

Excel 2003 for Windows

Tutorial Description

This course introduces you to basic spreadsheet operations. It will teach you how to set up your data and to analyze, manage and chart it for graphical presentation.

Intended Audience

Persons who need to keep track of and manipulate numerical data, such as budgets will find the class beneficial.

Suggested Resources

Excel on-line Help
CIT documents

Materials

This exercise

What is Excel?

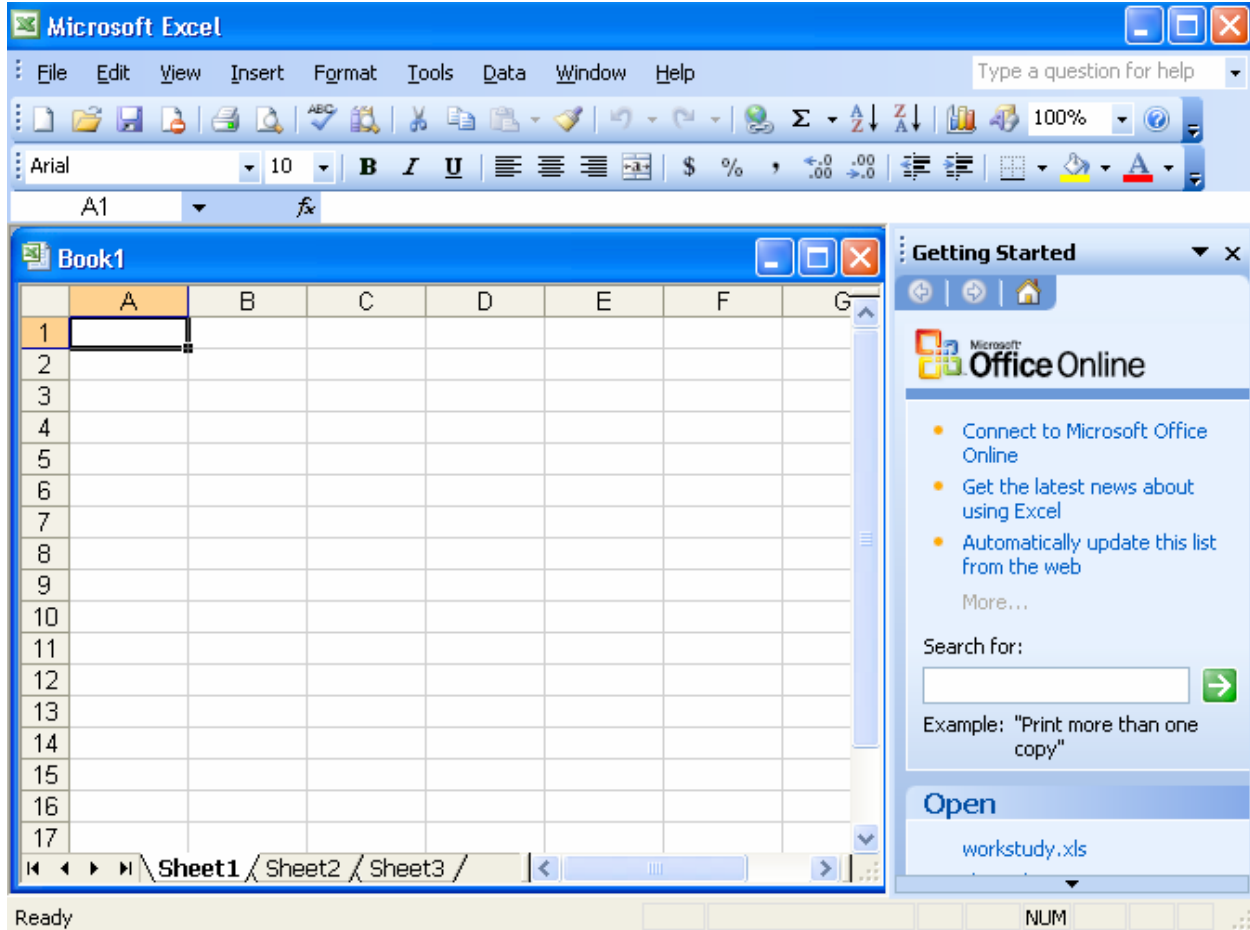
Excel is an integrated worksheet, chart and database package. It is a powerful tool for organizing, analyzing and presenting data. You can think of a worksheet as an electronic mathematical scratch pad on which you can do thousands of calculations automatically. The primary advantage of an electronic worksheet is that you can change one number in the calculations and it will automatically recalculate the whole worksheet for you. A chart represents the data graphically and the database is used for managing information.

Accessing Excel

- Click on the **Start** button; choose All Programs> Microsoft Office> Microsoft Office Excel 2003

A blank worksheet labeled **Microsoft Excel - Book1** will appear on your desktop.

Workbook Features



A workbook is the electronic equivalent of a three-ring notebook. A workbook can contain worksheets and chart sheets. Each sheet's name appears on a tab at the bottom. Sheets can be moved or copied between workbooks.

At the top of the worksheet are column headings labeled A, B, C, etc., and along the left side are row headings labeled 1, 2, 3, etc. The screen only displays a portion of the worksheet. Using the scroll bars, you can scroll through the worksheet. *The maximum size of the worksheet is 256 columns by 65,536 rows.*

The worksheet is like a grid and the intersection of each row and column is called a **cell**. Each cell can be accessed or used by specifying its coordinates (column number, row number). For example, D8 is a cell reference.

The area (A1) outlined with a heavier border is the active cell and indicates where you are in the worksheet. This is referred to as the selected cell. *It is active.* To enter data into a particular cell, the cell must be active.

The small box in the lower right corner of the cell is the fill handle. The fill handle is used to copy a cell or range of cells to another location and to create a series of sequential numbers.

The mouse pointer is represented as a shadowed outline cross instead of an arrow. In Excel, the mouse pointer has 13 different shapes depending on where it is on the screen and what function is being performed.

All of the other standard Windows features are included: Close buttons, scroll bars, menu and title bars.

The Menu bar includes additional menu labels pertaining to Excel.

The Toolbars include the Standard toolbar and the Formatting toolbar. There are a variety of toolbars. They contain commonly used tools. Move the mouse pointer over the tools for the name of each tool.

The Title bar on the worksheet is labeled **Book1**.

Note: If the Formatting toolbar is not displayed, choose View> Toolbars> Formatting.

The Formula bar [below the Formatting toolbar] is used to enter and edit data in cells.

