



Introduction to Microsoft Excel 2007

Class learning objectives

1. **What is Excel?**
 - Spreadsheet uses & samples
 - Touring the Excel window
 - Learning important definitions
 - Navigating around the workbook

2. **The Basics**
 - Entering & editing data in cells
 - Inserting cells, rows, & columns
 - Formatting cells
 - Renaming, adding, & reorganizing worksheets

3. **Formulas**
 - Using mathematical operators
 - Using four sum methods
 - AutoCalculate

4. **Customizing Your Spreadsheet**
 - Gridlines

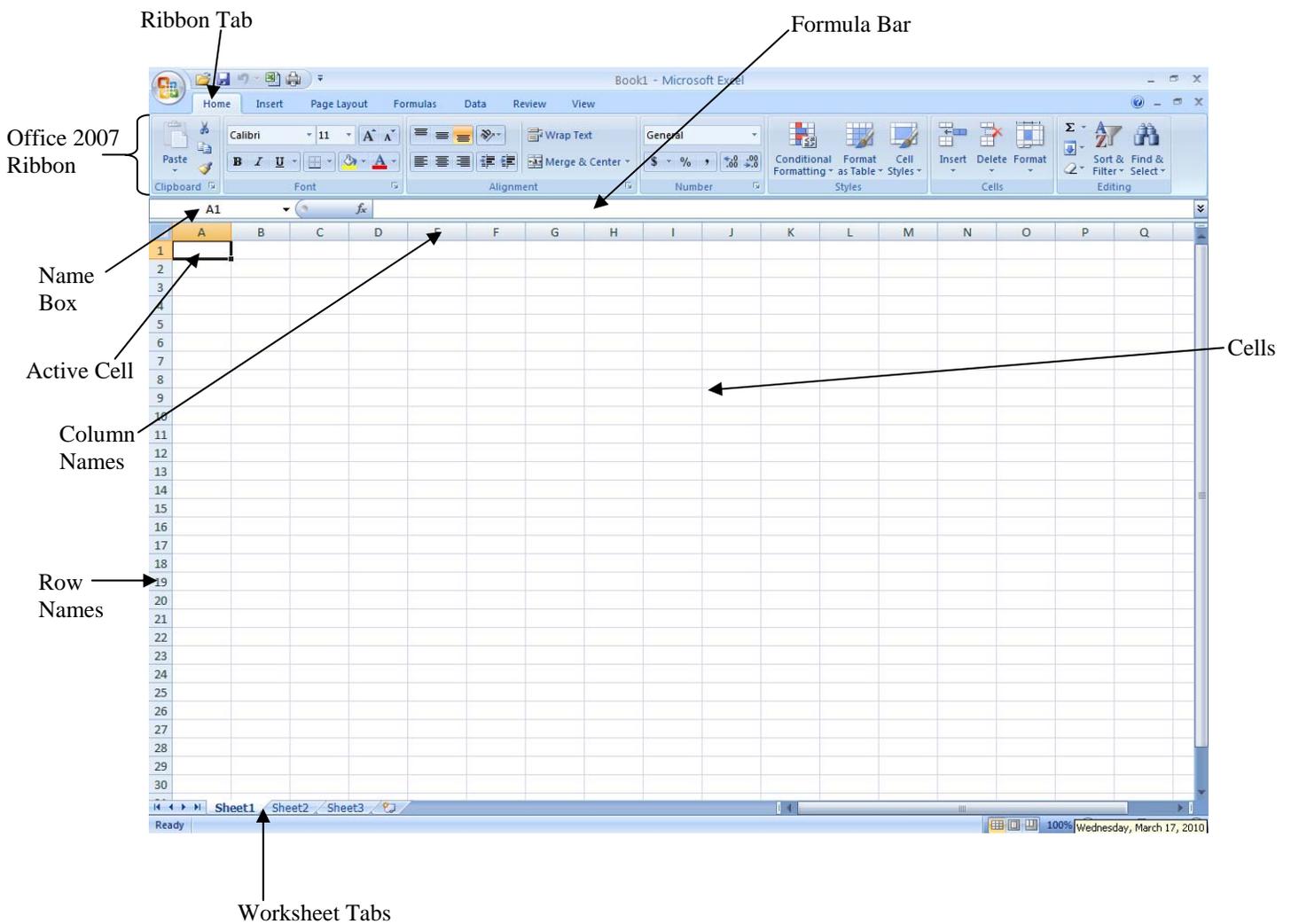
5. **Finishing Up**
 - Using Excel's help
 - More learning resources

What is Excel?

