

# CWS

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## EXCEL BASICS: MICROSOFT OFFICE 2010

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View our full schedule, handouts, and additional tutorials on our website:  
[www.lib.unc.edu/cws](http://www.lib.unc.edu/cws)

# GETTING STARTED

## *Prerequisites:*

It is assumed that the user is both familiar and comfortable with the following prior to working with Microsoft Excel:

- Using the mouse and the left-click feature
- Basic navigation through Microsoft Windows
- Basic typing and keyboard commands
- Familiarity with Microsoft Word

Please let the instructor know if you do not meet these prerequisites.

## *What You Will Learn:*

Starting and opening the software application	Microsoft Excel components and features	Keyboard functions
Simple tasks in Microsoft Excel	Formatting cells	Typing in cells
Sorting Data	AutoSum and Excel equations	Creating charts and graphs
Multiple sheets	Printing spreadsheets	Ending and closing the software application
Microsoft Excel Help	Saving spreadsheets	Exiting the program

## USING MICROSOFT EXCEL

A spreadsheet is a computer program used to organize real world data, such as a rolodex or check register, that allows the user to easily maintain and access the information stored within it. Some advantages of a spreadsheet are that the user can "program" it to perform certain functions automatically (such as addition and subtraction) and its ability to hold almost limitless amounts of data (entire filing cabinets can be represented in a single spreadsheet). Once created, the spreadsheet can be quickly accessed, modified, and updated.

### *Microsoft Excel Components:*

Before you get started with Microsoft Excel (commonly referred to as MS Excel or simply Excel, you will need to locate and open it on the computer. It may be on your desktop.

On the computer desktop:

1. Double-click on the MS Excel icon



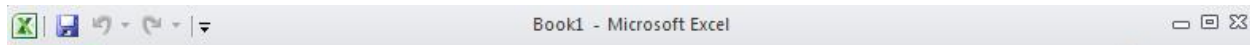
Go to the Start menu if the MS Excel icon is not on the desktop:

1. **Click ► Start ► Programs ► Microsoft Excel\***

\*Occasionally, Microsoft Excel will be in a folder called "Microsoft Office" or similar – this will make one more step between "Programs" and "Microsoft Excel" in the diagram above.

MS Excel will open a blank page called "Book 1."

