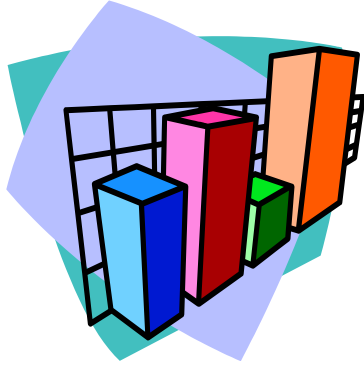


Welcome to *Teach Yourself: Intermediate Microsoft Excel*

This *Teach Yourself* tutorial explains some of the basic operations and terminology of Microsoft Excel 2003, a spreadsheet program used to organize data. It builds on the lessons in *Teach Yourself: Introduction to Microsoft Excel*. This is the same tutorial we use in our Intermediate Microsoft Excel class, but it has been adjusted so you can take the course on your own. If you would like to attend Intermediate Microsoft Excel or any other class offered by LFPL, just go to the LFPL website www.lfp.org and click on 'Events' on the left side of the screen to find when and where the next class meets.



Intermediate Microsoft Excel

Class learning objectives

1. **Completing a Series**
2. **[Review of Excel Basics](#)**
 - **Creating a basic spreadsheet**
 - **Basic formatting**
 - **Sums**
 - **Averages**
3. **[More Formatting](#)**
 - **Freezing Panes**
 - **Order of Operations**
4. **[Making a Budget](#)**
 - **Copying Formulas**
 - **Applying the SUM function**
 - **Comments**
5. **Creating Charts and Graphs**
 - **Turn the spreadsheet into a chart or graph**
 - **Options for your charts**
6. **Getting Help**



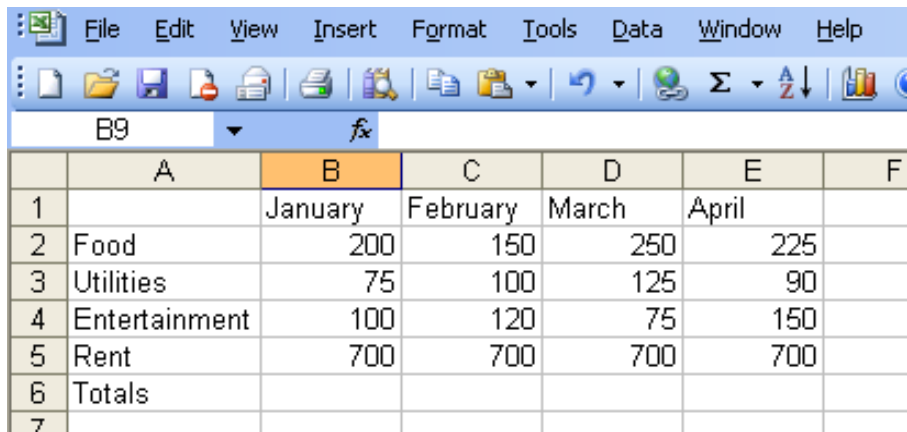
Completing a Series

If you are entering information into Excel that is part of a series (such as the months of the year), Excel will extend the series for you.

- Type January in cell B1
- Place your pointer over the bottom right corner of that cell. When you do this your pointer will look like a plus sign.
- Click and drag across enough cells to finish your series. This is a process called AutoFill.
- This will work with text series (Monday, Tuesday, etc) or number series (3,6,9,12, etc). If Excel cannot determine what the series is then it will just copy whatever is in the first cell and paste it in all the cells in your series.

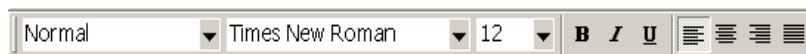
Review of Excel Basics

Let's create the following spreadsheet just to practice our basic Excel skills such as entering data, navigating around, editing data, etc.



	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					
7						


Take a little bit of time to practice basic formatting (bold, italics, underlining, and centering). You can format data in a cell, or a range of cells, to customize its appearance. Simply select the cells you want to format and then locate your formatting toolbar, which looks similar to this:



Then click on the button that corresponds to the desired effect. For example, select your cells and then click on the “B” button to make the data in those cells bold.

Let's also review some basic formulas.

The formula for adding a list of numbers in one column or in one row is =SUM(Beginning cell:Ending cell). So if you wanted to add all the scores in column B, you would go to cell B6 and type in =SUM(B2:B6).

Adding columns of numbers is so common in Excel that Excel provides a shortcut button to accomplish this task. The **AutoSum** button is near the middle of the standard toolbar and looks like a capital E that someone stepped on (). **AutoSum** is designed to have Excel look for numbers above the active cell and add those numbers together. If there are no numbers above, Excel looks for numbers to the left of the active cell. So click on cell C6 and hit the **AutoSum** button and then hit **Enter**. Excel will add all the cells above it together.

One last bit of reviewing: let's change the name of our sheet to **Monthly Budgets**. To rename the sheet you have a couple of options: Either choose **Format** off the main menu, click on **sheet** and then **rename**.

- Or, right click on the **sheet** tab, then choose **rename** from the shortcut menu
- Or, Double click on the **sheet** tab

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.

