eXcEL

tutorial

ginnopaoli kelley

EXCEL TUTORIAL

Microsoft Excel is a powerful spreadsheet program that is easy to use and allows you to store, manipulate, analyze, and visualize data. This tutorial will guide you through the basic steps in beginning to use Excel. After completing this tutorial, you will have the basic skills to accomplish the following objectives:

- Identify and become familiar with the user interface
- Create, open, and save workbooks
- Select, copy, and move data
- Format cells (width, columns, etc.)
- Create simple graphs (pie charts, bar graphs, histograms)

Each section may include a small QuickTime clip with screen shots to help you visualize and perform the given tasks. Whenever you see [image], click on the image and the movie will play.

DEFINITIONS

Term	Definition
Active Cell	A cell that is selected.
Cell	Cells are formed where rows and columns intersect. To refer to a cell, enter the column letter followed by the row number. For example, cell D4 is the intersection of column D with row 4.
Workbook	In Excel, a workbook is a file where you work and store your data. Because each workbook can contain many worksheets, you can organize various kinds of information in a single file. By default, each workbook contains three worksheets. You can add or delete worksheets in to the workbook as needed.
Worksheet (Spreadsheet)	Worksheets consist of cells that are alphabetically organized by columns and numerically organized by rows. Each cell is used to list, organize, and calculate data within your worksheet.

OPENING EXCEL

When you first open the Excel program, a new workbook (Book1) containing three default worksheets (Sheet1, Sheet 2, and Sheet3) will be created. The worksheets are designated with tabs at the bottom of the page. You can move between worksheets using the tabs.

Each worksheet contains cells with 65,536 rows and 256 columns. The rows are labeled numerically and run along the left side of the worksheet. The columns are labeled alphabetically and run along the top of the worksheet. Rows are labeled from 1 through 65,536. Columns are labeled from A to Z, AA to AZ, B – BZ, etc. A cell is created by the intersection of a column and row and is named ColumnRow (ie. A7 – column A, row 7). The scroll bars to the right and bottom of the worksheets can be used to scroll to any location of the worksheet.
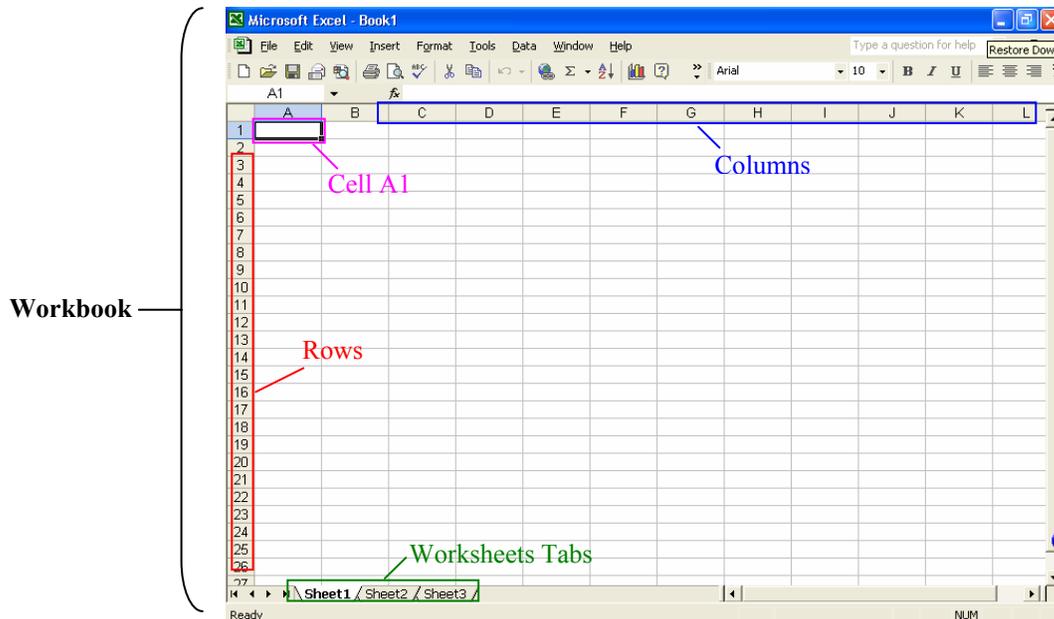
Deleting and Adding Worksheets

To delete a worksheet:
1. Select **Edit > Delete Sheet**. The sheet that you are currently displaying will be deleted.