Excel is a spreadsheet program that can be used to organize, manipulate and analyze data. Excel is often used in the workplace to track statistics, create sales reports, financial modeling, scientific engineering, and making charts and graphics. However, it can also be useful at home to create budgets or even make a list of family members' birthdays. Excel is a versatile and powerful program with a lot to offer.

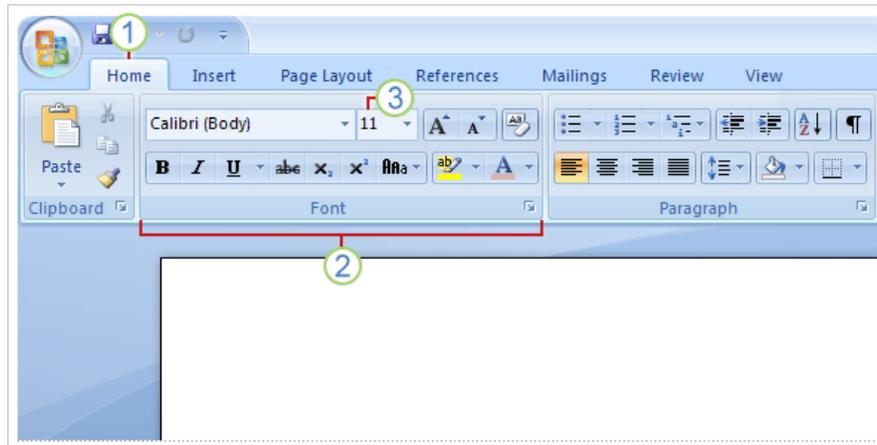
The Excel Window

When you first open up Excel you will see a blank sheet that looks a lot like a grid. If you have ever used other Microsoft programs such as Microsoft Word, you will recognize several parts already such as the Title Bar. Other parts might be unfamiliar, so let's look at the parts of an Excel window.



The Microsoft Office 2007 Ribbon

Microsoft Office 2007 uses a visual tool called **the ribbon** to display all of the commands that are used to edit a document. The ribbon uses two different visual elements: tabs and command groups.



1. Each tab contains a set of groups that share a theme in common. The Home tab, for example, contains all of the commands that are used most often by most people.
2. Within each tab are groups of command icons that share a common design element. The Font group, for instance, contains all of the commands that change the way that text looks while the Number group contains commands that change the way numbers are displayed within a cell.
3. Finally, within each group are visual representations of the commands themselves.

Cells –The gray boxes that make up the Excel grid are called cells. Cells are arranged in rows and columns. They are used to store data. Data can be numbers, text and formulas, such as mathematical calculations.

Active Cell – The active cell is the cell you are currently working with. There is always an active cell on your worksheet. You can identify the active cell on your worksheet because it has a thicker border than the other cells and its name is listed in the cell name box. To change which cell is the active cell, simply click on it or move to it using the arrow keys on your keyboard.

Name Box –The cell name box, located below the clipboard group in the ribbon identifies the name of the active cell. Cells are named by giving the column letter and then the row number. For example, B3 means the active cell is located in column B and is in the third row.

Formula Bar –The formula bar displays the contents of the active cell. This could be a formula, data or just text.

Workbook – An Excel file is called a workbook. It is helpful to think of a workbook as being like a notebook containing many sheets.