## The Title Bar

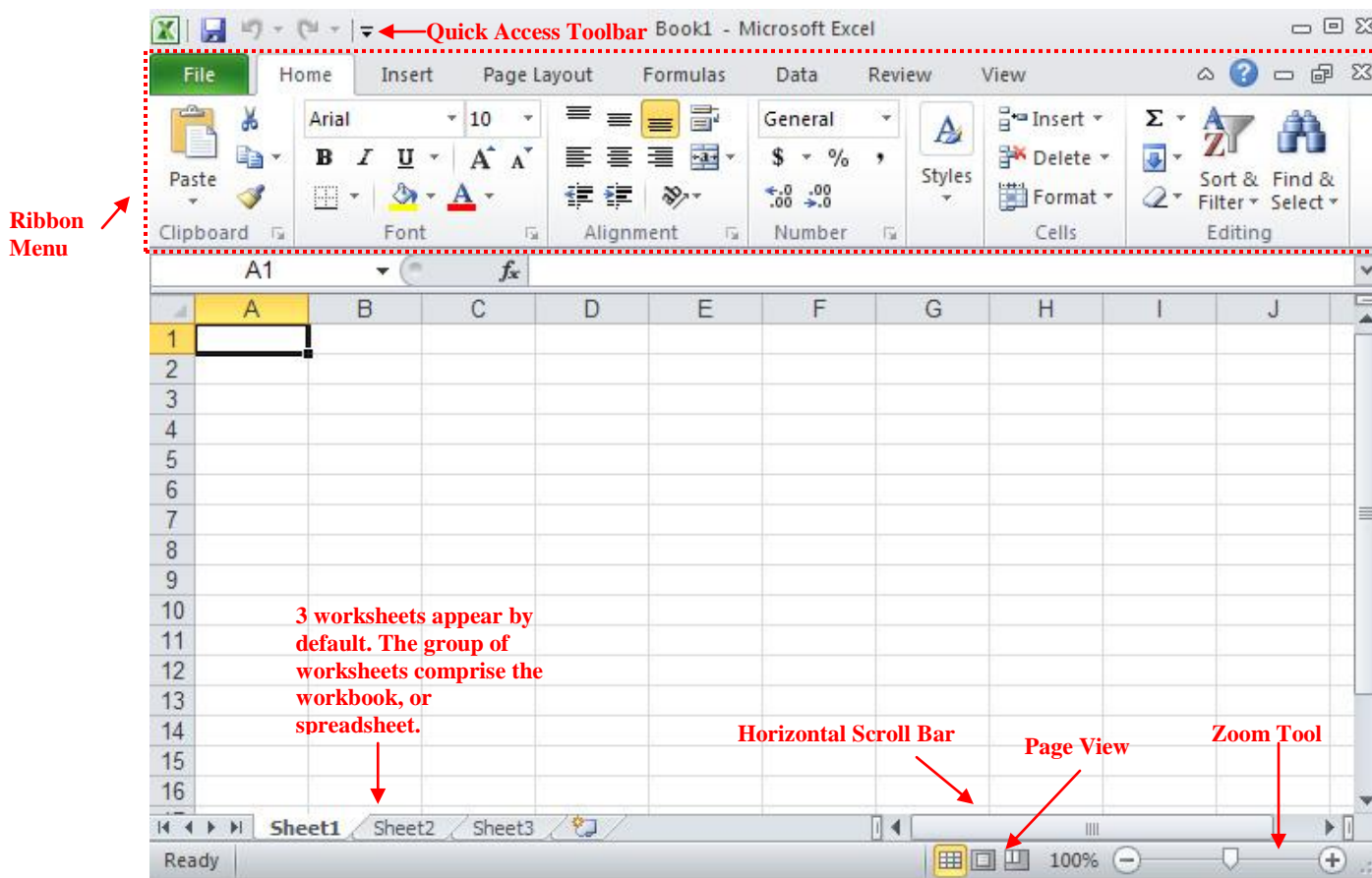


This is a close-up view of the Title Bar, where file information is located. Notice the default title "Book 1." You will get a chance to rename your spreadsheet the first time you choose to save it.

## The Ribbon Menu System

The **tabbed Ribbon menu system** is how you navigate through Excel and access the various Excel commands. If you have used previous versions of Excel, the Ribbon system replaces the traditional menus. Menus have been replaced by tabs which display the options that were previously listed in the drop-down menus.

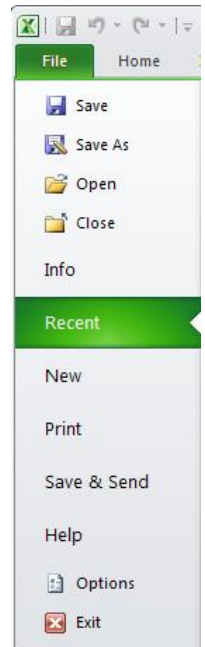
At the bottom, left area of the spreadsheet, you will find worksheet tabs. By default, **three worksheet tabs** appear each time you create a new workbook. On the bottom, right area of the spreadsheet you will find page view commands, the zoom tool, and the horizontal scrolling bar.