To add a worksheet:
1. Select **Insert > Worksheet**. A new worksheet will be added to your workbook.

Note: You can edit the name of the worksheet by double-clicking the Worksheet Tab and editing the name.

TOOLBARS

When you open Excel you will notice the basic toolbars at the top of the workbook. You can customize the toolbar to include your most frequent operations. Below is a screenshot with the name of each button on the toolbar. Below the screenshot you will see a table with a brief description for each buttons operation.

Standard Toolbar

| Button	Description
	Starts a new workbook
	Opens an existing workbook
	Opens an existing workbook
	Prints current worksheet
	Shows the print preview
	Begins *Spell Check*
	Cuts selection
	Copies selection
	Pastes cut or copied selection
	Copies format from another formatted cell (*Format Painter*)
	Undoes previous action
	Redoes previous action
	Inserts hyperlink
	Inserts the =Sum( ) function and other functions
	Sorts data in ascending order by alpha characters
	Sorts data in descending order by alpha characters
	Opens the *Chart Wizard*
	Opens/makes visible the *Drawing* toolbar
	Changes zoom control to zoom in or out
	Opens the Office Assistant feature with searchable help and tips

Formatting Toolbar
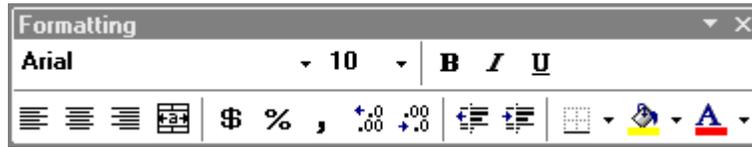
| Button	Description
Arial	Changes font of selection
10	Changes size of selection
U	Underlines selection
B	Bolds selection
I	Italicizes selection
≣	Left aligns selection
≣	Centers selection
≣	Right aligns selection
$	Formats selection to *Currency* style
%	Formats selection to *Percent* style
,	Formats selection to *Comma* style
.0 .00	Increases number of decimal places shown
.00 .0	Decreases number of decimal places shown
≔	Decreases indent
≔	Increases indent
⊞ ▾	Adds border lines to the cells
◇ ▾	Changes color of the selected cell
A ▾	Changes color of the font

Customizing Toolbars

To customize the toolbar to better fit your needs, you can follow these easy steps.

1. Select **Tools > Customize**, the following box appears:
2. Select the **Commands** dialog tab
3. To select a category of buttons, from the *Categories* listing, select the desired *Categories* listing. To the right of the dialog box, the *Command* listings appear.
4. In the *Commands* listing select the desired button you want to add. You can find out more about the button by selecting it and then clicking *Description*.
5. From the Commands listing, click and drag the desired button onto the Excel toolbar environment.
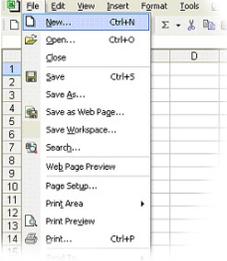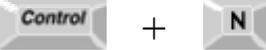6. When finished, click **Close**.
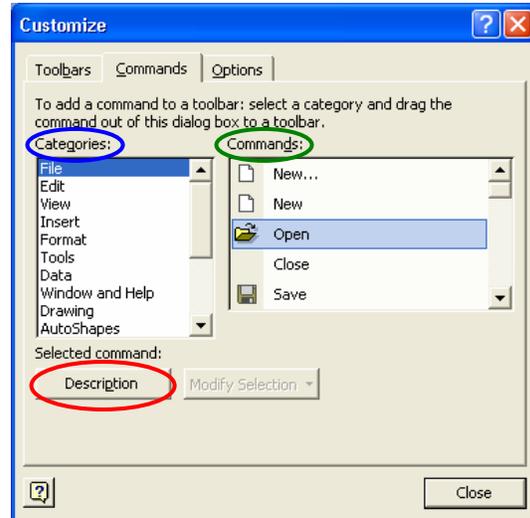
Example: Suppose you wanted to add a button Σ (Autosum) onto the toolbar. This command adds numbers automatically within a specified number of cells. Follow these simple steps or watch the clip to follow the steps involved.