Worksheets –The individual pages in the workbook are called worksheets. They are often referred to as simply “sheets.” In addition to data, worksheets can also contain graphical objects, such as charts,

arrows and pictures. Each worksheet consists of a tabular grid of cells. There are more than 65,000 rows of cells, starting with number 1 along the left margin of the worksheet. There are 256 columns along the top margin of the worksheet. These columns are labeled alphabetically, using a single-digit and then double-digit alphabetization scheme.

Worksheet Tabs –There is a tab in the bottom left corner of the Excel window for each sheet in your workbook. Clicking on a sheet’s tab will take you to that sheet.

Navigating Around the Workbook

Excel has scroll bars to help you view all areas of a sheet quickly. You can click in a cell using your mouse to select a specific cell. Using the scroll bars and the mouse you can quickly select any cell in the worksheet. However, some users find it easier to move around in Excel using the keyboard instead of the mouse. The table below explains some keystrokes you can use to navigate around worksheets.

This Keystroke	Moves
TAB key	Move to the right to the next cell in the row.
ENTER key	Move to the cell in the column below.
Shift+TAB	Move to preceding cell.
Arrow keys (→←↑↓)	Move right, left, up, and down (one cell at a time).
CTRL+arrow keys	Move to the edge of the current data region (region the cell is currently in).
Home	Move to the beginning of row.
CTRL+Home	Move to Cell A1.

Entering and Editing Data

Entering Data into a cell

To enter data into a cell, simply do the following:

1. Select the cell by clicking on it. The cursor will not blink (as it does in Microsoft Word), but instead the cell will be outlined in a thick black line and it will be listed in the cell name field below the ribbon. These two things tell you that the cell is active and ready to accept a formula or text.
2. Type numbers, text, or a combination of both into the cell.
3. Press the **Enter** key OR click on the green check mark to the left of the Formula bar. Pressing Enter will enter the information into that cell and move you down to the next cell. Pressing the green check mark will enter your data but keep the same cell active.

Create the spreadsheet below to practice entering data into a spreadsheet.

	A	B	C	D	E	F
1		January	February	March	April	
2	Food	200	150	250	225	
3	Utilities	75	100	125	90	
4	Entertainment	100	120	75	150	
5	Rent	700	700	700	700	
6	Totals					

Editing a cell:

If you discover that you made a mistake when entering data into a cell, you can correct them within the formula bar or the cell itself.

- **Formula Bar:** Select the cell, then click in the formula bar. Make the needed correction. Then press **Enter** or click on the green check mark in the Formula bar.
- **In the Cell:**
 - Either:
 - Select the cell and begin typing. What you type will erase the current information in the cell.
 - OR-
 - Double click on the cell. A cursor will appear in the cell. Move the cursor to where you need to make your changes. Make the changes. Then press **Enter**.

Canceling/Undoing Changes

Cancelling actions

- If you haven't yet pressed Enter while entering or editing information in a cell, press the **Esc** key or click on the "X" button on the formula bar.

Undo/Redo Actions

To Undo Your Most Recent Action

- Click the Undo button  on the Standard Toolbar.

To Cancel Your Most Recent Undo

- Click on the Redo button  on the Standard Toolbar.

Clearing a Cell

Clearing a cell removes any data that is entered into the cell. The quickest way to clear a cell is to select one or more cells, then press the **Delete** key or the **Backspace** key. This clears the contents, but leaves formatting and other cell contents intact.

To delete the cell entirely, click **Edit** on the main menu and select **Delete**. It will then ask you which way you would like to shift the other cells.

Inserting Cells, Rows and Columns.

Inserting a Cell

1. Click on the cell where you would like to insert a new cell.
2. On the Home tab, click on **Insert** in the **Cells** group and then click **Insert Cells** from the list of choices.
3. Click on the circle that indicates which direction you would like to shift the existing cells.

Inserting a Row

1. Click on the row where you would like to insert a new row.
2. On the Home tab, click on **Insert** in the **Cells** group and then click **Insert Rows** from the list of choices.
3. A new row will be inserted above the row containing the current active cell.

Inserting a Column

1. Click on the column where you would like to insert a new column.
2. On the Home tab, click on **Insert** in the **Cells** group and then click **Insert Columns** from the list of choices.
3. A new column will be inserted to the left of the column containing the current active cell.

