



HILLSBOROUGH
Community College

Microsoft Excel 2003 Module I

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Microsoft Excel 2003 Module I

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Objectives

Upon Completion of this module, participants will be able to:

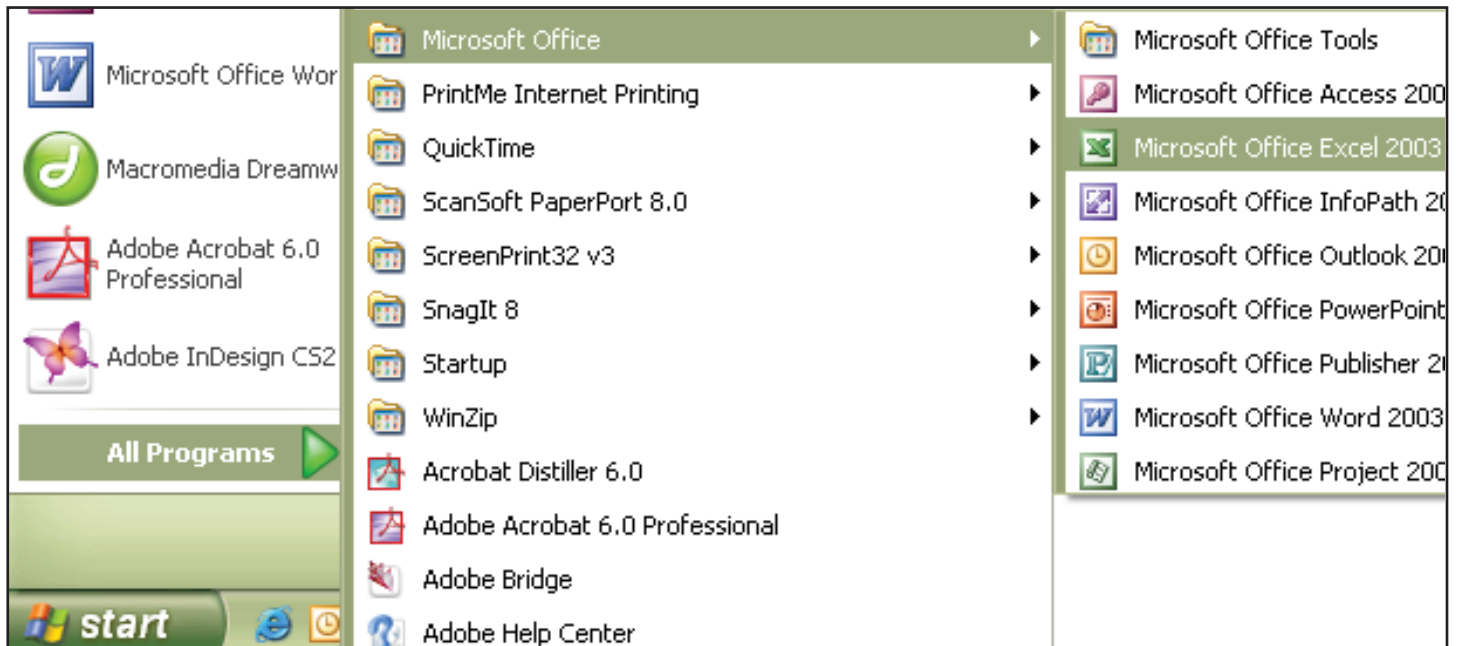
1. Use the Menu bar, Standard and Formatting Toolbars;
2. Know the parts of an Excel worksheet;
3. Know how to open and save a workbook;
4. Use the Page Setup Dialog box;
5. Insert a row, column, or worksheet;
6. Format a cell;
7. Change the font type, style, size and color of a cell or range of cells;
8. Create a border around a range of cells;
9. Use basic Excel formulas;
10. Know how to use the Chart Wizard to create a chart

Overview

Excel is a spreadsheet program that allows you to create many types of spreadsheets for reports, budgets and other projects.

Opening Excel

1. Click on **Start>All Programs>Microsoft Office> Microsoft Excel.**





Menu Bar

The Menu Bar displays Excel commands grouped into related functions.

1. **File** - From the File Menu, you can create new spreadsheets, open existing spreadsheets, save a spreadsheet, use the printer options, and exit the program.
2. **Edit** - From the Edit Menu, you can cut or copy text, paste text or graphics in different places of the spreadsheet, delete, and find and replace words.
3. **View** - From the View Menu, you can change the view of the spreadsheet, create headers and footers, and select toolbars.
4. **Insert** - From the Insert Menu, you can insert rows, columns, sheets, charts, functions, and pictures.
5. **Format** - From the Format Menu, you can format cells, rows, columns, sheets, and autofomat.
6. **Tools** - From the Tools Menu, you can use spell check, error checking, track changes, and protect the spreadsheet.
7. **Data** - From the Data Menu, you can sort or filter data, create pivot charts, and import external data.
8. **Window** - From the Window Menu, you can split and freeze panes.
9. **Help** - From the Help Menu, you can get help from Microsoft or the Office Assistant, and find out what version of Excel you are using.



Standard Toolbar

The Standard Toolbar provides shortcuts to the most commonly used spreadsheet functions.



New Document - allows you to open a new spreadsheet.



Open Folder - allows you to open an existing spreadsheet.



Save - allows you to save a spreadsheet.



Email - allows you to email the spreadsheet from within Excel.



Search - allows you to search for text within the spreadsheet.



Print - allows you to print the spreadsheet.



Print Preview - allows you to preview the spreadsheet before printing.



Spell Check - allows you to check the spelling throughout the spreadsheet.



Research - allows you to research a word or information in your spreadsheet.



Cut - allows you to cut text or information in a cell to move to another cell.



Copy - allows you to copy text or information in a cell to copy it to another cell.



Paste - allows you to paste the information you have cut or copied into another cell.



Format Painter - allows you to copy the format of a cell or range of cells and use the same formatting in other cells.



Undo - allows you to undo the task that was just completed.



Redo - allows you to replace what you have deleted on the spreadsheet.



Insert Hyperlink - allows you to insert a hyperlink into the spreadsheet.



AutoSum - allows you to use basic functions (for example: Sum, Average, Minimum, and Maximum).



Sort Ascending - allows you to sort selected information in the spreadsheet from A-Z.



Sort Descending - allows you to sort selected information in the spreadsheet from Z-A.



Chart Wizard - allows you to start and use the chart wizard function.



Drawing - allows you to display the drawing toolbar.



Zoom - allows you to change the zoom percentage of the spreadsheet.



Microsoft Help - allows you to access help for Microsoft Excel.



Formatting Toolbar

The Formatting Toolbar provides shortcuts to the most commonly used text formatting functions.



Font - allows you to change the text font style.



Font Size - allows you to change the text size.



Bold - allows you to bold text.



Italic - allows you to italicize text.



Underline - allows you to underline text.



Align Left - allows you to align text to the left side of the cell.



Align Center - allows you to align text in the center of the cell.



Align Right - allows you to align text to the right side of the cell.



Merge and Center - allows you to merge together a range of cells and center the text in the same range of cells.



Currency Style - allows you to change the cell format to currency style.



Percent Style - allows you to change the cell format to a percent style.



Comma Style - allows you to change the cell format to comma style.