1. Select **Tools > Customize**.
2. From the *Categories* listing, highlight *Insert*. In the *Commands* listing, highlight Autosum Σ.
3. Drag the selecting unto the **Toolbar** and **Drop**.
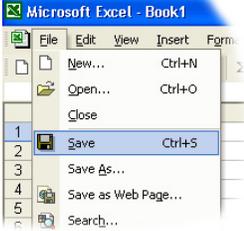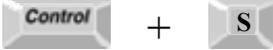4. The new button should appear on the toolbar.
5. Finish
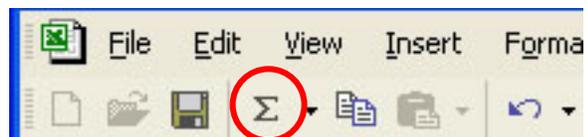
CREATING AND SAVING WORKBOOKS

There are three ways of creating *New* workbooks in Excel.

From the **Toolbar**, select **New**	
From the *Keyboard*, select **Control** + **N**	
From the **File** menu, select **New**	
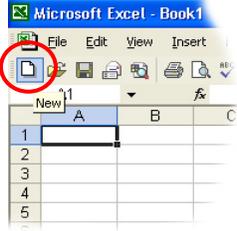
There are three ways to *Save* your workbooks.

From the **File** menu, select **Save**	
From the *Keyboard*, select **Control** + **S**	
From the **Toolbar**, select **Save**	
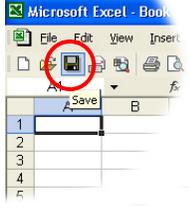
SELECTING, MOVING, AND COPYING DATA

Use the mouse to select the cell you want to begin editing and use the keyboard strokes listed in the table to navigate between cells in the worksheet.

| Movement	Key stroke
One cell up	up arrow key
One cell down	down arrow key or **ENTER**
One cell left	left arrow key
One cell right	right arrow key or **TAB**
Top of the worksheet (cell A1)	**CTRL+HOME**
End of the worksheet (last cell containing data)	**CTRL+END**
End of the row	**CTRL**+right arrow key
End of the column	**CTRL**+down arrow key
Any cell	**File|Go To** menu bar command

To *select* a cell, simply click on the desired cell.

To *move* a cell, click on the desired cell and use the **Cut/Paste** function.

To *copy* a cell, click on the desired cell and use the **Copy/Paste** function.
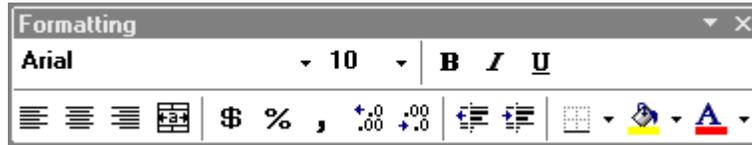
Suppose you wanted to copy cell A1 (Gold) to cell D1.

1. **Select** cell A1 **> Copy** (you will see the selected cell with an animated border).
2. **Select** cell D1 > **Paste**
3. **Finish**


Copy

Animated Border

Paste
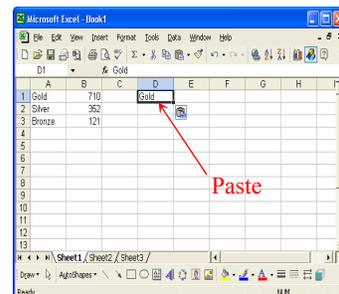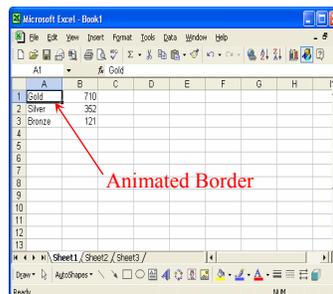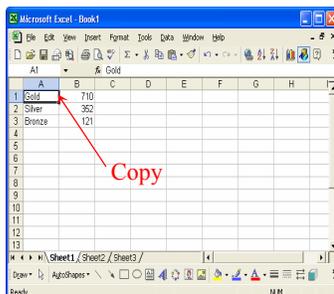
FORMATTING CELLS

The content from cells can be formatted in many ways. You will use the Formatting Toolbar as shortcuts (click **here** to see the description of each button).