Formatting Cells

Selecting Cells

Before making any formatting adjustments you must first select the cell(s) you want to change. Selected cells will have a dark border surrounding them.

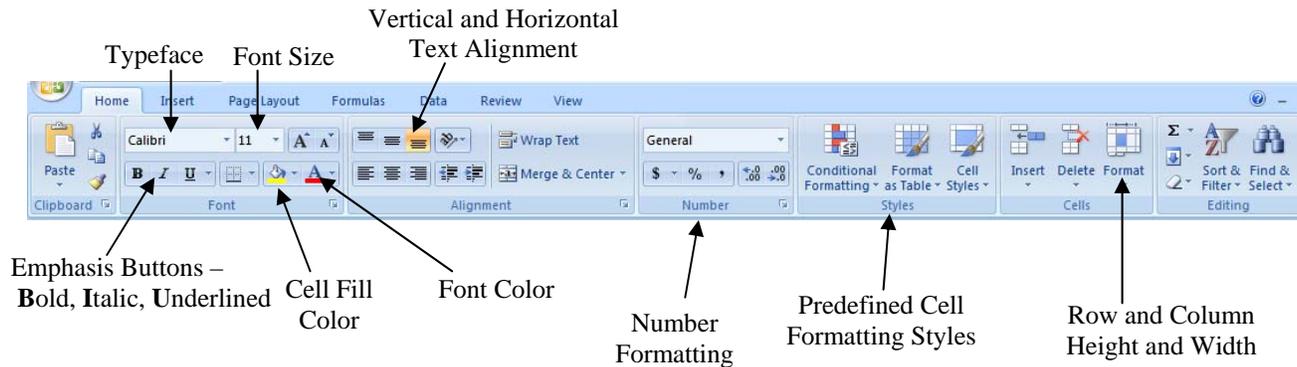
To select:

- a single cell, click on it. Nonadjacent cells can be selected by holding down the.
- a range of cells, click on a corner cell in the desired range, hold down your mouse button and drag your mouse pointer over the desired range of cells. Multiple ranges can be selected by holding down the CTRL key on your keyboard and selecting additional cell ranges.
- all of the cells in a column, click on the column heading.
- all of the cells in a row, click on the row heading.
- all of the cells in a worksheet, press **Ctrl + A** on your keyboard OR click the square in the upper left corner of the worksheet to the left of column A's heading.

NOTE: Even when a range of cells is selected, one cell is still the active cell (the one in your selected area that did not turn blue).

Using Office 2007's Formatting Tools

You can format the appearance of a cell, or range of cells, by selecting the cells you want to format and then make adjustments to them using the tools on the Office 2007 Ribbon.



Formatting Numbers

The default numbering format for numbers entered is the General format. In General format, the numbers appear exactly as you typed them into the cells. Sometimes it is useful to adjust the appearance of numbers to reflect the type of data that you are working with. Examples of other formats that you can use include: Dates, Currency formats, Accounting formats, Percentages, Scientific Numbers or Rounded Numbers. You can also set how negative values appear in most of these formats.

To change the number format,

1. Select the cells with the numbering styles to be changed.
2. In the **Number** group on the **Home** tab, click on the downward pointing arrow to the right of General and select the desired format from the list.
3. Click on **OK**.

Renaming, Adding, Reorganizing Worksheets

When you first open a new Excel Workbook, it gives you three sheets to work with and they are just called sheet 1, sheet 2, and sheet 3.

Renaming Worksheets

It is a good idea to rename the sheets to reflect what kind of information can be found on that sheet. To rename the sheet do one of the following:

- Double click on the **Sheet1** tab.
- OR
- Right click on the sheet tab and select rename.

Any of these actions will cause the name in the sheet tab to be highlighted. Once it is highlighted, you simply type in the new name and hit the **Enter** key.

Adding Worksheets

If you need more than three sheets you can easily add more.