More Formatting

Freezing Panes - You may have certain cells that you want to make visible at all times. You can freeze these panes so that they stay in the same spot. Click on the row or column just past the panes you want to freeze. Then click on **Window** on the Main Menu Bar and select freeze panes. To unfreeze the panes, simply click on **Window** again and select **unfreeze panes**.

Order of Operations - When entering a complicated mathematical formula, Excel will perform mathematical operations in a particular order. This is known as the "order of operations." The mnemonic device "**Please Excuse My Dear Aunt Sally**" indicates the correct order: Parentheses, Exponents, Multiplication, Division, Addition, Subtraction. For example, the computation $=(2000+400)*2^3-5$ will yield the result 19195. Excel will first add $2000+400$ because that is within the parentheses, then it will cube 2, then multiply $2400*2^3$, and finally subtract 5 from that product to get the result.

Using Excel to Make Budgets

A very popular application of Excel that utilizes the SUM function is making budgets. Let's look at our spreadsheet again and make a few additions.


	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					
7						
8	Income	1000	1100	900	1000	
9	Black/Red					

- 1) Make the above additions to your spreadsheet. Be sure that cells b6:e6 are set to sum the values of the cells above them.
- 2) In cell B9, type **=b8-b6**
- 3) With cell b9 still active, place your cursor on the square in the bottom right corner of the cell. You will see it change into a skinny black cross. Hold down your left mouse button and drag your cursor over c9:e9. **Notice that Excel has copied the formula across the row and applied it to its corresponding column!**
Whenever you have a formula in a cell, Excel will copy that rather than the data, and also apply the formula accordingly.
- 4) Select the range b9:e9.
- 5) Click on **Format** in the Main Menu, and then click on **Cells**.
- 6) Click on the **Number** tab. In the center of the dialog box that opens you will see **Negative numbers**. Click the second option to make negative numbers red, and then click **OK**.
- 7) Any negative numbers in row 9 should now be in red. So during some months we have spent more than we earned. Because the SUM and AutoSum functions add values of cells, our **Black/Red** value will change as the expense values change.

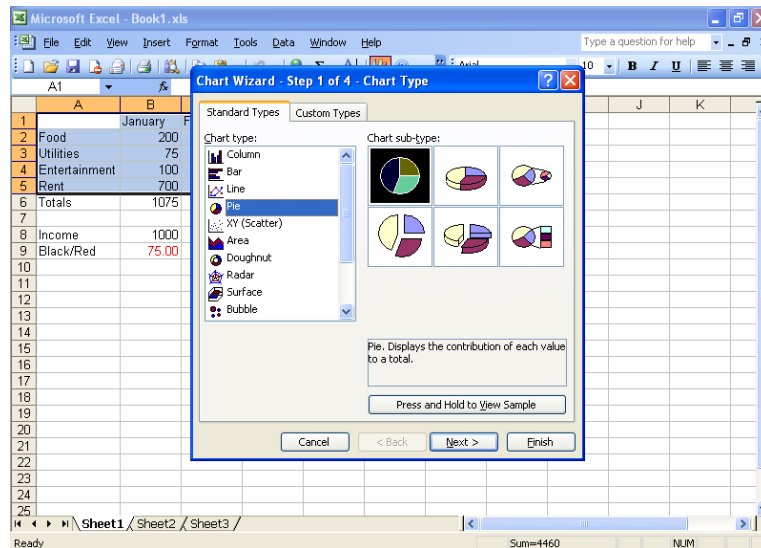
Comments – You can easily add comments to cells that will only appear when you mouse over the cell. Simply right click on the cell and select Insert Comment. A blank yellow note will appear. Type in your comment, and then close the comment by clicking on the desktop on a spot away from the yellow note. You will notice that the cell with the comment now has a small red triangle in the corner. To read the comment, simply rest your mouse on the cell.

Creating Charts and Graphs

Excel makes it easy to turn your data into colorful charts and graphs.

- Select the range A1:E5.
- Click on the chart wizard button () on your toolbar.

- Select what type of chart you would like to create. Remember that not all chart types are appropriate in all situations. A column graph would work particularly well here, allowing you to examine many trends at once.



- At the next step, click on the **Series** tab. This will let you enter names for the items in your legend. Then click next.
- There are many options in the next step that can be accessed by clicking on the different tabs. Here are some highlights of what is available under each tab.
 - **Titles** - this will allow you to name your chart as well as name the x and y axis of the chart. (The x axis is horizontal and the y axis is vertical.)
 - **Axes** – from here you can choose not to display either axis.
 - **Gridlines** – allows you to select how many gridlines you want on your chart. Remember that having too many can sometimes be distracting.
 - **Legend** – This will allow you to turn the legend on or off. If you decide to leave it on, it will also let you select its placement.
 - **Data Labels** – you can choose to have labels applied to your chart. Be aware that if there are several labels they may overlap and prove hard to read.
 - **Data Table** – This gives you the option to display the data table right next to the chart. This is helpful if you choose the chart to be placed on its own sheet at the next step.

After you have made your decisions, click on **Next**.