Increase Decimal - allows you to increase the number of places past the decimal.



Decrease Decimal - allows you to decrease the number of places past the decimal.



Decrease Indent - allows you to decrease the indent of text in a cell.



Increase Indent - allows you to increase the indent of text in a cell.



Border - allows you to apply borders to cells in the spreadsheet.



Fill Color - allows you to color a specified cell or range of cells with a certain background color.



Font Color - allows you to change the font color of the text.

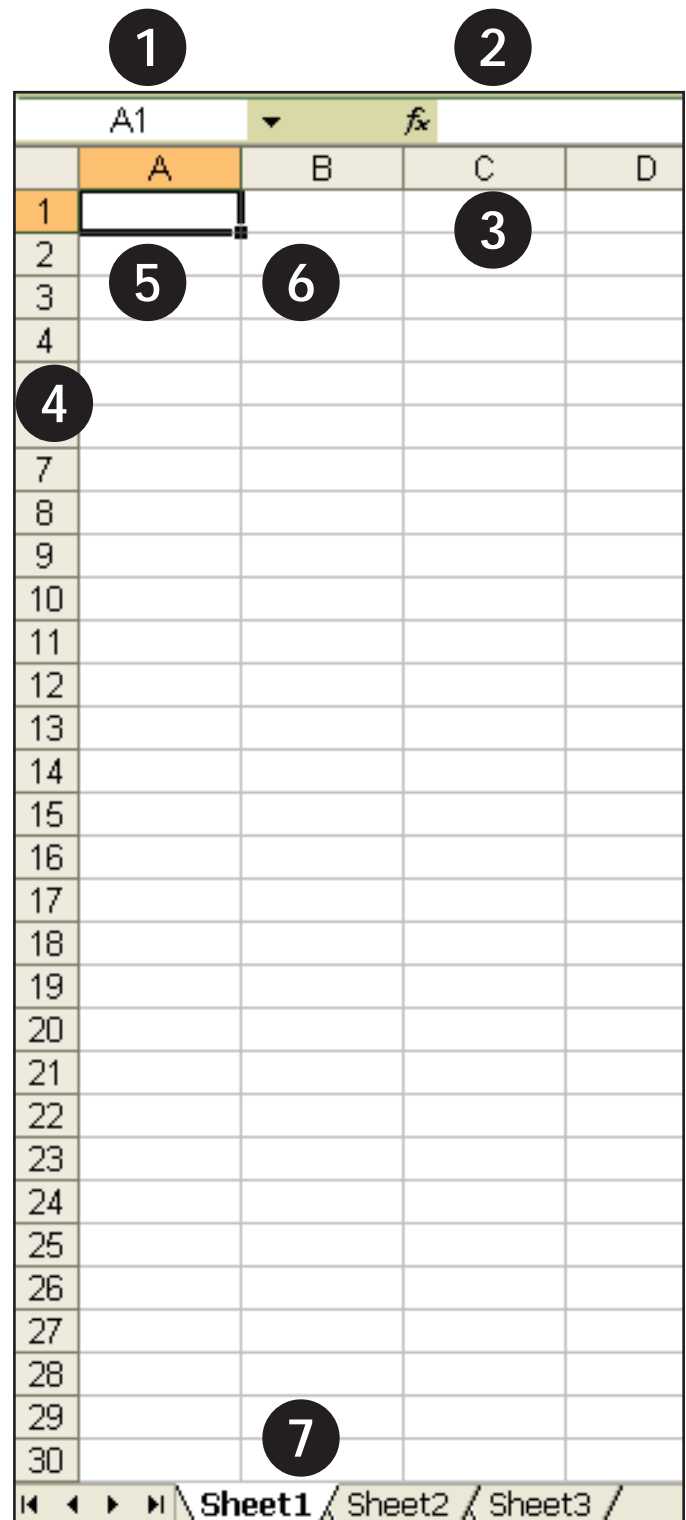
Parts of a Worksheet

This section outlines parts of an Excel spreadsheet.

1. **Name Box** displays the column letter and row number that designates the active cell.
2. **Formula Bar** provides information about the active cell. Formulas can be added or edited in the formula bar.
3. **Column Headers** are the letters only at the top of the spreadsheet.
4. **Row Headers** are the numbers on the left side of the spreadsheet.
5. **Active Cell** is the currently selected cell, displayed with a thick black border around the cell.
6. **Fill Handle** is the little black square on the bottom right side of the border around the active cell.
7. **Sheet Tabs** identify the current worksheet.



Note: The difference between a worksheet and a workbook is that a worksheet is a single sheet and a workbook is the entire Excel file.



Opening an Existing Workbook

Opening an existing workbook allows you to search for previously created workbooks and open them in Excel.

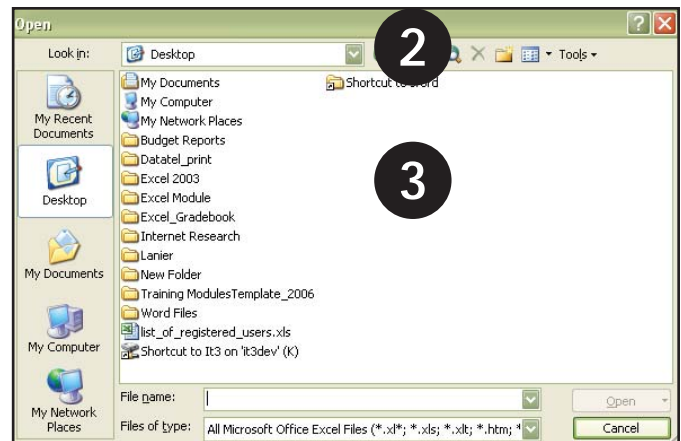
1. From the Menu Bar, click **File>Open**.
2. Select the location of the existing workbook (Example: Desktop).
3. Select the folder in which the document is stored (Example: **PDS Workshops>Excel>Excel I**).
4. Click the worksheet title (Example: excel_1).
4. Click **Open**.



Shortcut: Use the **Open Folder** icon on the Standard Toolbar to locate and open an existing workbook.

Or

Press and hold CTRL+O on the keyboard.



Saving a Workbook

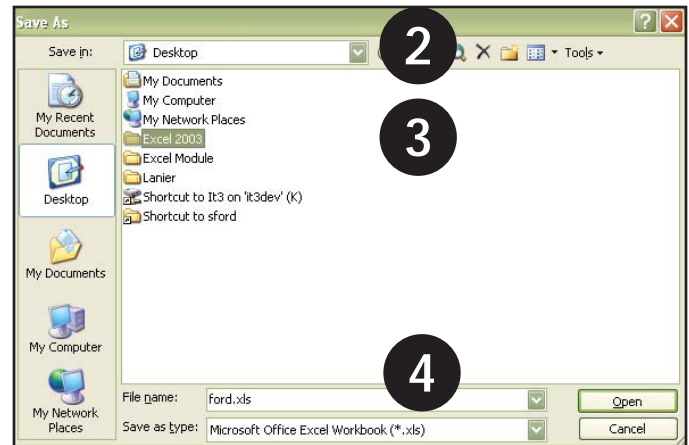
Saving a workbook allows you to select the location where the workbook will be saved. Select the folder where the workbook will be saved, and name the workbook.