- Click on **Insert** in the **Cells** group and click **insert sheet**.
- OR
- Click the New Sheet button  to the right of the rightmost worksheet tab.

A new sheet will be added to your list of sheets.

Reorganizing Worksheets

If you need to reorganized your worksheets:

1. Click and hold down on the sheet tab of the sheet you wish to move and drag it to where you want it.
2. Release your mouse button to drop the sheet in the order that you like.

Formulas

Formulas allow you to manipulate and analyze the information you have entered into your Workbook. A formula is a calculation that can be entered into any cell and consists of a series of numbers (or cell references) and mathematical operators.

- **Begin EVERY formula with an equal sign (=).**
- **After entering a formula, press ENTER to display the total.**

Using Mathematical Operators

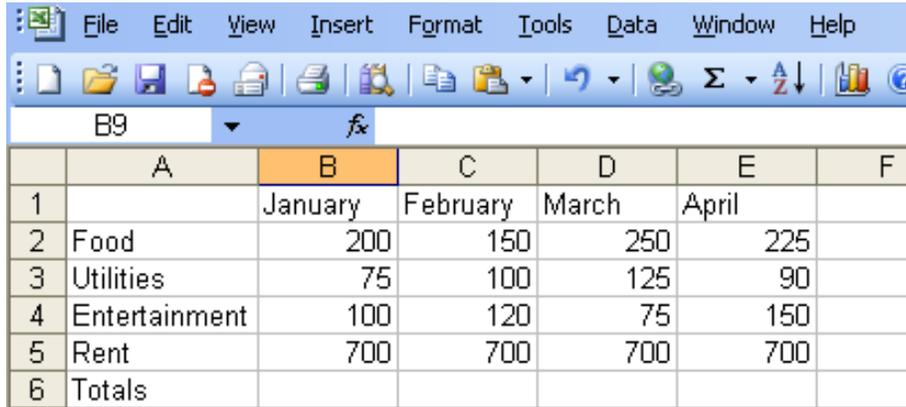
The math operators you can use in constructing a formula include the following:

- + for addition - for subtraction
- * for multiplication / for division

For example, you could enter =4+6 into a cell to have it display the result 10.

Using Four Sum Methods

Let us explore four methods of adding in Excel and the advantages and disadvantages of each.



	A	B	C	D	E	F
1		January	February	March	April	
2	Food	200	150	250	225	
3	Utilities	75	100	125	90	
4	Entertainment	100	120	75	150	
5	Rent	700	700	700	700	
6	Totals					

Sum Method 1, a simple formula:

1. Click on cell B6.
2. Enter the simple formula $=200+75+100+700$ into B6.
3. Press Enter.

Sum Method 2, cell references:

1. Click on cell C6.
2. Enter the formula $=C2+C3+C4+C5$ into cell C6. (C2, C3, etc are known as cell references)
3. Press Enter.

Once you have entered the formulas and found the totals, try entering a different number in both column B and C for Food. What happened to the totals in cell B6 and C6?

The total for column B stayed the same. The total for column C adjusted to the updated information. The formula for column B was inflexible because it used actual numbers. The formula for column C was more flexible because it referenced the position of the information being added.

Sum Method 3, a series:

If you wanted to add many cells of information together, you probably do not want to type in the cell reference for each cell such as in Method 2. Excel has several shorthand formulas for common calculations, one of which is the sum formula below:

=SUM(beginning cell reference:ending cell reference)

1. Click on cell D6.
2. Enter the formula =SUM(D2:D5)
3. Press Enter.

The colon **:** between the two cell references indicates a series of values and tells Excel to include all of the cells within that range of values.

Sum Method 4, the AutoSum feature:

Excel also has a convenient **AutoSum** button  that automatically generates a sum formula.