- Type in a series of 4 or 5 numbers

The active cell reference and its contents are displayed in the Formula bar. While data is being typed, a box with an X and a checkmark appears between the cell reference and the data displayed in the Formula bar. Clicking the X deletes the entire entry from the Formula bar; clicking the checkmark enters the data in the cell. You will have to click on the Formula bar to modify or edit data after it is entered on the worksheet.

Clicking on the **fx** symbol (Insert Function button) inserts the equal sign (=) sign on the Formula bar and displays the Insert Function dialog box. This button allows you to select a number of built-in functions, enter values and do calculations.

The Status bar at the bottom of the worksheet displays information about a selected command or indicates operations in progress. The right side displays the keyboard indicator. NUM indicates the <Num Lock> key on the keypad is on. Press the Num Lock key to turn it off.

Worksheets - you can have multiple worksheets in a workbook. To name the sheets, just double click on the sheet name (Sheet1, Sheet2, etc) and type in a new name.

Split bars - dragging the small rectangle at the top of the vertical scroll bar (above the arrow) splits the window horizontally; the one to the right of the horizontal scroll bar splits the window vertically.



Horizontal and Vertical Screen Splits:

- Drag on the split boxes to practice; return to original location by double clicking on the gray lines

Worksheet Select All box - The blank box located below the Book1 label on the Title bar and above the 1 in Row 1.

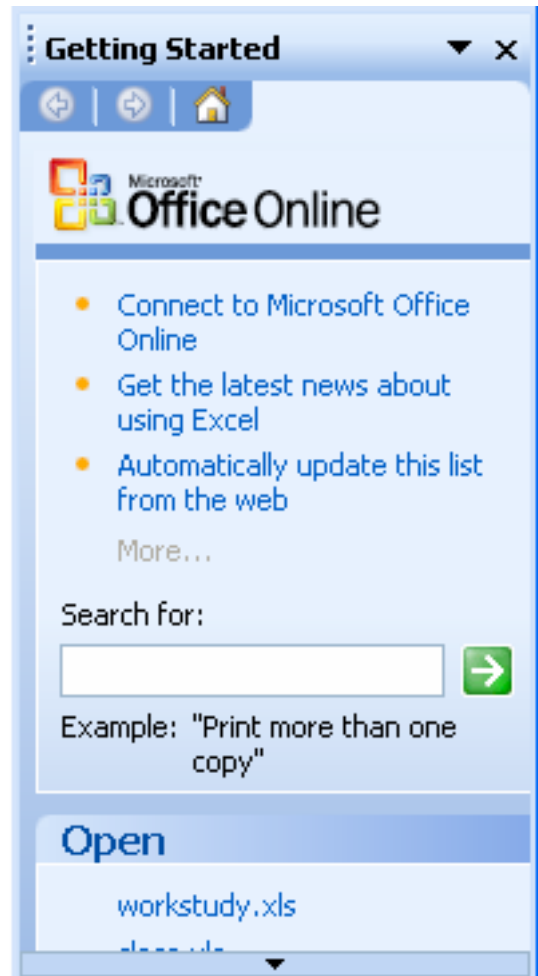
- Click the Worksheet Select All box; click anywhere to deselect

Task Pane

The Task Pane is a new feature in Excel XP. It organizes features of Excel by “task” in an attempt to make Excel easier to use. To close the Task Pane, click on the Close box (X) in the top right corner of the Pane. To show the Task Pane, go to the View menu and select Task Pane. Clicking on the arrow to the right of “Getting Started” will display other task panes.

Tools on the Standard Toolbar

The ones covered in this tutorial are marked with an asterisk. The tools will be described as they are used.



Standard

- *New - create a new workbook.
- *Open - used to open an existing worksheet.
- *Save - saves changes to active worksheet.

Permission (Unrestricted Access) -

- *Print - prints active worksheet.

*Print Preview - used to view worksheet before printing.

Spelling - spell checks the worksheet.

Research – finds files, web pages and items based on the search criteria you enter.

Cut /Copy - used to cut/copy selection to clipboard.

Paste - used to paste clipboard selection into new location.

Format Painter - copies and pastes formats for cells and objects.

*Undo - used to reverse previous action or command.

Redo - repeats last action or command.

Insert Hyperlink - allows insertion of a link to a file residing on the Internet, the local hard drive, or on another computer on the local network.

*AutoSum - inserts SUM function and a proposed sum range based on the data above or to the left of the active cell. Drop down menu (arrow) allows you to select a number of built-in functions, enter values and do calculations.

Sort Ascending - sorts selected rows in ascending order.

Sort Descending - sorts selected rows in descending order.

*Chart Wizard - used to create a chart from the data on your worksheet.

Drawing - displays or hides the Drawing toolbar.

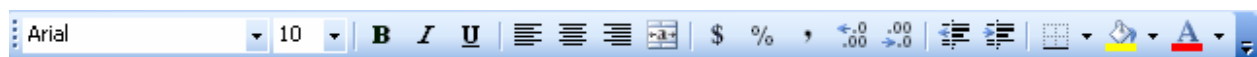
Zoom - changes size of current worksheet.

*Microsoft Excel Help - online help.

Toolbar Options – show buttons on one row and can add/remove buttons.

Tools on the Formatting Toolbar

The ones used in this tutorial are marked with an asterisk.



Formatting

*Font - font selections.

*Font Size - point size selections.

*Bold - applies bold formatting to selected text.

*Italic - applies italic formatting to selected text.

*Underline - applies underlining to selected text.

Align Left - aligns text on the left.

*Center - centers text.

Align Right - aligns text on the right.

*Merge and Center - merges cells together and centers text across them.

*Currency Style - numerical formatting.

Percent Style - numerical formatting.

Comma Style - numerical formatting.

Increase Decimal - adds one decimal place to numerical format.

Decrease Decimal - removes one decimal place to numerical format.

Decrease Indent - removes indentation.

Increase Indent - adds indentation.

*Borders - add borders to cells, rows and columns.

*Fill Color - add color to cells.

*Font Color - add color to selected text

Toolbar Options – show buttons on one row and can add/remove buttons.

Moving Around the Worksheet

Methods for moving around the worksheet:

- Click on a cell directly, using the mouse

- Press the <Tab> or <Enter> key
- Use the arrow keys and the scroll bars

The Go To command on the Edit menu is useful when you know the cell reference or approximate area of the worksheet you wish to go to.

- Select Edit> Go To... or <Ctrl + G>
- In the Reference text box type *iv65536* and click the **OK** button

The last cell in the worksheet is selected. Whenever you use the Go To command, Excel remembers where you were. Selecting the Go To command again will display your previous location in the Reference box or you can press <F5>.

- Select Go To on the Edit menu to display the Go To dialog box
- Select the previous location from the Go To box by clicking on the cell reference
- Click on **OK**

The previous location becomes the active cell.