You can edit the contents of each cell just as you would in a Word document. The basic editing buttons are available for each cell (Bold, Font size, Font character, Alignment, etc.). You can also edit the cell by filing it with color or merge a group of cells .

Suppose you wanted to fill cell A1 with Orange color and change the font color to blue.

1. Select the desired cell, in this case A1.

2. Select the Font Color button and click the Blue color (this should automatically change the font color to blue).

3. Select the Fill button and click the Orange color (this should automatically fill the cell with the color orange).

4. Finish.
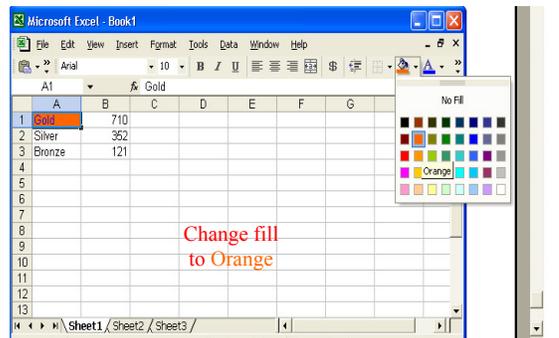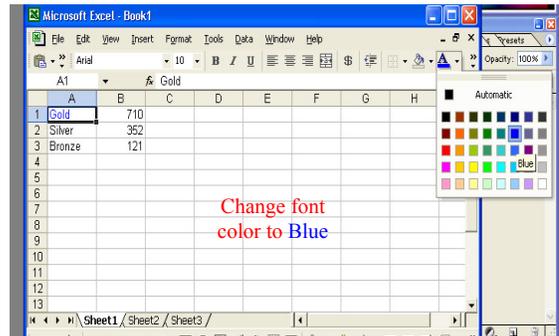
Note: You can also fill and change font color to an entire column or row. Simply highlight the desired column or row and follow the preceding steps.

Adding or Deleting columns or rows

Suppose you wanted to add an extra row (between 2 and 3) and column (between A and B) to our worksheet.

1. Move the cursor to row 3 (you will notice the cursor change to an arrow pointed to the right).
2. *Right click* and select **Insert**. This will automatically insert a row between row 2 and row 3.
3. Move the cursor to column B (you will notice the cursor change to an arrow pointed down).
4. *Right click* and select **Insert**. This will automatically insert a column between column A and column B.
5. To delete columns or rows, you will follow the same steps and select **Delete** instead of **Insert**.
6. Finish
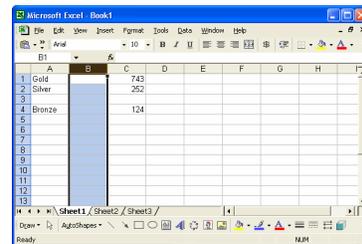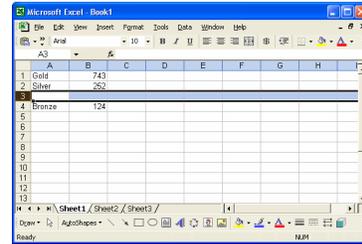
Changing size in columns and rows

Suppose you wanted to change the size of row 3 and column C.

1. Move your cursor between columns C and D (*you will notice your cursor change to a cross*). When this happens, you may adjust the width of the column.

2. Move your cursor between row 3 and 4 (*you will notice your cursor change to a cross*). When this happens, you may adjust the height of the row.

3. To adjust the width of a column to a specific size, select the column and *right click*. Select **Column Width** and input the desired size.

4. To adjust the height of a row to a specific size, select the row and *right click*. Select **Row Height** and input the desired size.