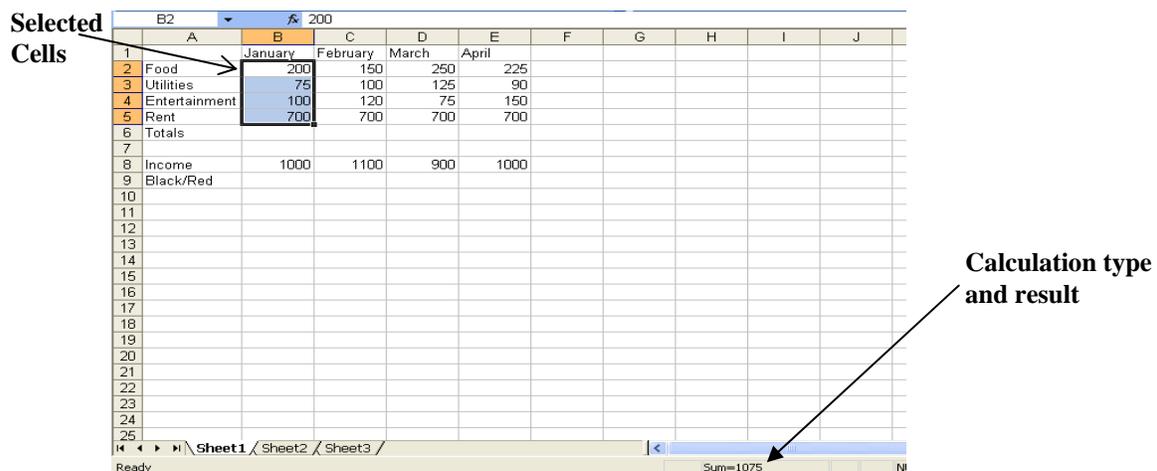
1. Start by selecting a cell below the column of numbers or to the right of the row of numbers that you would like to add together.
2. Then click on the AutoSum button  on the standard toolbar.
3. Finally press the Enter key. AutoSum will total up the row or column for you.

The **AutoSum** looks above the active cell for two or more numbers to add together. If there are no numbers above, it looks for two or more numbers to the left of the active cell to add together. If there is a break in the numbers above or below, the **AutoSum** will not include information past one empty cell in the summation.

Click on E6 and then the **AutoSum** button to AutoSum column E.

AutoCalculate

Excel also makes it possible to see the results of several common mathematical formulas without having to type in the formula. Whenever you select a range of numbers (or individual cells by holding down your Ctrl key), Excel automatically performs a calculation on those numbers. The result can be found at the bottom of your spreadsheet.



The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J
1		January	February	March	April					
2	Food	200	150	250	225					
3	Utilities	75	100	125	90					
4	Entertainment	100	120	75	150					
5	Rent	700	700	700	700					
6	Totals									
7										
8	Income	1000	1100	900	1000					
9	Black/Red									
10										
11										
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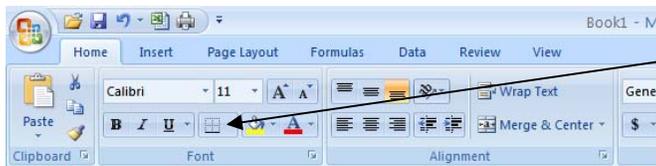
The status bar at the bottom shows "Sum=1075". An arrow points from the text "Calculation type and result" to the status bar. Another arrow points from the text "Selected Cells" to the range B2:E5.

If the calculation shown is not the one you want, simply right-click on the calculation result and click to select the kind of calculation you are interested in from the menu that appears.

Customizing Your Spreadsheet

Gridlines – If you go to **Print Preview** by clicking on the **Microsoft Office Button**  and then **Print** and finally **Print Preview**, you will notice that the gridlines do not print out on your spreadsheet. However, if you want the gridlines to print out, you can turn this feature on. Go to the **Page Layout** tab and in the **Sheet Options** group check the print box under the gridlines heading. Now look at your **Print Preview**, and you will see the gridlines will have appeared.

Adding gridlines to areas with colored backgrounds involves a separate step. Highlight the area that needs gridlines. Click the dropdown arrow to the right of the borders icon in the **Font** group on the **Home** tab and choose the **all borders** option.



Click the dropdown arrow to show gridlines

Finishing Up

Printing Your Spreadsheet

To print your spreadsheet:

1. Click on the Microsoft Office Button. 
2. Hover your cursor over Print.
3. Click the printing option that you want to use.