Use the Page Up and Page Down keys to move by screen.

Cell Selection

Using the mouse you can select a single cell, a range of cells, multiple selections, column(s) or row(s).

Single Cell

- Click on the cell or use the <Tab> or arrow keys.

Range of Cells

Any rectangle section of the worksheet can be selected. When a range is selected, the first cell you select is the active cell.

- Point to the cell, hold down the mouse button and drag through the cells you want to select

The active cell will be clear and the remaining cells will be darkened.

Multiple Selection of Cells

Any combination of single cells, including non-adjacent cells, or range of cells can be selected anywhere on the worksheet.

- Click the first cell and drag through the range; release
- Move the mouse pointer to a different location, hold down the <Ctrl> key as you click additional cells or drag through a range

Column and Row Selection

To select an entire column/row or multiple columns/rows:

- Click anywhere in the column/row headings; that is, anywhere in the cell containing the column letter or row number
- Drag on the headings to select more than one column or row
- For multiple columns/rows not adjacent to each other, hold down the <Ctrl> key while clicking the column/row headings

Entire Worksheet Selection:

Click the Worksheet Select All box -- the blank rectangle to the left of the column headings and above the row headings. Click anywhere on the Worksheet to deselect it.

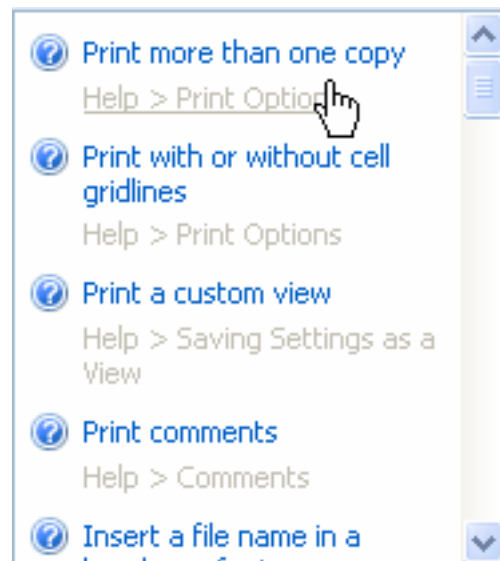
Help

You can use the “Type a question for help” text box to the right of the menu bar for help.

- Click on the arrow and type your question

In the Task Pane you will receive a list of choices based on your question. Clicking on one of the choices will display a list of the Help pages it finds most relevant to your question.

With the Office Assistant, you can ask a question and Office will also point you to where it thinks you're most likely to find the answers.



Help Button

- Click the **Help** button on the Standard toolbar



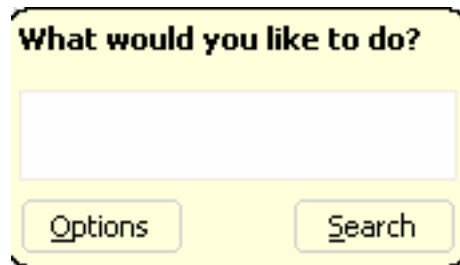
Using Office Assistant

With the Office Assistant, you can ask a question and Office will also point you to where it thinks you're most likely to find the answers.

By default the Office Assistant is off. To turn it on choose Help> Show the Office Assistant. Click on the Assistant to bring up the dialog box.



Office Assistant



Office Assistant Dialog Box

- In the "What would you like to do?" text box, enter your question
- Click the **Search** button

A listing of topics similar to those when using the "Type a question for help" is displayed.

- Explore the Help topics
- Click the **Close** button to exit the Microsoft Excel Help window

Entering Data

There are two types of data in a worksheet: constant values and formulas. A constant value is anything you type directly into a cell. Constant values include numbers, date, time and text. Constant values change only when you *edit the cell*. A value obtained as a result of a formula can change when other values in the worksheet change.

A formula can include constant values, cell references, names, functions or mathematical operators (+ - * /) that produce a new value from existing values. Formulas always begin with an equal sign (=).

Data is entered in the cell by selecting the cell and typing. Pressing <Enter> stores the data in the cell and moves the pointer to the cell below. You can also select a range of cells to store information in.

Numbers are automatically right aligned in the cell and text is left aligned. Numbers are displayed in scientific notation if they are longer than the width of the cell. Changing the width of the column will display the complete number. Cells displaying pound signs (###) are also an indication that the column needs to be widened.

Note: To enter a number or formula as text, type a single quote <'> before the entry.

Formula Bar In addition to the data appearing in the selected cell when you begin typing, the data appear in the Formula bar and the cancel (X) and enter (checkmark) box is visible. You can either click the checkmark or press <Enter> to store the data. Clicking on the X will clear the data from the Formula bar and the selected cell. Pressing the <Esc> key will also clear the data from the cell.

Notice that due to overlap you can't see the contents in the cell where there is information in an adjacent cell.

- Open a new workbook by clicking on the **New** button on the Standard toolbar and type the following information:

| | A | B | C | D | E |
|----|-------------------------|-------|-----------------------------|-------|--------|
| 1 | Ben & Jerry's Ice Cream | | | | |
| 2 | | | Year of Students Responding | | |
| 3 | | First | Second | Third | Fourth |
| 4 | Cherry Garcia | 7 | 3 | 7 | 4 |
| 5 | Chunky Monkey | 1 | 2 | 5 | 1 |
| 6 | Heath Bar Crunch | 7 | 2 | 2 | 7 |
| 7 | Oreo Mint | 2 | 9 | 3 | 3 |
| 8 | Phish Food | 4 | 20 | 4 | 20 |
| 9 | Rainforest Crunch | 9 | 6 | 7 | 5 |
| 10 | Totals by Year | | | | |

Make sure your entries are in the same rows and columns as the example. Note: 'Year of Students Responding' is actually all in C2. Don't worry about mistakes.

Note: If the Task Pane isn't visible, choose View> Task Pane

Correcting Data

In addition to pressing <Backspace> while typing, the following methods are available:

- Simply select cell B9 and type 15 <Enter>

The 9 entry is replaced with 15.

- Select the cell A9 and position the insertion point in the entry in the Formula bar between the 'o' and the 'f'. Click and press <Backspace> to get rid of the 'f'. Press the <Spacebar> and retype an uppercase *F*. Press <Enter>
- Type in a few numbers below the worksheet; then delete the information using the following two methods
- To remove data from a single cell, select the cell and press <Backspace>
- To remove data from a range of cells, drag to select and then choose Edit> Clear> All

The last method is to erase the worksheet. You may not want to do this since you haven't yet saved it.