- Select where you want the chart to be placed and click **Finish**
- Your chart has been created. You can move your chart around the page by clicking and dragging it. You can also change the y-axis values to range from 0-100 by clicking on the y-axis of your new chart. When the **Format Y-Axis** dialog box appears, click on the **Scale** tab, then in the box next to maximum, enter 100.

Even after you have your chart in place it may be necessary to fine-tune it, or you may decide you'd like to make some changes. You can either click on the chart button again to return to the wizard, or you can usually right-click on the area of the chart you would like to change.

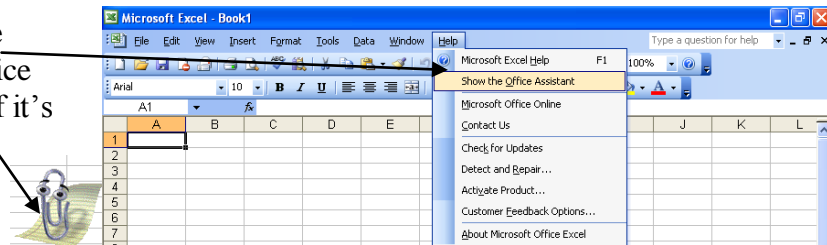
Titles – You may want to add a title to your spreadsheet. The easiest way to do this is by adding a header. Here are the steps to follow:

- Go to **View** on your main menu and select **Header and Footer**
- Click on **Custom Header**
- Decide where you want your title to appear (centered, left corner, right corner) and type in your title. You can format your title by clicking on the “**A**”. Then click **OK**
- From this page, select **Print Preview** to see what your header is going to look like
- If you are satisfied with its appearance, then click close.
- If you are not satisfied with its appearance, click close and start over by going back up to **View** and selecting **Header and Footer**

The Help Menu

If you have a question about Excel that you need answered right away, you might want to consult the Help menu. The help menu has two interfaces: the Office Assistant and the standard Help menu. Let’s examine the Office Assistant first. You’ve probably seen it before—it’s a little dog, cat, paperclip, etc that you can click on to get help. If you don’t see it, click **Help** on the main menu bar. Then click **Show the Office Assistant**, and the Office Assistant will appear. Once it appears, or if it was already visible, click on it to begin interacting with it.

Click **Show the Office Assistant**, and the Office Assistant will appear if it’s not already visible.

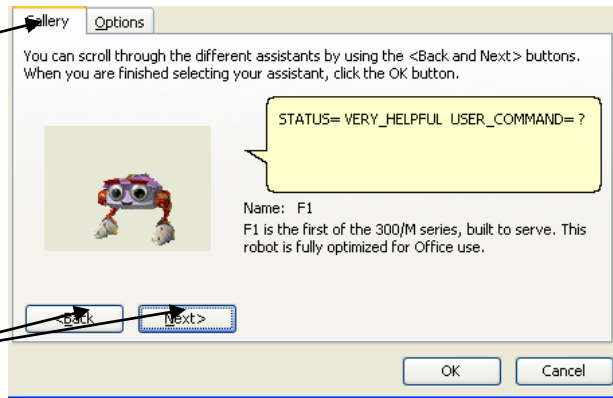


Clicking on the Office Assistant opens up a search bar into which you can type your help topic. Type “create a chart” (without the quotes) into the search bar, and click **Search**. You will see a task pane appear on the right side of the screen listing (usually) 30 results. You should see your help topic at or near the top of the list. Click on it to open another task pane with the solution to your problem. Close the two task panes when done.

Customizing the Office Assistant

Click on the Office Assistant again and click **Options**. Here you can change the look and behavior of the Office Assistant. You will see two tabs: **Gallery** and **Options**. Click on the **Gallery** tab. Here you can change the look of the Assistant. Click the **Back** and **Next** buttons to move back and forth between the selections. If one of these two buttons becomes grayed out, you must go in the opposite direction by pressing the other button.

Click **Gallery** to choose another character.

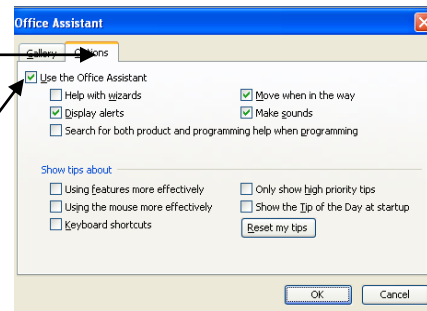


Click **Back** and **Next** to cycle

Once you've examined the different characters, click the **Options** tab. **Options** presents several checkboxes with which you can customize the Assistant. Scan these over, and then uncheck the one at the top left that says **Use the Office Assistant**, and then click **OK**. The Office Assistant will disappear.

Click the **Options** tab to customize the Assistant's behavior.

Uncheck **Use the Office Assistant** to turn it off.



Now let's take a look at the standard Help menu. Click **Help** on the Main Menu Bar. Next, click **Microsoft Office Excel Help**. This will open a task pane on the right side of the screen. Type "create a chart" into the search bar provided, and then click the white arrow. You will see another task pane with the same 30 results you saw earlier. In other words, you get the same level of help whether or not you use the Office Assistant.

Click **Help** and then **Microsoft Excel Help**.