5. Finish
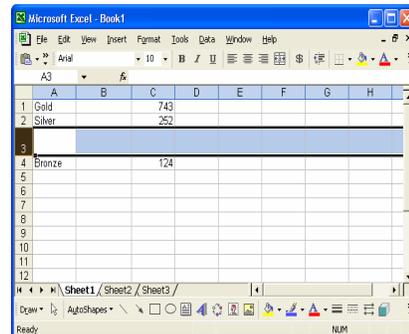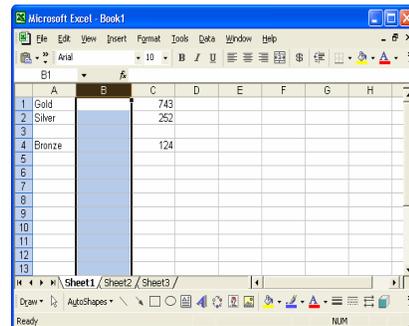
CREATING GRAPHS USING THE CHART WIZARD ◆

Charts allow you to present data entered into the worksheet in a visual format using a variety of graph types. Before you can make a chart you must first enter data into a worksheet.

Suppose you had the following data in a worksheet. We will create a bar graph to illustrate the data in our worksheet using the chart wizard.

1. First and foremost, input all of your data into the worksheet.
2. Select an empty cell anywhere in the worksheet.
3. Select ▊. This will initiate the **chart wizard**. The chart wizard will take you on a step-by-step process of selecting your data and appropriately labeling your chart. There are four main steps.
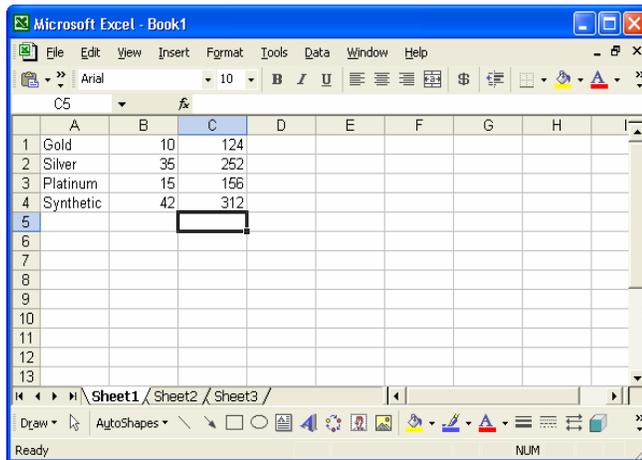
When the chart wizard is initiated, you will see the following screen appear.

Step 1 of 4

The first it will ask you is to select the appropriate chart or graph for your presentation. Since we want to make a bar graph, the selected graph is correct (*Note: each chart type includes a variety of sub-types*).

You can use the **Press and Hold to View Sample** button to view a quick sample of the graph.

Under the **Custom Types** tab are included samples of less-used charts and graphs that can be used.
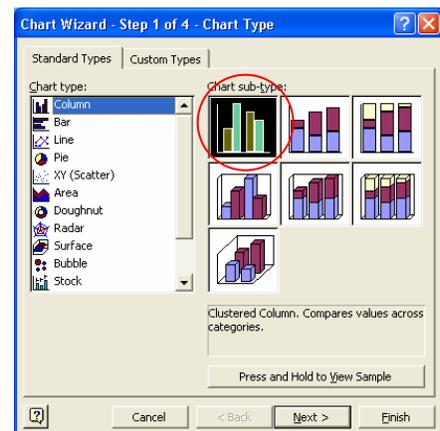
Step 2 of 4

By clicking **Next**, the wizard will ask you for the data range (in other words, the selected data that will be used in the chart). The wizard will automatically select the data range, however, if you want to select specific cells to be included in the chart or graph, follow these steps:

1. Click on the **Data Range** button.
2. In your worksheet, select the desired cells by holding the **Ctrl** key and selecting each cell.
3. Press **Enter**. This will automatically edit the chart with the specified data.