- Click the Worksheet Select All box, located above the row headers. Select Delete from the Edit menu
- Click anywhere to deselect

The **Undo** button (<Ctrl + Z> or under the Edit menu) will restore the worksheet. To undo a recent action one at a time, click on the Undo button. To undo several actions at once, click the arrow beside the Undo button and select from the list.

- Click on the arrow beside the **Undo** button



Column Width

All of the information in column A is not displayed. The default column width is 8 characters (Arial point size 10). To increase the width of the column:

- Position the pointer on the vertical line separating columns A and B in the column heading

The pointer changes to a double arrow.

- Click and drag the line to the right until all of the text is displayed -- you will have to release the button to see if you have dragged far enough

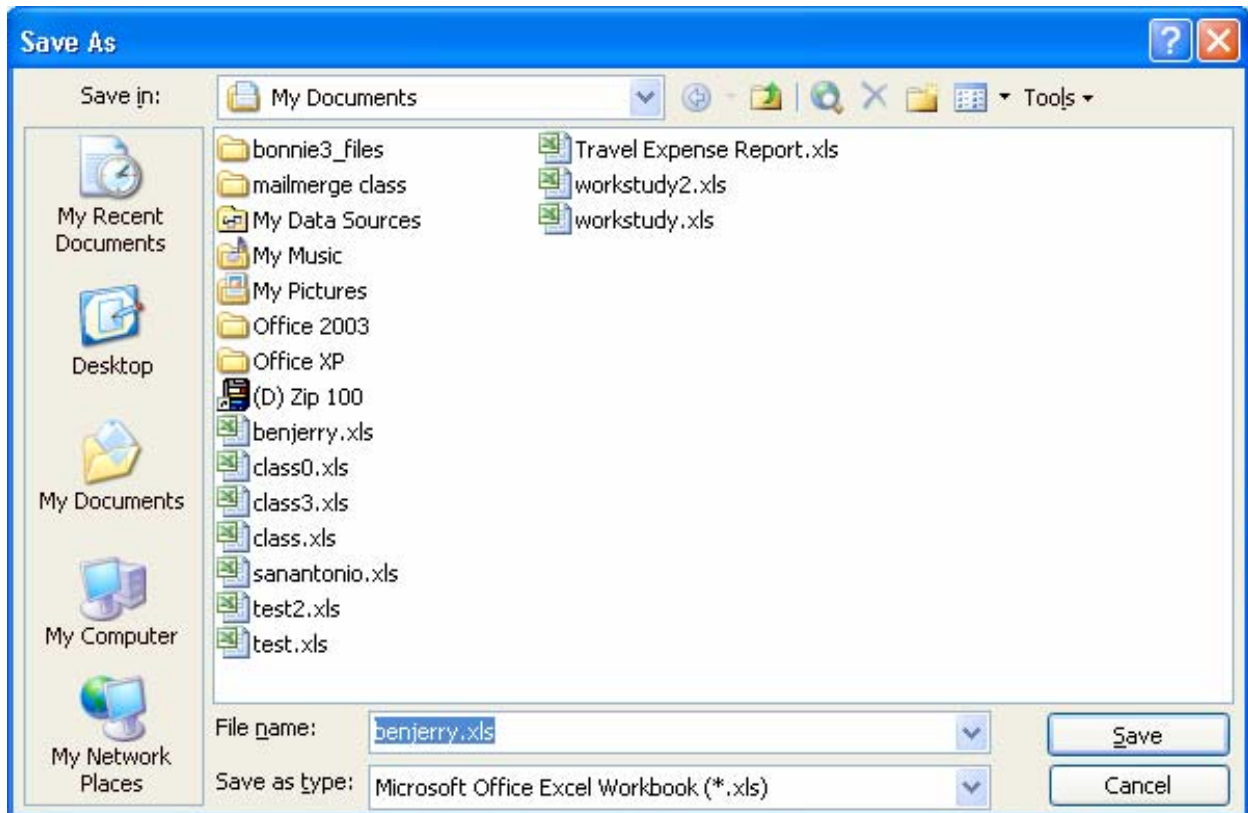
Also, double clicking the vertical line in the heading will cause Excel to select the AutoFit Selection option under the Column command on the Format menu to size the window.

If more than one column is selected, dragging or double clicking the line will affect all selected columns.

You can undo the column width change by selecting Undo Column Width <Ctrl + Z> under the Edit menu.

Saving

- Choose the Save tool on the Standard toolbar (3rd button from the left)
- In the “Save in” box, choose the location where you want to save your file



- In the “File name” box, type *benjerry* to replace the “Book2” and press <Enter>

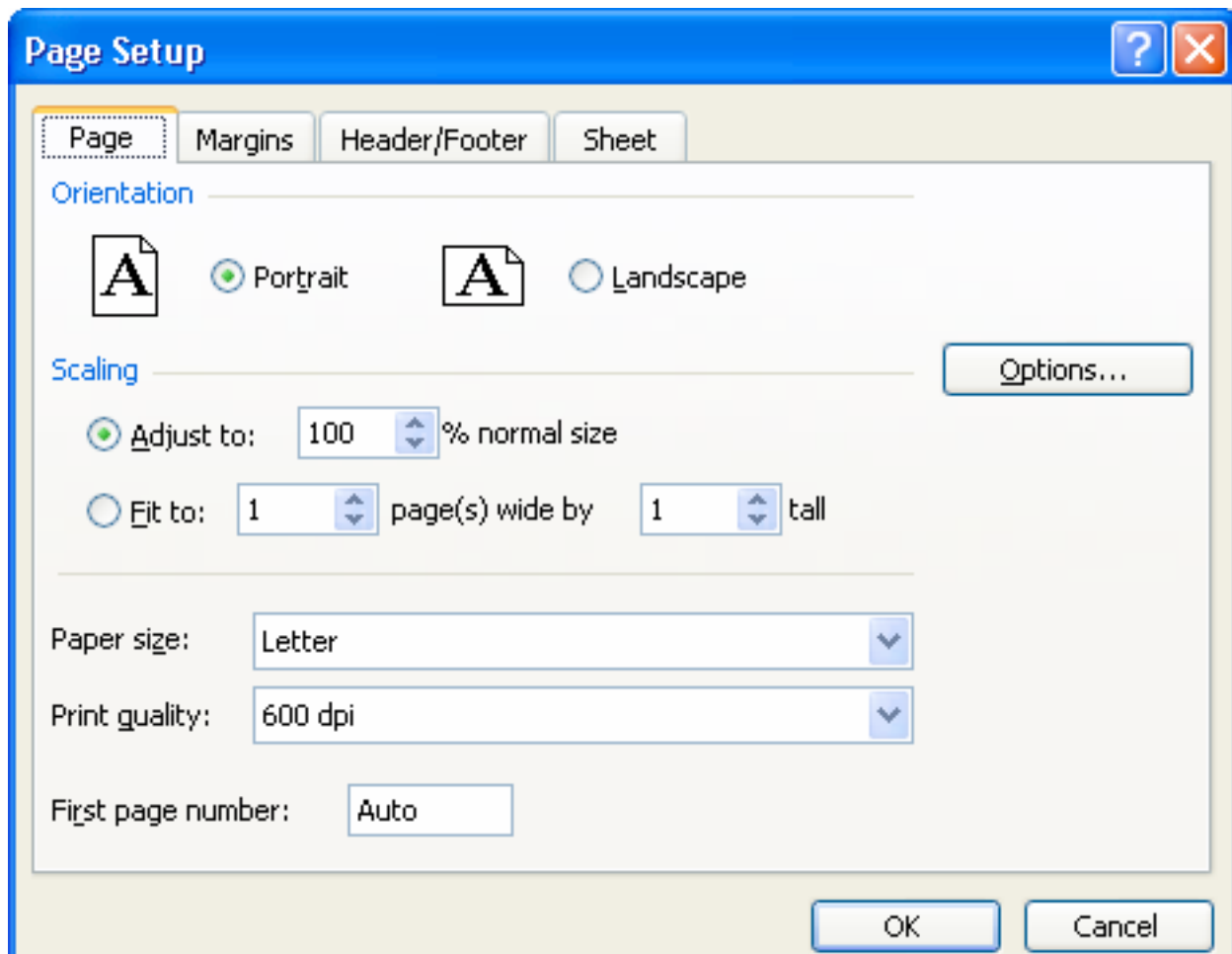
The extension **.xls** should automatically be assigned. You are returned to your worksheet and the Title bar indicates the new title. If you are updating an existing file, the dialog box is bypassed.