1. From the Menu Bar, click **File>Save As**.
2. Select the location where you would like to save the workbook.
3. Select the folder where you would like to save the workbook.
4. Name the file.
5. Click **Save**.

Shortcut: Use the Save icon on the Standard Toolbar to save a new document.

Or

Press and hold CTRL + S on the keyboard.



Saving a Workbook

With the file excel_01 open, Save the workbook on the Desktop in the PDS Workshops>Excel>Excel I folder with your last name as the file name. Close the file.

Page Setup

Page Setup allows you to change the way your spreadsheet will look and print.

1. From the Menu Bar, click **File>Page Setup**.

Page Tab

The **Page** tab allows you to change the layout of the page, scaling of the page, paper size, and more.

Page Orientation

Page Orientation changes the way the spreadsheet prints on a page.

2. Choose **Portrait** or **Landscape**.

Scaling

Scaling allows you to adjust the spreadsheet to a smaller size for printing.

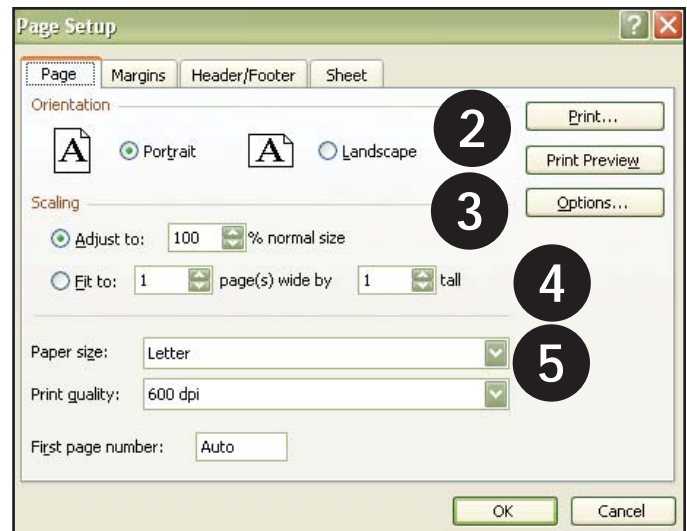
3. Click the radio button next to **Adjust to**.
Then use the up or down arrows to adjust the percentage of the normal size that will allow the spreadsheet to print properly.

To make the spreadsheet fit in the amount of pages wide by tall.

4. Click the radio button next to **Fit to**. Use the up and down arrows beside the pages wide and pages tall to change how the spreadsheet will print out.

To change the paper size for printing:

5. To change the type of paper used for printing, use the down arrow by paper size.

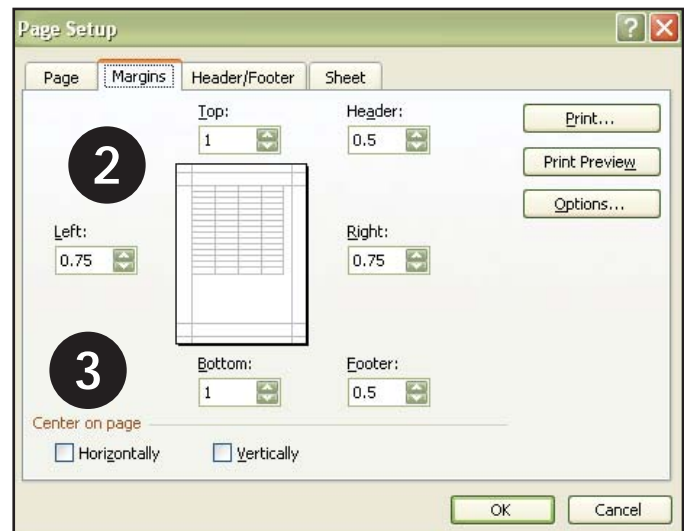


Page Setup Cont.

Margins Tab

The **Margin tab** allows you to change the margins.

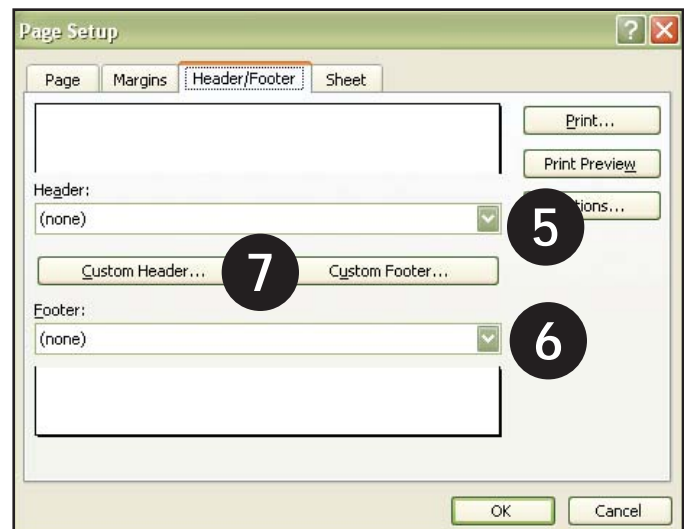
1. From the **Page Setup** dialog box, click the **Margins Tab**.
2. Use the up and down arrows to change the margins of the top, bottom, left, right, header, or footer.
3. To center the spreadsheet **Horizontally** or **Vertically**, click the respective check box.



Header/Footer Tab

The Header/Footer tab allows you to provide essential information about the printout, file name, author, pages, date, and more.

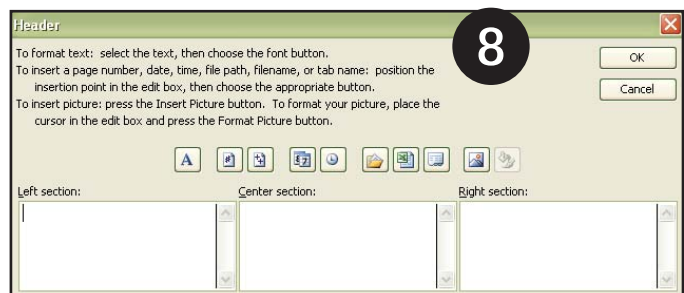
4. From the **Page Setup** dialog box, click the **Header/Footer Tab**.
5. To use a pre-defined header, click the down arrow for available options.
6. To use a pre-defined footer, click the down arrow for available options.



Custom Header/Footer

Custom Header/Footer allows you to create a unique header/footer.

7. Click the **Custom Header Button** on the **Header/Footer** dialog box.
8. The window allows you to enter information that will appear on the left, center, or right side. There are different features available such as date, time, pages, and pictures.



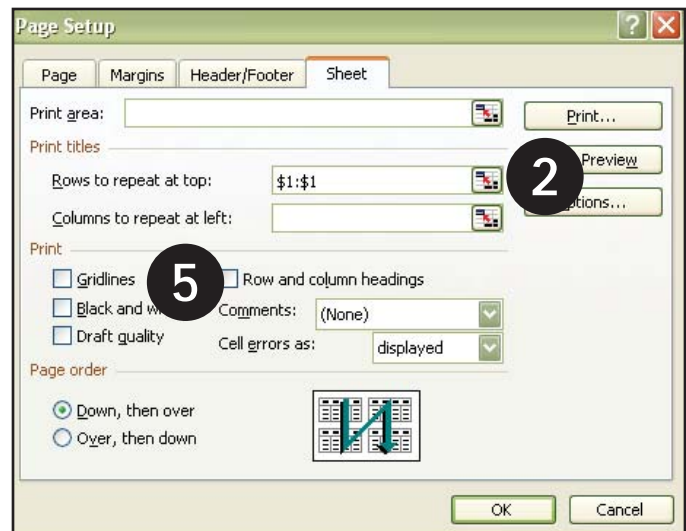
Note: To create a Custom Footer, follow the same steps as above, beginning with the **Custom Footer Button**.