Once the correct data is selected, select the **Series** tab. On this menu, you can **Name** each series of your chart. When you are finished, click **Next**.
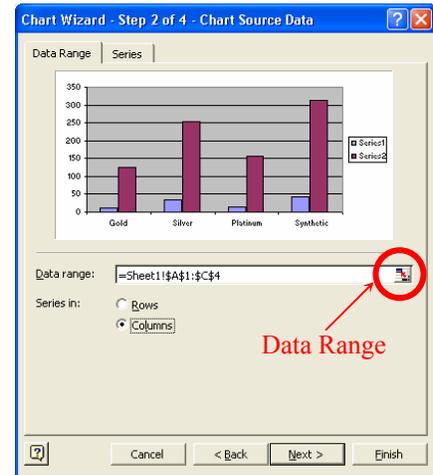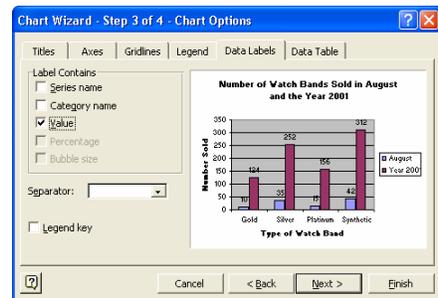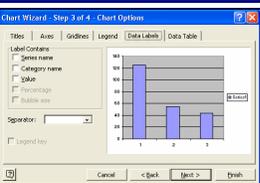
Step 3 of 4

In this menu, the wizard asks you to label your axis and name your chart. There are also a variety of options you can choose from the tabs listed.

Select the box labeled **Value** (this will enable you to see the actual values for each bar).

Click **Next**.

SCREENSHOT	DESCRIPTION
	The **Titles** tab lets you edit the Title of your chart and label the X and Y axis.
	The **Axis** tab lets you toggle views of for the X and Y axis.
	The **Gridline** tab lets you set your major and minor gridlines in your chart.
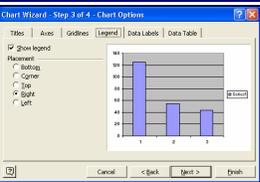
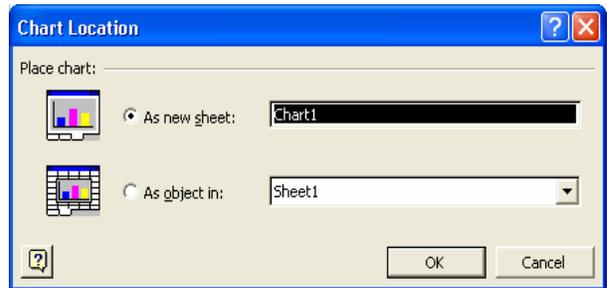|	
	The **Legend** tab lets you position your legend (series) menu.
	The **Data Label** tab lets you place value marks on your bars.
	The **Data Table** tab lets you show data labels along your X-axis.
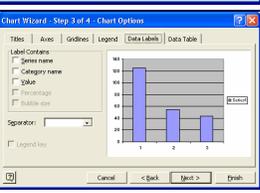
Step 4 of 4

In the final step, the wizard will ask if you want to include your chart or graph within the worksheet (**As object in**), or if you want the chart or graph on a separate sheet (**As new sheet**).

If you choose to insert the chart within the worksheet, then you will see it appear somewhere on your worksheet. You can move this chart around to the desired position.

If you choose to insert the chart on a separate page, your chart will appear as a separate sheet within your workbook. You can toggle the view between the Chart and Sheet by using the tabs at the bottom of your workbook.
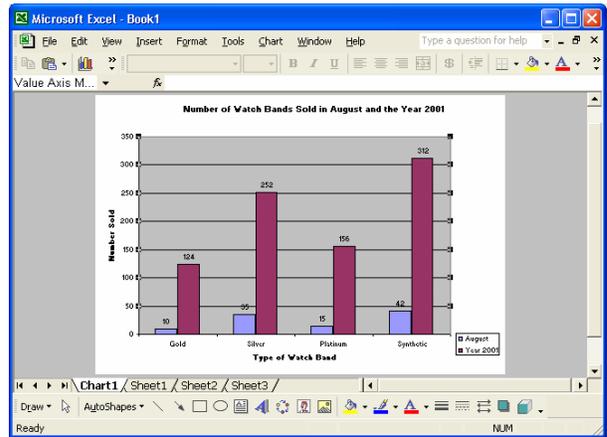
Click **Finish**.

PAGE SETUP AND PRINTING ◆

You can customize the output of your worksheet by modifying the properties in the Page Setup menu.