Previewing and Printing

To check out your worksheet before printing:

- Select the **Print Preview** button on the Standard toolbar (6th button)

After a moment, a full-page view appears on the screen.



The Page Setup dialog box allows you to change various options such as page orientation, margins, headers/footers, etc. If your worksheet is going to be wider than the standard page size, choose Landscape orientation. At this stage, our worksheet will fit on a standard page, but by the end of the exercises we will need to change to landscape before printing.

- Choose the Landscape option now

You can change margins, headers, etc using the various tabs at the top of the Page Setup dialog box.

- Click the **Header/Footer** tab
- To include a header, click the **Custom Header** button
- To place the header at the left, center, or right of worksheet, click in the Left, Center, or Right section text boxes, respectively, and type the header name
- Type *Ben & Jerry's Ice Cream*

You can also insert page number, date, time, and file name in the header by positioning the insertion point in the textbox and choosing the appropriate button.

- Click **OK** to save the changes and exit the Header window; click **OK** to exit the Page Setup dialog box

Note: Page Setup can be accessed directly under the File menu. You do not need to go through Print Preview.

- Click the **Print** button

Your Print dialog box will vary depending upon the type of printer you have.

Select the options you want and press <Enter>. To cancel a print job, press <Esc + .>.

In addition to the Print command on the File menu, the Print tool on the Standard toolbar (fifth button) can also be used. This option bypasses any dialog boxes and sends the worksheet to the printer.

To print a section of a worksheet

- Select the area you want to print
- Choose **Print** under the File menu
- Click **Selection** in the “Print what” box
- Click the **OK** button

Before we insert blank rows and columns, we’ll type in some more column headings.

- In cell F3, type *Total Cases*; in cell G3 *Cost Per Case*; in cell H3 *Total Costs*
- Widen Columns F, G and H if necessary

Inserting Rows and Columns

- Click Row 2 heading (click on the #2)
- Choose Rows from the Insert menu

A blank row is inserted before the selected row. If you select two rows, Excel will insert two blank rows before the selected rows.

- Click Row 11 heading and choose Rows from the Insert menu

- Click Column H heading (click on the letter H)
- Choose Columns from the Insert menu

Note: The Delete command on the Edit menu will remove selected rows and columns.

Formulas and Functions

Formulas are developed using cell references and mathematical operators. All formulas begin with the equal sign. For example, to add up the contents of a series of cells using cell references, a formula could be **=B5+C5+D5+E5**. To multiply one cell by another cell: **=F5*G5**. To subtract the contents of one cell from another cell: **=B10-B9**. To divide the contents of one cell by another cell: **=B10/B9**.

A formula can be literally typed in the cell required to store the result or typing in the mathematical operators and clicking the appropriate cells can build it. For example, to total the numbers in cells B5 through E5:

- Select cell F5 to store the formula result for totaling cells B5 through E5
- To create a sum formula, type an = sign and then click the cell B5 and type a +; continue through cell E5
- Press <Enter> or click the check mark in the Formula bar

A function is a pre-written formula that performs an operation on a value or values and returns a result. Functions can stand-alone or be combined with formulas. For example, the sum function **=SUM** can be combined with cell references. The **=B5+C5+D5+E5** formula can be combined with the sum function to create the formula **=SUM(B5:E5)**.

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|-------------|------------------------------|---|
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | 5 | 6 | 7 | 8 | =SUM(B5:E5) | | |
| 6 | | | | | | | SUM(number1, [number2], ...) | |
| 7 | | | | | | | | |

Functions can save you a lot of clicking and typing. Excel provides the sum function, which requires you to specify only the beginning and end cells for totaling. You type the SUM function with the beginning and end cell references or use the AutoSum tool.

The AutoSum tool on the Standard toolbar inserts the sum function and a proposed sum range based on the data above or to the left of the active cell. If there is data both above and to the left, the default is to total the data above.

Using our same example above -- totaling cells B5 through E5:

- Select cell F5; delete the contents
- Double click the **AutoSum** button on the toolbar



In the Formula bar =SUM(B5:E5) appears and the sum of cells B5 through E5 is stored in cell F5. If you click the AutoSum button once, the formula will appear in the cell. Just press <Enter>.

- Select the cells F6 through F10
- Double click the **AutoSum** button to total the remaining cells in Column F
- In the Cost Per Case column, fill in the following amounts:

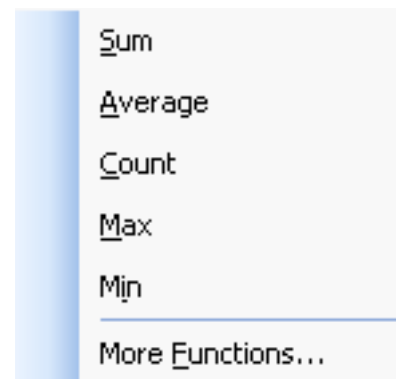
100.80, 144, 144, 144, 216, 288

- In cell I5, type the formula =F5*G5 and press <Enter>

This will give the total cases times cost per case.