Page Setup Cont.

Sheet Tab

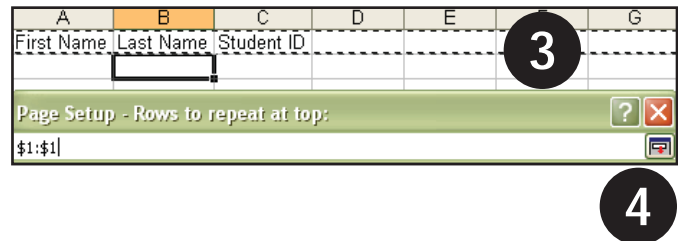
The **Sheet tab** allows you to repeat information that is in a single row or column across the top or side of a printed page as well as to print gridlines on the page.



1. From the **Page Setup** dialog box, click the **Sheet Tab**.



To Repeat Rows at the Top of each printed page

This feature is useful when you have a large spreadsheet that will print on multiple pages. Headings in the first row of the spreadsheet can be repeated at the top of each printed page.



2. Click the box to the right of the **Rows to repeat** box. 
3. The **Page Setup - Rows to repeat at top:** dialog box appears. Select the row that will be repeated at the top of every printed page. The row references will appear in the box.
4. Click the square to return to the Page Setup menu. 



To repeat the columns to the left on every printed page, follow the steps above, but select **Columns to repeat at left**.

To Print Gridlines on the printed page

To print gridlines, check the **gridlines** box. Otherwise there will be no lines on the printed page.

5. From the **Page Setup** dialog box select **Sheet Tab**, then check the **Gridlines** check box.

Inserting a Row, Column or a Worksheet into a Workbook

There are times that you need to insert a row, column, or worksheet into your workbook.

Inserting a Row

1. Click the cell below where you want the row inserted. Click **Insert>Rows**.
2. The row is inserted between.



Note: To insert a Column, click on the cell to the right of where you want the column inserted. Click **Insert>Column**.



To insert a worksheet, click on **Insert>Worksheet**.

1

	A
1	Sarah
2	Celeste

2

	A
1	Sarah
2	
3	Celeste

Page Setup

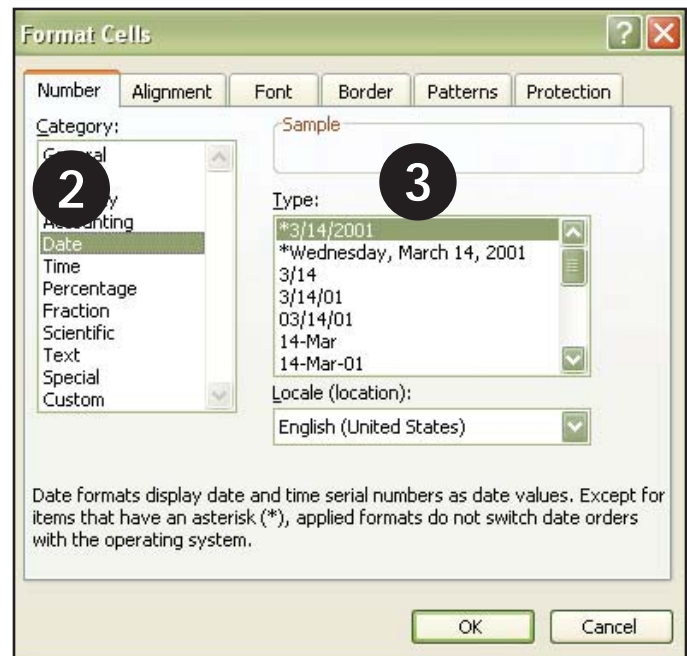
Make sure the Sheet 1 tab is selected. Follow the instructions in this module, use the Page Setup dialog box to change the page orientation to landscape and to change the top and bottom margins to .5. Add a custom header to the spreadsheet with your department name. Then turn on the gridlines to print on paper.

Formatting a Cell

The **Format Cells** Menu allows you to format a cell or a range of cells in a variety of formats.

Formatting a cell with various date formats

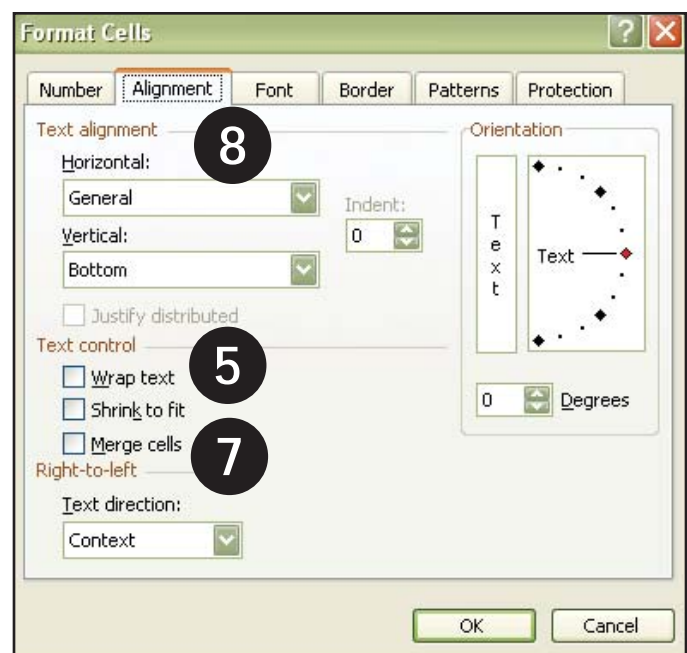
1. Type the date in a cell. Then click the cell to highlight it. From the Menu Bar, click **Format>Cells> Number Tab**.
2. Under **Category**, click **Date**.
3. Select desired **Date type**.



Wrap Text

Wrap text allows you to display multiple lines of text in a cell.

4. Type some text into the cell that will overlap into multiple cells. Highlight the first cell with one click. From the Menu Bar, click **Format>Cells>Alignment Tab**.
5. Under **text control** click the check box in front of **Wrap text**.