1. Select **File > Page Setup**.
2. In this menu, you can select the *Orientation* of your worksheet. You can also select the output device.
3. The *Margins* tab will let you set the margins of your sheet. You can center the worksheet vertically and horizontally.
4. The *Header/Footer* tab will let you edit the information in the footer or header of your worksheet.
5. The *Sheet* tab is basically your "tell-all" to the printer as it relates to how the worksheet should be printed. You can select gridlines, comments, how the worksheet should be oriented, etc.
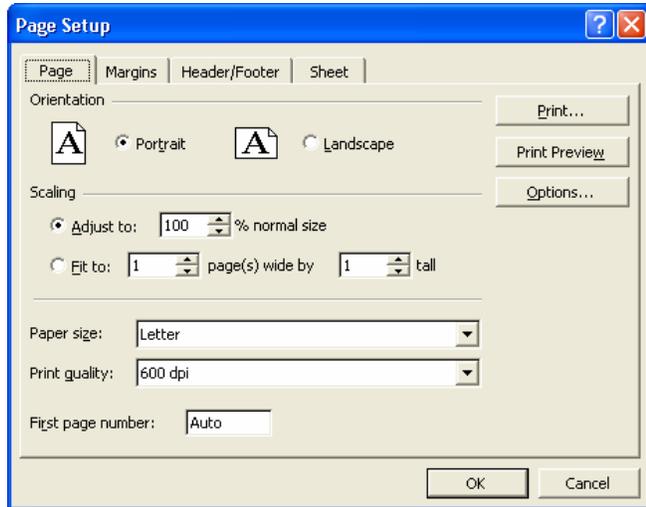
Before you print your document, it is recommended that you **Print Preview** to make sure that you are satisfied with the custom output of your Excel document.

Once you have selected the appropriate page settings, you are ready to print your document. Simply click the **Print** button and voila!
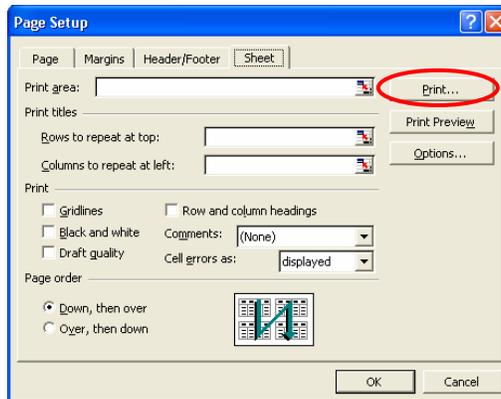
Congratulations! You have now completed the tutorial on **Excel Basics**. Let's put your new knowledge to use! Complete the activity named *My First Excel Workbook*. The activity will require you to use the skills learned in this tutorial. At the end of the activity you can view an example of the completed activity. Good luck!

MY FIRST EXCEL WORKBOOK

Directions: Create and Excel worksheet and chart using the guidelines below.

- Create a workbook containing one worksheet named **Student's Test Scores** and a separate sheet containing a Line graph illustrating the data.

- Use the following data (be sure to adjust the cell width so the entire text is visible within each cell):

John	88
Samantha	91
Maria	74
Kyle	66
Mark	93
James	82
Audrey	74
Sandra	77

- Name one column "**Names**" and the other column "**Scores**". The title of the worksheet should be included on the worksheet tab and on the heading of the worksheet.

- Insert a row between the Heading and the data. Center the text in all the cells.

- Fill the **Names** column with Cyan, and the **Scores** column with yellow.

- Bold the Heading and change the font color to blue.

- Change the font size of the entire worksheet to 12pt. You may need to adjust the column widths to view the contents of each cell.

- Create a **Column** graph.   Be sure to select the appropriate *Sub-style*.

- The title will be "**Student Test Scores**."   Label the x-axis **Students** and the y-axis **Percentage**.

- Print your worksheet so that the data is centered vertically and horizontally. Be sure to include gridlines for your worksheet and adjust the **Scaling** size to 200% the normal size.

Student's Test Scores

Names	Scores
John	88
Samantha	91
Maria	74
Kyle	66
Mark	93
James	82
Audrey	74
Sandra	77

Student Test Scores