- Select Cell B12 and double click the **AutoSum** button to total Column

Note: In addition to using the AutoSum button to total rows and columns, click on the arrow beside the AutoSum button to display a list of other commonly used functions.



Copying With Fill Commands

Rather than repeating the AutoSum function to total the remaining columns, we will use the Fill command to copy the Sum formula in B12 to cells C12 through F12.

To copy the contents of a cell, select the cell and drag to the end of the range you wish to copy the original cell contents to. For example:

- Click on cell B12 and drag to F12
- Select Fill Right command on the Edit menu <Ctrl + R> to copy the formula from cell B12 into the selected range

To copy the formula in I5 all the way down the column:

- Click on I5 and drag to I10
- Select Fill Down command on the Edit menu <Ctrl + D>

The next two sections are for information only. They don't apply to the exercise.

Drag-and-Drop

Drag-and-Drop copies (or moves) the contents of the cell(s); this includes formulas, functions and formatting.

- Select the cell(s) and then point to the cell's border - the pointer changes to two double-headed arrows
- Hold down the <Ctrl> key -- a small plus appears by the arrow
- While holding down the <Ctrl> key, click and drag to the new location; release

The cell contents can be moved using the same method except do not hold down the <Ctrl> key. Just select, click on the border and drag; release.

AutoFill

A series of numbers, dates, months, etc., can be created by dragging the fill handle of a selected cell (small square in lower right corner of cell). The pointer changes to a darkened plus.

| | A | B | C | D | E | F | G |
|---|-------------|-------------|-------------|-------------|-------------|----------|--------|
| 1 | January | February | March | April | | | |
| 2 | | | | | | | |
| 3 | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter | | |
| 4 | | | | | | | |
| 5 | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |

For example, if you have January in cell A3, by dragging on the fill handle to cell L3, Excel will automatically fill in the months February through December. If you have a cell entry '1st Quarter', the AutoFill feature will fill in 2nd Quarter, 3rd Quarter and 4th Quarter. If you drag beyond four cells, Excel begins repeating with 1st Quarter.

Numerical Formats

Excel offers a variety of numerical formats. We want to format the figures in the Cost Per Case and Total Cost columns as dollars and cents.

- Select cells G5 through G10
- Click on the **Currency Style** (\$) button on the Formatting toolbar
- Select cells I5:I10 and click on the **Currency Style** button

The Percent and Comma Style buttons are also available on the Formatting toolbar. Select Cells under the Format menu for other numerical formats.

Text Formatting

You can make your worksheet look much better by using different fonts and point sizes, bolding, italicizing, and centering.

Fonts

The default font is Arial point size 10. You can change the font using the Formatting toolbar.

- Select the title “Ben & Jerry’s Ice Cream”
- Select the **Font** arrow button on the toolbar and choose a font

Next to the Font tool is the **Font Size** tool.

- Select point size 18 from the list of font sizes

The font size can also be typed in the box.

Bolding, Italicizing and Underlining

- Select the title “Year of...” and the column titles “First, Second, etc” (B3:I4)

Hint: Click in cell B3 first and then drag.

- Click on the large **B** on the Formatting toolbar to bold the text

Use the *I* to italicize and the U to underline.

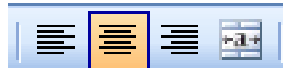
- Click anywhere to deselect

Clicking again on each button will undo their respective action.

Centering

There are two types of centering: centering within a cell and merging several cells and centering across their columns. The Center button (centering within the cell) is located two buttons to the right of the Underline. The Merge and Center button is two buttons to the right of the Center button.

To center text in the cells:



- Select the second row of titles (First, Second...) and click on the **Center** button

The two buttons on either side of the Center button are used to left align and right align text in a cell. The last button is used to merge several adjacent cells and to center across the columns.

Note: Never align data on which you will be performing calculations.

To merge several adjacent cells and center across the columns; e.g., a title across several column headings:

- Select the cell containing the title and the adjacent cells you wish to merge and center across; e.g., to center “Year of Students Responding” over the four columns (B4:E4), select B3 through E3
- Click the **Merge and Center** button

Borders

A row or column can be outlined with various sizes of line widths for emphasis.

- Click on the Row 12 heading number
- Click on the down arrow next to the **Borders** pop-up button (third from the right on the Formatting toolbar) and choose a border

Colors

- Select Rows 5, 7 and 9 -- click on the 5, then hold down <Ctrl> key while clicking Rows 7 and 9
- Click on the down arrow on the **Fill Color** popup menu button on the Formatting toolbar (second from right) and choose a fill color


- Click on the down arrow on the **Font Color** button (last button on right) and choose another color for your font
- Click anywhere to deselect

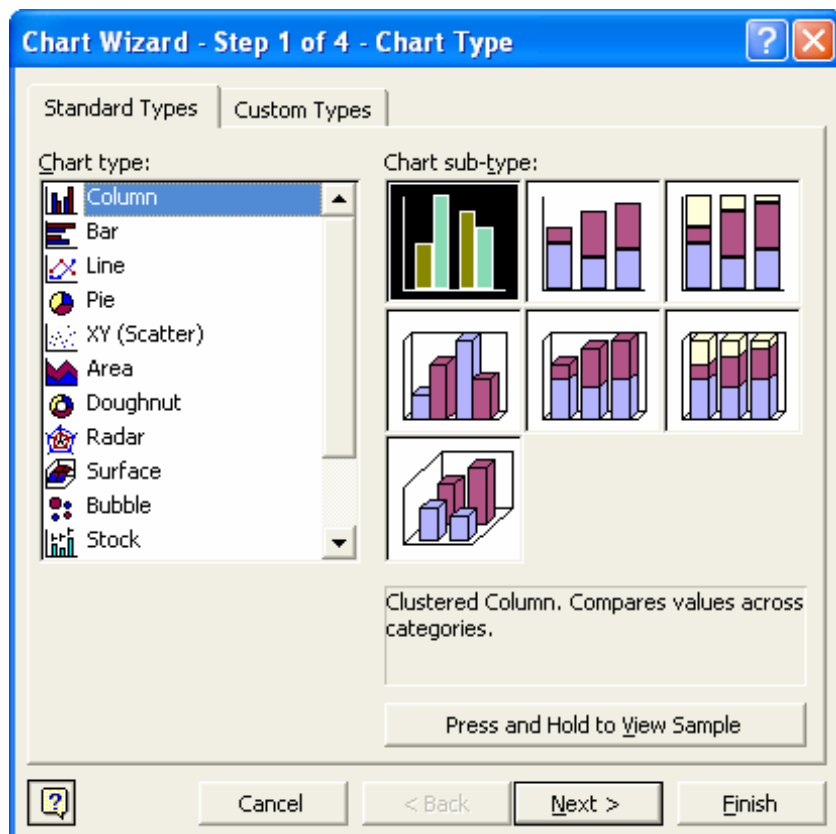
Charts

A chart is a graphical representation of the worksheet data. If you change data in the worksheet, the chart is automatically updated.