Merging Cells

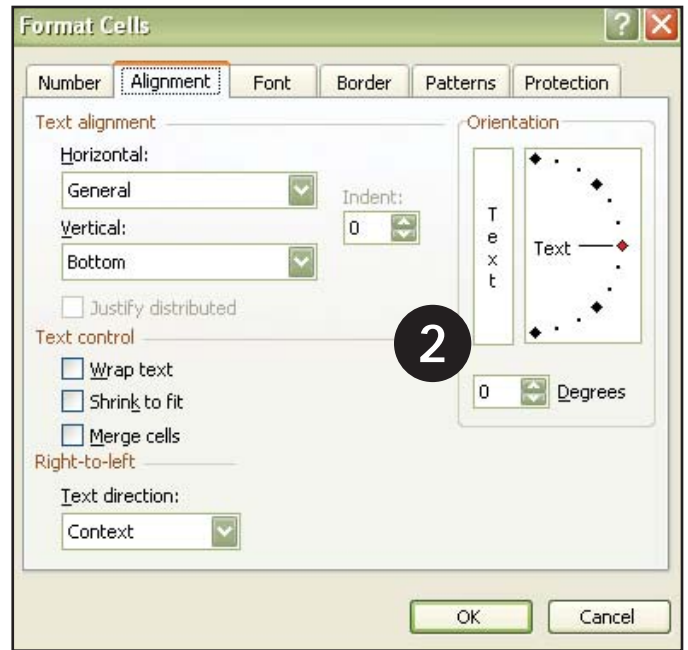
Merging cells creates one cell.

6. Type the text into the cell that will need to be merged. Click and hold the mouse button over the first cell that you typed in and highlight all of the cells to be merged together. From the Menu Bar, click **Format>Cells>Alignment Tab**.
7. Click the check box in front of **Merge Cells**.
8. Once merged, the cell can be aligned **Horizontally** and **Vertically** by clicking the down arrows.

Text Orientation

Text Orientation allows you to rotate the text inside a cell.

1. Type the text into the cell that you want to rotate. From the menu bar, click **Format>Cells>Alignment Tab**.
2. Under **Orientation**, drag the line to the desired degree of rotation or use the up and down arrows next to degrees to change the orientation.



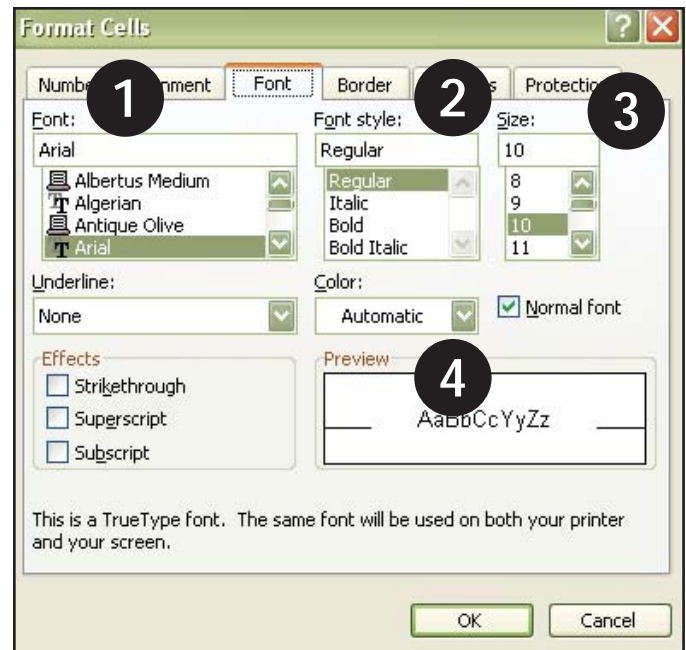
Changing the Font Type, Size, Color

You can change the font type, size, and color to enhance the look and feel of your worksheet.

To Change the Font

1. Highlight the text you want to change. From the Menu Bar, click **Format>Cells>Font Tab**. Use the up or down arrows to select the desired font.

Shortcut: Use the Font icon on the Formatting toolbar.



To Change the Font Style

2. Use the up or down arrows to select desired font style.

Shortcut: Use the Bold, Italic and Underline icons on the Formatting Toolbar.



To Change the Font Size

3. Use the up or down arrows to select the desired font size.

Shortcut: Use the Font Size icon on the Formatting toolbar.



To Change the Color of the Text

4. Use the down arrow to show the colors available. Click on the desired color.

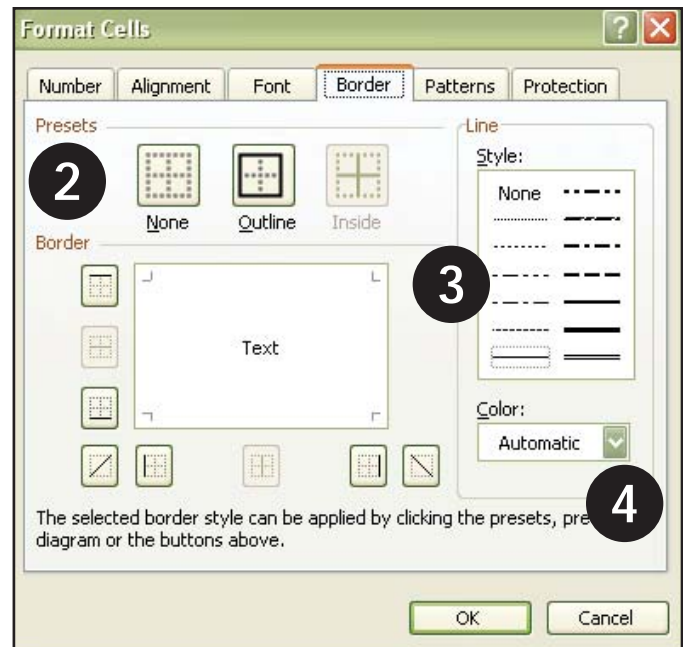
Shortcut: Use the Font Color icon on the Formatting toolbar.



Creating Borders

Using borders can help to separate information in a spreadsheet.

1. Select the range of cells that require a border. From the Menu bar, click **Format>Cells>Border Tab**.
2. Select the preset border style, or select the individual border style by clicking the lines desired for the border.
3. Change the style of the border lines by clicking the desired line style.
4. Change the color of the border by clicking the arrow.




Formatting Text

Type today's date in the current spreadsheet using the following format: October 10, 2006. Then change the date format to a numeric format of your choice. Select the date cell and change the orientation of the date to 45 degrees. Change the font style, size, and color of the date.

Formulas

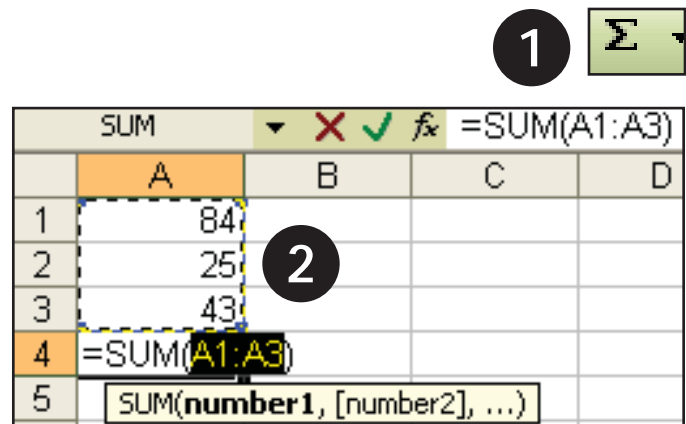
Using the AutoSum Icon

The **AutoSum** icon is used for totaling a range of cells. AutoSum also allows you to use other functions that are associated with this feature.