## The File Tab

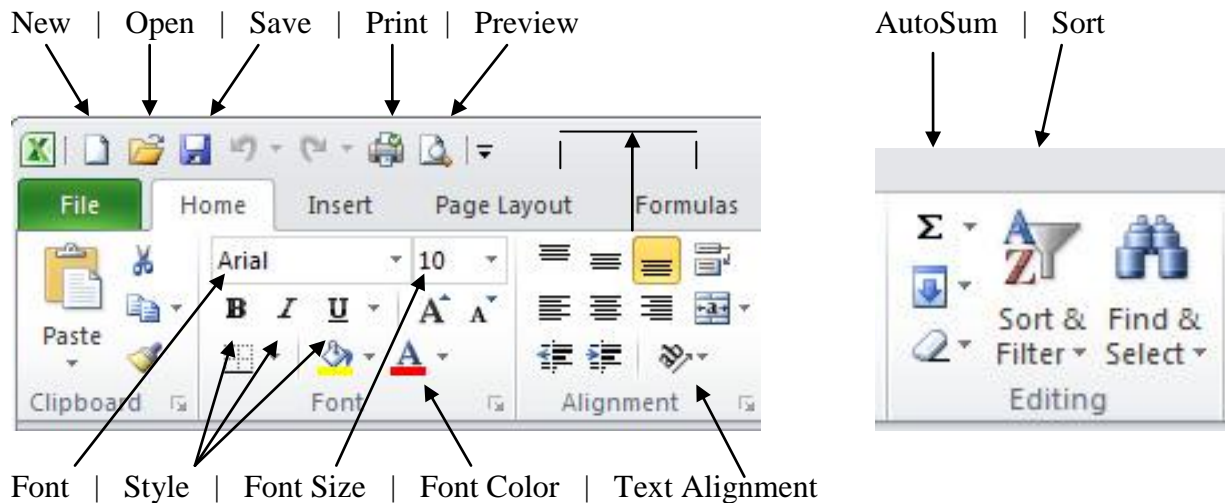
In Microsoft Office 2007 there was something called the Microsoft Office Button in the top left-hand corner. In Microsoft Office 2010, this has been replaced with a tab in the Ribbon labeled File, when you left-click on this tab a drop-down menu appears. From this menu you can perform the same functions as were found under the Microsoft Office Button menu, such as; create a new spreadsheet, open existing files, save files in a variety of ways, and print.

By default the **Quick Access Toolbar** is pinned at the left-side of the Title Bar, and includes commands such as Undo and Redo.



## The Home Tab

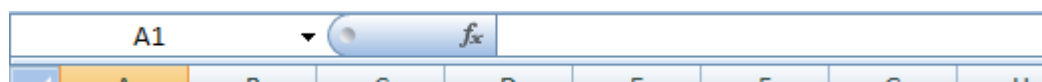
The most commonly used commands in MS Excel are also the most accessible. Some of these commands are:



The Home Tab offers formatting options such as; font, size, color, alignment, organization and style of the text in the spreadsheet and the individual cells. For example, (starting from the left side) the "Calibri" indicates the FONT, the "11" indicates the SIZE; and so on.

This tab works the exact same way as the MS Word Formatting Toolbar. The main difference is that the format changes will only affect the selected cell or cells, all unselected cells remain in the default setting ("Calibri" font, size "11").

## Equation Editor



The equation editor is generally found below the ribbon menu. The left side denotes which cell is selected ("A1") and the right side allows you to input equations or text into the selected cell.

There are two ways to input information into a cell. 1) Select an individual cell and type the equation or text into the equation editor or , 2) type the equation or text directly into the selected cell.

Equations (=sum(D5+E5)) will automatically be hidden inside the cell and can only be viewed through the equation editor while the result of the equation will be in the cell.

If any written text is longer than the cell width, then the spreadsheet will cover up any portion longer than the cell width.

## The Keyboard











In order to use MS Excel effectively, you must input commands using both the mouse and the keyboard. The above image of a keyboard may closely resemble (if it is not identical to) the keyboard in front of you; learning just a few certain keys will help to improve your efficiency in typing as well as present you with more options within the program. The following is a list of commonly used keys that you may already be familiar with:

1. **Backspace:** This key deletes backwards as you type.
2. **Delete:** This key deletes forwards as you type.
3. **Shift:** This key, when pressed **WITH** another key, will perform a secondary function.
4. **Spacebar:** This key enters a space between words as you type.
5. **Tab:** This key will force the cursor to indent, or jump forward 10 spaces.
6. **Caps Lock:** This key will present the capitalized version of each letter key.
7. **Control (Ctrl):** This key, when pressed **WITH** another key, performs as shortcut.
8. **Enter:** This key executes a command (pressed in MS Word, it begins a new line).
9. **Number keypad:** This is a redundant keypad existing only for user preference.
10. **Arrow keys:** Like the mouse, these keys are used to navigate through the document.