There are 14 types of charts. The default is the Column Chart. In a Column Chart each column represents a cell on the worksheet. The value in the cell determines the column's height. A related group of values is called a data series. Each data series is represented with a different pattern. The vertical axis, referred to as the Y-axis, is scaled to reflect the range of values in a worksheet.

We will do a chart displaying the total cases of each flavor of ice cream by year and the combined totals of each flavor. We will use the default choices for our chart.

- Select cells A4:F10
- Click the Chart Wizard tool on the Standard toolbar 



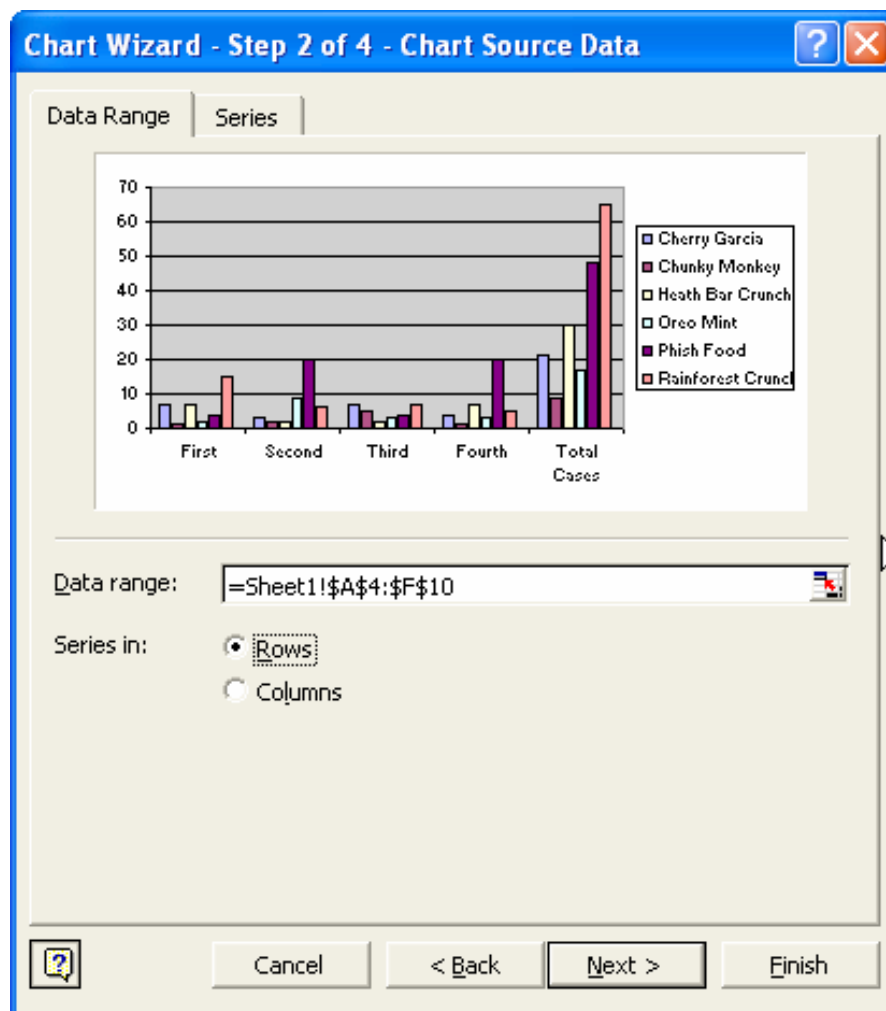
The first of four ChartWizard dialog boxes appears, from which the type of chart is chosen by selecting an item from the list of 14 chart types and then selecting an item from the chart subtypes display.

- Click the **Next** button to accept the default Column type

The second dialog box appears, allowing you to enter a new range if the selected range is incorrect.

This dialog box also displays our sample chart. The X-axis is labeled with the ice cream flavors and the first row of the worksheet is used for the legend text (first, second, etc).

- In the “Series in” section, click the **Rows** button to change the X-axis labels to First, Second, etc.



The ice cream flavors become the legend text.