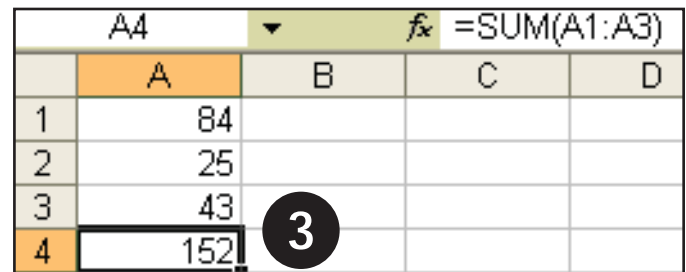
1. Click the cell where the sum will be located. From the Standard Toolbar click the **AutoSum** button. 

This brings up the sum function. Depending on where numbers are located, Excel tries to create a range of cells that it thinks will be used.

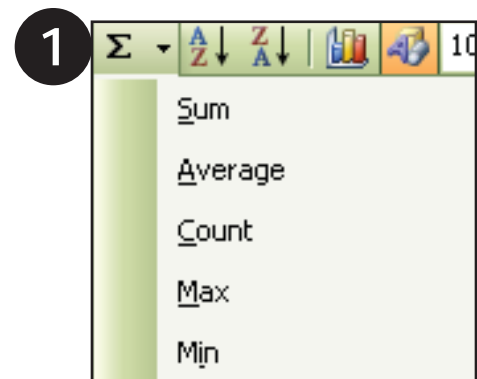
2. Using the mouse, click and drag the range of cells to be summed.
3. Click the **Enter** key on the keyboard. The sum is displayed in the desired location.



	A	B	C	D
1	84			
2	25			
3	43			
4	=SUM(A1:A3)			
5	SUM(number1, [number2], ...)			



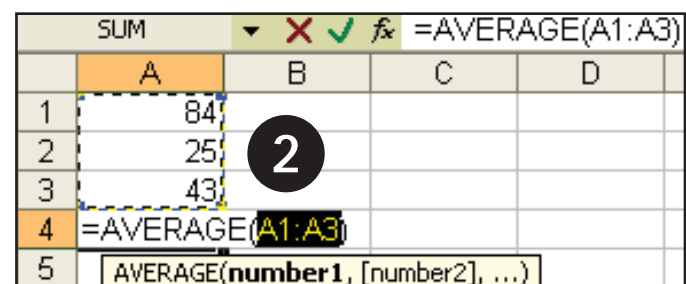
	A	B	C	D
1	84			
2	25			
3	43			
4	152			



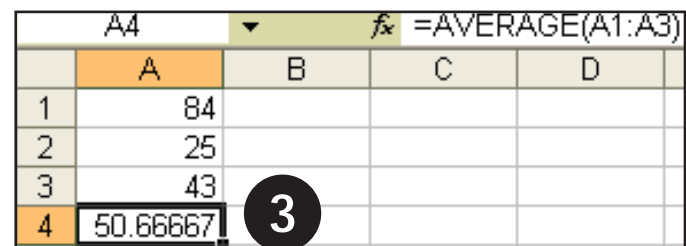
Average Formula

The **Average** function finds the average of specific data.

1. Click the cell where the average will be located. Click the down triangle to the right of the **AutoSum** button>**Select Average**.
2. The formula is entered into the cell showing the range of cells that will be used. Make sure that it is the correct range of cells.
3. Select **Enter** on the keyboard. The average is displayed.



	A	B	C	D
1	84			
2	25			
3	43			
4	=AVERAGE(A1:A3)			
5	AVERAGE(number1, [number2], ...)			



	A	B	C	D
1	84			
2	25			
3	43			
4	50.66667			

AutoSum and Average

In the open spreadsheet, in cell B1 type 10. In cell B2 type 15. In cell B3, use the AutoSum button to find the sum of B1+B2. Once completed, highlight cell B4 and find the average of cells B1 and B2.

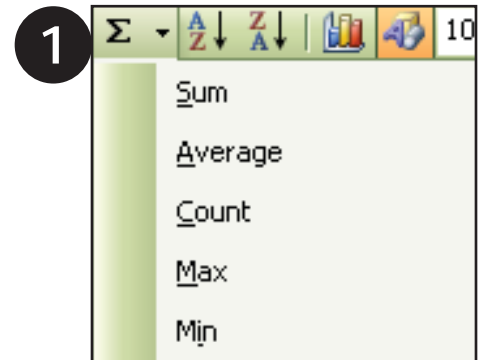
Multiplication Formula

Using multiplication in Excel requires you to write the formula.

1. Click the cell where the formula will be located. On the keyboard click on the equals (=) sign. This tells Excel that a formula is being entered.
2. Type the first cell reference that will be needed. (Example: Click the cell that has the first number in it that will be used to multiply).
3. Select the asterisk symbol (*) on the keyboard (This indicates multiplication). Type the second cell reference that will be used. Click **Enter**.

	A	B	C
1	84		
2	24		
3	=A1*A2		

	A	B	C
1	84		
2	24		
3	2016		



Minimum Formula

This formula returns the minimum number in a range of selected cells.

1. Click the cell where the formula will be located. From the Standard Toolbar. Click on the down arrow next to the **AutoSum** button>**Min**.
2. With the mouse, select the range of cells to be used in the formula . Click **Enter**.
3. The Minimum number in a range of selected cells will appear.

	A	B	C
1	84		
2	24		
3	34		
4			
5	=MIN(A1:A4)		

	A	B	C
1	84		
2	24		
3	34		
4			
5	24		

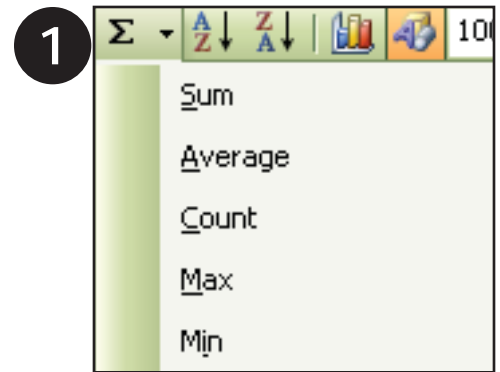
Multiplication and Minimum

In cell D1 type in 20. In cell D2 type in 30. Follow the directions in this module to use the multiplication formula in cell D3 to find out what the product of D1 and D2 is when multiplied together. In cell D4 find the minimum number out of cells D1 through D3.

Maximum Formula

This formula returns the maximum number in a range of selected cells.

1. Click on the cell where the formula will be located. From the Standard Toolbar, click on the down triangle next to the **AutoSum button**>**Max**.
2. With the mouse, select the range of cells to be used in the formula. Click **Enter**.
3. The Maximum number of the range of selected cells will appear.



	A	B	C	D
1	84			
2	24			
3	34			
4				
5	=MAX(A1:A4)			

A screenshot of an Excel spreadsheet. The formula bar shows '=MAX(A1:A4)'. The range A1:A4 is selected with a dashed border. A large black circle with the number '2' is overlaid on the right side of the spreadsheet.

Count Function

The Count Function returns the number of values in a range and can quickly determine how many cells contain numeric information.

1. Click on the cell where the formula will be located. From the Standard Toolbar, click on the down triangle next to the **AutoSum button**>**Count**.
2. With the mouse, select the range of cells to be used in the formula. Click **Enter**.
3. The number of values in the selected range of cells will appear.