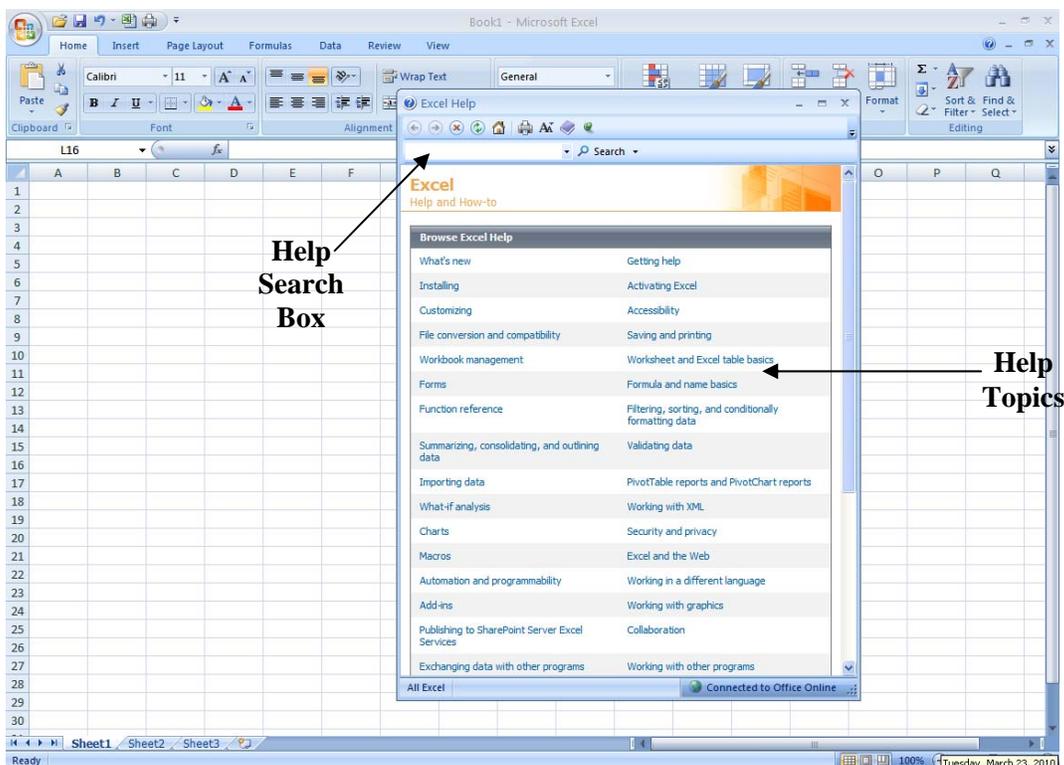
Fitting Your Spreadsheet to the Page

1. Click on the Microsoft Office Button. 
2. Hover your cursor over Print.
3. Click Print Preview.
4. Click **Page Setup** in the **Print** group of the **Print Preview** tab.
5. Click the circle next to **fit to:** and type 1 in the page width box.
6. Your spreadsheet will now resize itself to the width of a single sheet of paper.

Using Excel Help

Accessing Microsoft Excel's Help Feature

If you have a question about Word that you need answered right away, you might want to consult Microsoft Excel 2007's built in help feature. You can access this feature in Excel by pressing the **F1** key on your computer keyboard. From there you can click on a help topic or search for one using Excel's help search box located near the top of the Excel Help window.



For Further Reading and Learning

Now that you have completed Our Microsoft Excel class, you can continue rounding out your knowledge of the Office productivity software by taking our classes on Microsoft PowerPoint or Microsoft Publisher.

To find a book on Microsoft Excel, search the library's catalog using "Microsoft Excel" as a subject term. The library has many more book and video resources that will teach you even more advanced Excel techniques.

You can learn more about our upcoming classes on the library's event's calendar at <http://www.lfpl.org/events.htm> or in our monthly Computer Learning Center brochure.

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