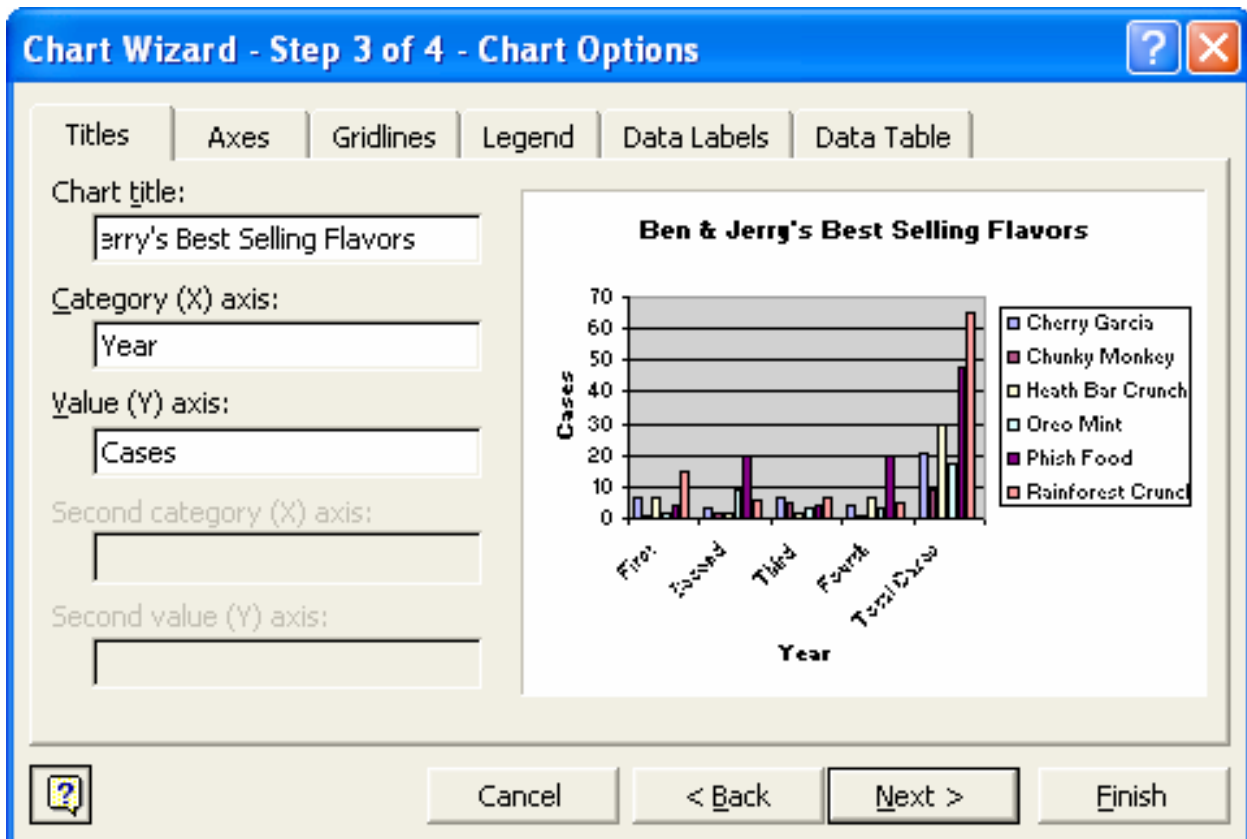
- Click the **Next** button

The third dialog box appears. Make sure the **Titles** tab is selected.

- Click in the **Chart title** box
- Type *Ben & Jerry's Best Selling Flavors* and press <Tab>

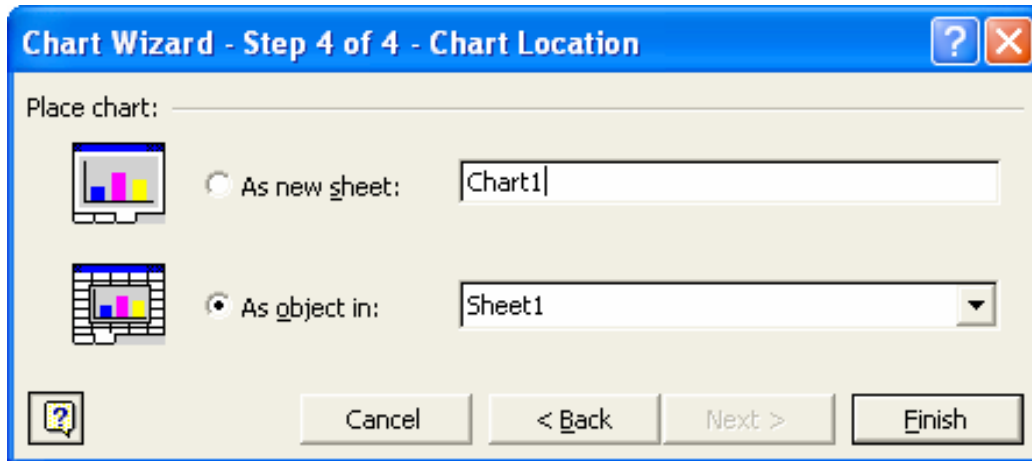
In a moment, the chart will automatically update to include the title.

- In the Category (X) box, type *Year* and press <Tab>
- In the Value (Y) box type *Cases*



Note: This dialog box also contains options for changing other aspects of the appearance of the chart. These options can be accessed by clicking on the various tabs.

- After the updating is completed click the **Next** button to continue



The fourth and final Chart Wizard dialog box appears, allowing you to place the chart as an object in your current worksheet or to save it as a new worksheet in your workbook.

- Click the **Finish** button to accept the default, placing the chart as an object within the current worksheet

You now have left the Chart Wizard and returned to the workbook window. The Chart is selected and the Chart toolbar is displayed. The chart toolbar disappears when the chart is deselected.



| | |
|--------------------------|---|
| Chart Objects | Allows you to select an object (such as the Chart Title) to edit; also displays the name of the current selected object |
| Format Chart Area | Opens a formatting dialog box for the selected object |
| Chart Type | A drop down menu allows you to select a different chart type |
| Legend | Adds or deletes a chart legend. |
| Data Table | Adds or deletes a data table from the chart |
| By Row | Plots data series by row |
| By Column | Plots data series by column |
| Angle | Displays text clockwise |
| Clockwise | |
| Angle | Displays text counterclockwise |
| Counterclockwise | |

- Click anywhere on the chart and drag to reposition
- Using the handle in the lower right hand corner, drag down and to the right to enlarge your chart

- Click outside the chart to deselect

Editing the Chart

- To edit the chart, click on the chart

The Chart toolbar is displayed (if it is not, select Toolbars then Chart from the View menu). You can click on different elements on the chart to modify the elements. You may also select elements to modify by selecting them from Chart Objects (currently labeled “Chart Area”) on the Chart Toolbar.

- Click anywhere within the legend box and drag to reposition
- Use the handles to resize the legend box
- Double click on the selected legend

The Format Legend dialog box is displayed. Use the Patterns, Fonts, and Placement tabs for additional formatting features.

- Close the Format Legend dialog box
- Click on the Title to select it; drag on a handle to reposition
- While the title is still selected, choose Format on the Menu bar, and choose the Selected Chart Title

Use the tabs to change appearances such as fonts, colors, patterns and alignment

- Close the Format Chart Title dialog box
- Click on the chart itself to move or resize
- Under Format on the Menu bar, use Selected Chart Area for different options for changing the appearance
- Close the Format Chart Area dialog box
- Click on the X or Y axis on the chart

The selected axis has handles at each end.

Under Selected Axis on the Format menu you can format the axis by changing the scale, the way the numbers are displayed, etc.

- Close the Format Axis dialog box

Changing Chart Types and Chart Formats

- To change your chart to another type, click on the down arrow on the **Chart Type** button on the Chart toolbar and select another chart
- To change to another format of the same type of chart while in chart editing mode, select Chart Type from the Chart menu

This will give you a range of options within the chart type you are working with.

- If you are dissatisfied with the results, click on the **Chart Wizard** button on the Standard toolbar to go through the process again and define which cells you want to have charted (chart must be selected)

Changing Data

Any data changed in the worksheet will automatically update the chart. Change the value in B7 from 7 to 55 and New York Super Fudge to *New York Fudge*. On your chart, the Y-axis is now increased from 60 to 70 and the ice cream flavor name has been changed.

Printing a Chart

- Select Print from the File menu and click **OK**
- If you wish to print only the chart, click on the chart to select and then choose Print from the File menu

Deleting a Chart

- Click on the chart to select it
- Choose Edit> Clear> All

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