	A	B	C	D
1	84			
2	24			
3	34			
4				
5	84			

A screenshot of an Excel spreadsheet. The formula bar shows '=MAX(A1:A4)'. The value '84' is displayed in cell A5. A large black circle with the number '3' is overlaid on the right side of the spreadsheet.

	A	B	C	D
1	84			
2	24			
3	34			
4				
5	=COUNT(A1:A3)			
6	COUNT(value1, [value2], ...)			

A screenshot of an Excel spreadsheet. The formula bar shows '=COUNT(A1:A3)'. The range A1:A3 is selected with a dashed border. A large black circle with the number '1' is overlaid on the right side of the spreadsheet.

	A	B	C	D
1	84			
2	24			
3	34			
4				
5	3			

A screenshot of an Excel spreadsheet. The formula bar shows '=COUNT(A1:A3)'. The value '3' is displayed in cell A5. A large black circle with the number '2' is overlaid on the right side of the spreadsheet.

Maximum and Count

In cell D5 find the maximum number in cells D1 through D3. In cell D6 use the count function to count the number of values in cells D1 through D5.

Types of Charts and Their Uses

1. **Area** - An Area chart emphasizes the magnitude of change, rather than time and the rate of change. It also shows the relationship of a part to a whole by displaying the sum of the plotted values.
2. **Bar** - A Bar chart shows individual figures at a specific time or shows variations between components but not in relationship to the whole.
3. **Bubble** - A Bubble chart compares sets of three values in a manner similar to a scatter chart with the third value displayed as the size of the bubble marker.
4. **Column** - A Column chart compares separate (noncontinuous) items as they vary over time.
5. **Cone** - A Cone chart displays columns with a conical shape.
6. **Cylinder** - A Cylinder chart displays columns with a cylindrical shape.
7. **Doughnut** - A Doughnut chart shows the relationship of parts to the whole.
8. **Line** - A Line chart shows trends and change over time at even intervals. It emphasizes the rate of change over time rather than the magnitude of change.
9. **Pie** - A Pie chart shows proportions and relationships of parts to the whole.
10. **Pyramid** - A Pyramid chart displays columns with a pyramid shape.
11. **Radar** - A Radar chart emphasizes differences and amounts of change over time and variations and trends. Each category has its own value axis radiating from the center point. Lines connect all values in the same series.
12. **Stock** - A Stock chart shows four values for a stock - open, high, low, and close.
13. **Surface** - A Surface chart shows trends in values across two dimensions in a continuous curve.
14. **XY (Scatter)** - A Scatter chart shows either the relationships among numeric values in several data series or plots the interception points between x and y values. It shows uneven intervals of data and is commonly used in scientific data.

Creating a Chart

Creating a chart allows you to represent your data in a visual format.

1. Click on the **Sheet 2** tab. Using the mouse, select and highlight all cells that contain information for the chart. From the **Menu Bar**, click **Insert>Chart**.

Or



From the **Standard** Toolbar, click the **Chart Wizard** Icon.

Chart Wizard: Step 1

Chart Wizard: Step 1 allows you to select the Chart type that will be used to construct your chart.

2. Under **Standard** Types, select a column chart to be used. Click **Next**.

	A	B	C
1	Name	Score 1	Score 2
2	Sarah	99	85
3	Celeste	98	99
4	Zelete	85	80

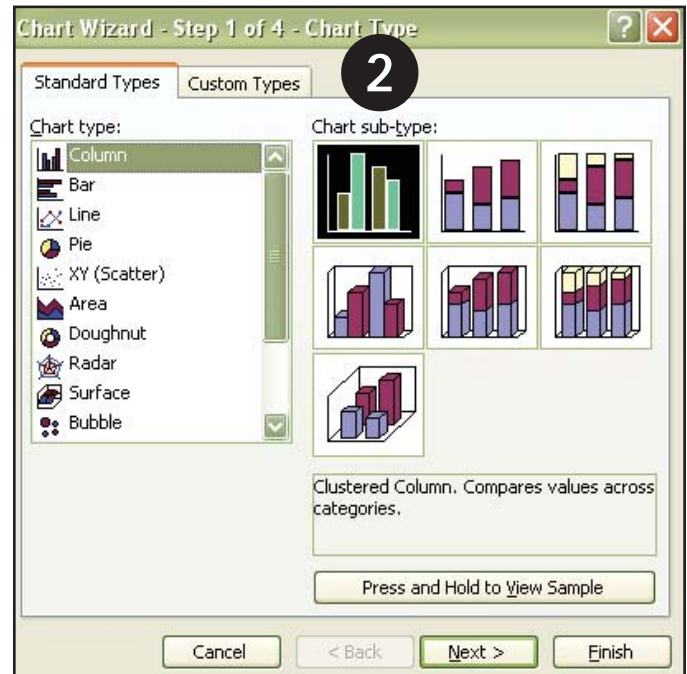

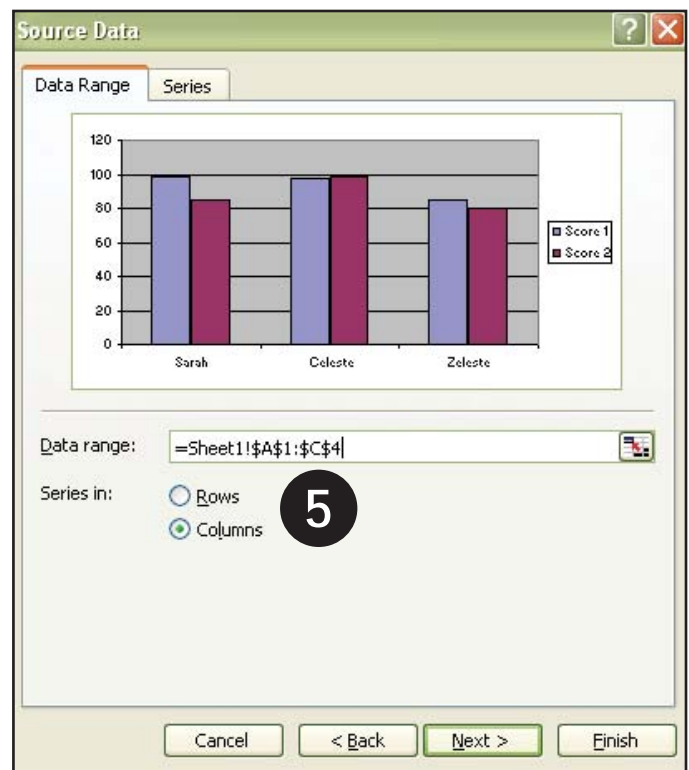
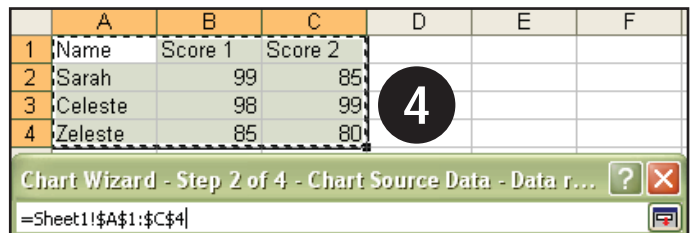
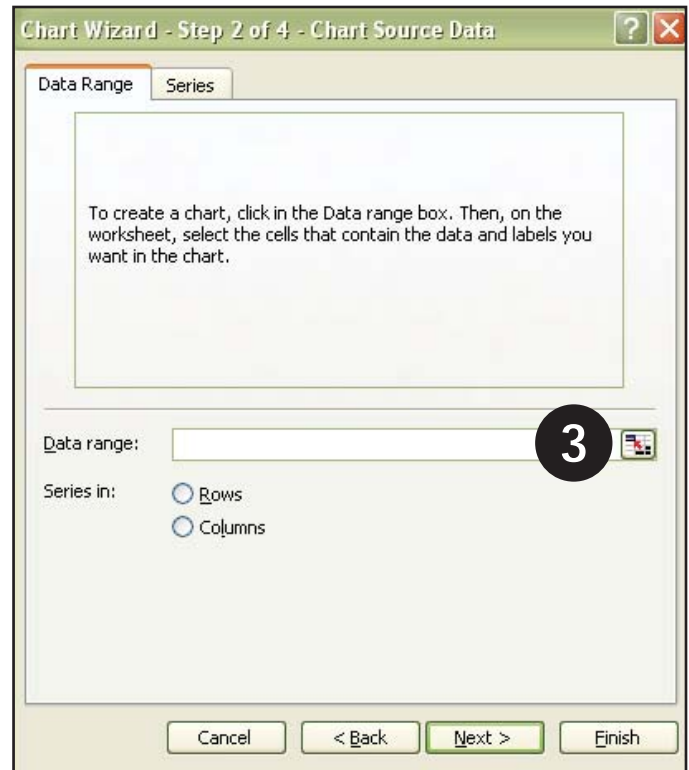


