other charts by identifying the chart as a user-defined chart and saving it under a different name. The chart is then added to the **Chart type** list box in the Chart Type dialog box.



Charts created in Excel can be exported to other Office XP programs. For example, you can use a chart created in Excel in your PowerPoint presentation.



You can also use the built-in chart types on the **Custom Types** page in the Chart Type dialog box to format a chart.



Procedures

1. Right-click a blank area of the chart on which you want to base the user-defined chart.
 2. Select the **Chart Type** command.
 3. Select the **Custom Types** tab.
 4. Select the **User-defined** option.
 5. Select **Add**.
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6. Type a name for the custom chart.
7. Select **OK**.
8. Select **OK**.

APPLYING USER-DEFINED CHARTS



Discussion

User-defined charts are listed in the **Chart type** list box in the Chart Type dialog box and usually contain the basic formats and characteristics of the chart types you use most frequently. Any time you create a chart, instead of using one of the standard chart types, you can select a user-defined chart from the **Chart type** list box.




You can also use the built-in chart types on the **Custom Types** page in the Chart Type dialog box to format a chart.



You can delete a user-defined chart by opening the Chart Type dialog box, and selecting the **Custom Types** page, the **User-defined** option, and the chart you want to delete from the **Chart type** list box. Then, select **Delete** and select **OK** to delete the user-defined chart.



Procedures

1. Select the range you want to use in the chart.
 2. Click the **Chart Wizard** button  on the **Standard** toolbar.
 3. Select the **Custom Types** tab.
 4. Select the **User-defined** option.
 5. Select the chart you want to apply from the **Chart type** list box.
 6. Select **Next >**.
 7. Select the desired source data options and select **Next >**.
 8. Select the desired chart options and select **Next >**.
 9. Select the desired chart placement.
 10. Select **Finish**.
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