## Pointer Shapes

As with other Microsoft programs, the pointer often changes its shape as you work in Excel. Each pointer shape indicates a different mode of operation. This table shows the various pointer shapes you may see while working in Excel.

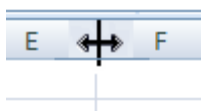
Shape	Context	Action
	The default pointer shape; appears in most Excel workspace contexts	Moves cell pointer or selects a range of cells
	Appears when the pointer is on the border of a window	Adjusts window size
	Appears when the pointer is between a row or column divider	Adjusts height and width of rows and columns
	Appears when you are editing cell contents	Provides a text insertion point
	Appears when the pointer is on a column or row heading	Selects columns or rows
	Appears when the pointer is placed over a cell border, graphic, or other object	Moves cells, graphics, or objects
	Appears when the pointer is on the "fill corner" of a cell or cell range	AutoFills other cells with similar information
	Appears when mouse is placed over the <i>Ribbon</i>	The standard Microsoft Windows pointer; selects <i>Ribbon</i> and menu options

## SIMPLE TASKS IN MICROSOFT EXCEL

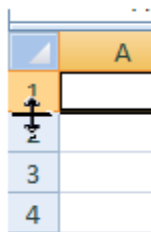
### *Formatting Cells:*

**Cells** are the small rectangular boxes that make up the spreadsheet. All the information entered into an Excel spreadsheet is entered into the cells.

The cell **Width** and **Height** will usually need to be adjusted to view all the information entered into a cell.



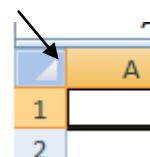
To adjust the cell **width**, move the mouse pointer in between two cell columns in the column header. Hold down the left mouse button and drag the mouse left to shorten the width or right to expand the width. Notice that all cells within the column are automatically adjusted.



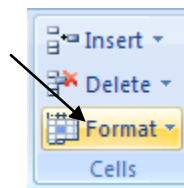
Adjust the cell **height** using the same method. Move the mouse cursor between two rows, hold down the left mouse button and move the mouse up to decrease the height and move it down to increase the height.

Before you begin entering data into a spreadsheet, you may already know what width and height you want your cells to have. In this case, you can adjust the widths and heights of all cells by doing the following:

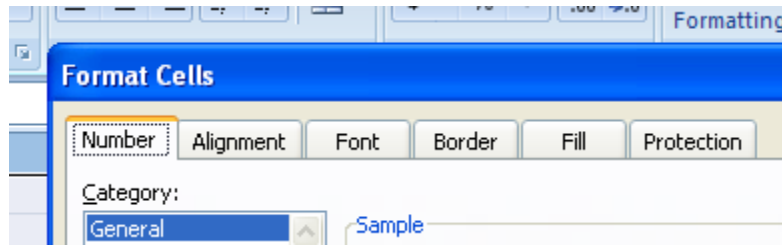
Select the "square" between Column A and Row 1. This will select ALL the cells in the spreadsheet. From the "**Home**" tab of the Ribbon Menu, within the "**Cells**" box, click on "**Format**," and select **Row Height**. You will now be asked to enter a numerical value for "height." Note that the default value is 15. Enter your own height value (10, 15, 20, 25, etc.).



Repeat the same steps for Column width. From the "**Home**" tab of the Ribbon Menu, within the "**Cells**" box, click on "**Format**," and select **Column Width**. Note that the default value for the width is 8.43. Enter your own width value (5, 10, 15, 20, etc.).



For any given cell or selected cells, you can also format the way your data is represented within the cell(s). Select a single cell or multiple cells. Again, from the "**Home**" tab of the Ribbon Menu, within the "**Cells**" box, click on "**Format**." Select "**Format Cells**." The format window will now appear, giving you a wide variety of options on how to format your cell.