Chart Wizard: Step 2

Chart Wizard: Step 2 allows you to select the Chart Source Data that will be used to construct your chart.

3. With the **Data range** tab selected. Click the **Data range** box to select the information to be used in the chart. 
4. Select Cells A1 through C4 and return to the **Chart Wizard**.
5. To change the way the rows and columns appear, click the appropriate radio button.



6. Click the **Series Tab**. The **Series box** shows the column headings that were selected from the spreadsheet.
7. Across from the Series are the **Name box** and the **Values box** for the highlighted series. The boxes show the location of the information on the spreadsheet.
8. The **Category (X) axis** labels can be a category or value labels from the spreadsheet. Click the box to the right to see where the information came from.
9. Click **Next**.

Chart Wizard: Step 3

Chart Wizard: Step 3 allows you to add titles to your chart, arrange the legend, add Data labels, and work with the data table.

10. **Chart title** allows you to put a title at the top of the chart. Add a title to your chart.
11. **Category (X) axis** allows you to put a title underneath the X axis or along the bottom of the chart.
12. **Value (Z) axis** allows you to put a title to the left side of the chart.
13. Click the **Legends tab** to adjust the placement of the legend. Place the legend at the bottom of the chart.

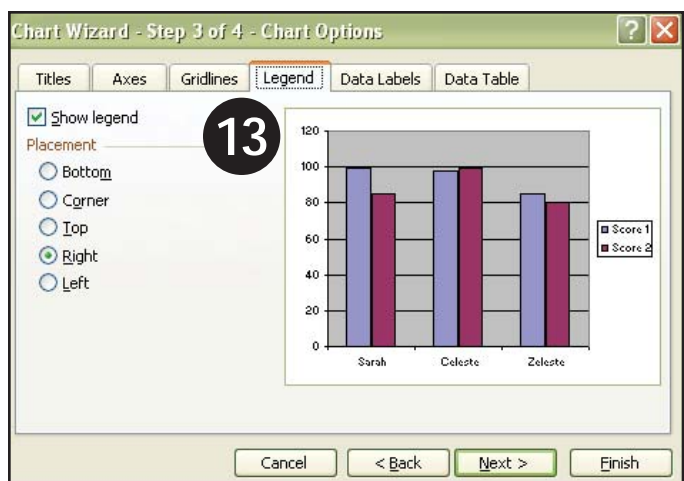
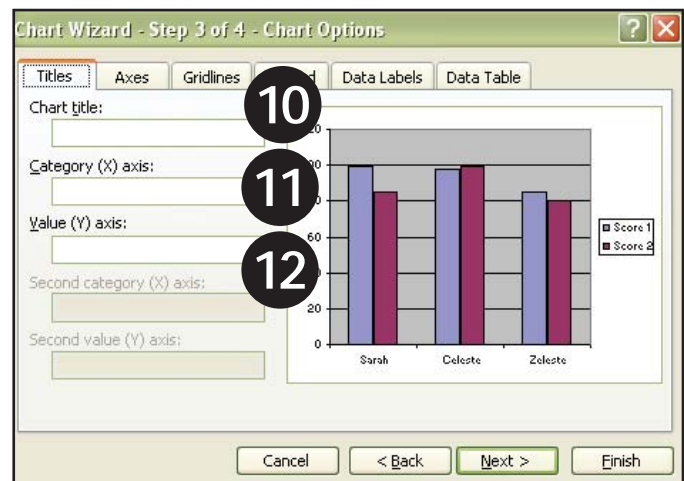
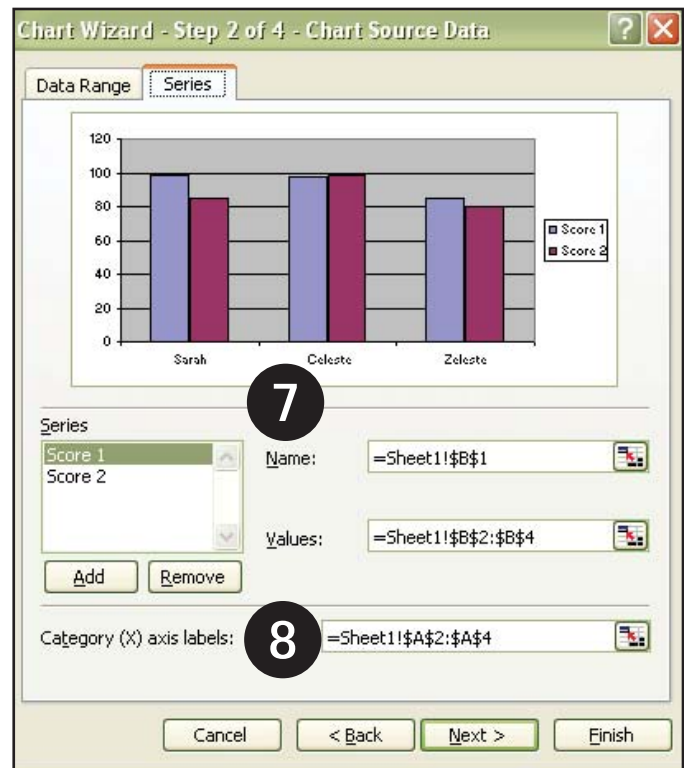


Chart Wizard: Step 3 cont.

- Click **Data labels**. This allows you to add labels on the chart depending on what information is needed. Click **Next**.

Chart Wizard: Step 4

Chart Wizard: Step 4 allows you insert the chart either as a new sheet or as an object in the current sheet. This is the final step.

- Select the chart location of your choice: inserted into the workbook as a new sheet or as an object in the current sheet.
- Click **Finish**.