**Number** – This allows you to choose how to represent the numbers that are entered into a cell.

**Alignment** – This determines how the data will be aligned within the cell (left-side, centered, or right-side).

**Font** – Select the type of font to be used within the cells.

**Border** – This option lets you choose what type of border, if any, you like around the cells or part of the cells.

**Patterns** – This allows you to change the background color of the cell.

**Protection** – This option allows you to "lock" cell information so that other users will not be able to make changes.

### *Typing in Cells:*

The Formatting toolbar in MS Excel 2010 is exactly the same as the one used for MS Word 2010. The biggest difference between the two is that for MS Excel, the format is set for each individual cell. Therefore, if you change the font, size and applied the **bold** option in cell C5, then this format will only be applied to cell C5. All remaining cells will remain in default mode until they have been changed.

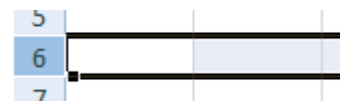
Sometimes you may only wish to adjust the format of one particular cell. In this case, simply select the cell by clicking the mouse on it and make any necessary adjustments to the font, size, style, and alignment.

Other times, you may wish to adjust the text format a group of cells, entire rows, or entire columns.

**Selecting a group of cells** – Take a look at your spreadsheet and visualize which group of cells you wish to select. Remember, in MS Excel, all selected cells must be connected creating some sort of highlighted "rectangle." Select the cell that would be the upper-left hand corner of your "rectangle." Hold down the **Shift** key on your keyboard and use the arrows (←, →, ↑, ↓) on the keyboard to expand the selection of cells.

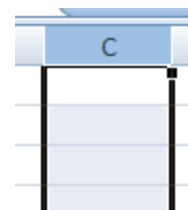
Once the group of cells has been selected, you can make any necessary adjustments to the font, size, style, and alignment and it will be applied to all selected cells.

**Selecting an entire row** – Sometimes you may wish to format the text of an entire row so that any data entered into the row, regardless of which column, will always look the same. Select the **Row Number** with your mouse and note how the entire row becomes highlighted.



All text formatting changes are now applied to the entire row.

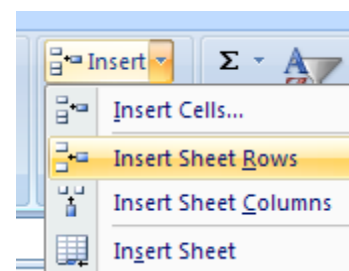
**Selecting an entire column** – Sometimes you may wish to format the text of an entire column so that any data entered into the column, regardless of which row, will always look the same. Select the Column Letter with your mouse and note how the entire column becomes highlighted. All text formatting changes are now applied to the entire column.



### *Inserting Rows and Columns:*

At some point, you may realize that you need to insert a row or column into your spreadsheet.

**To insert a row**, click on the row **below** where you want your new row to be (remember to click on the row number to highlight the entire row). From the “**Home**” tab, within the “**Cells**” box, click and hold “**Insert**.” Select “**Insert Sheet Rows**.” (Or, right click your mouse and select **insert**.) A new row will automatically be inserted and the row numbers automatically adjusted.



**To insert a column**, click on the column **to the right** of where you want your new column to be (remember to click on the column letter to highlight the entire column). From the “**Home**” tab, within the “**Cells**” box, click and hold “**Insert**.” Select “**Insert Sheet Columns**.” (Alternatively, right click your mouse and select the insert option.) A new column will automatically be inserted and the column letters automatically adjusted.

### *Sorting Data:*

Once you have organized your spreadsheet and entered in some data, you may find it useful to sort that data according to certain criteria. Take a look at the checking account information represented below:

Check No.	Date	Description	Amount Debit	Amount Credit
201	4/25/2012	Duke Power	\$60.70	
	4/26/2012	ATM	\$80.00	
202	4/29/2012	Harris Teeter	\$43.27	
	5/1/2012	Paycheck		\$1,200.00
203	5/1/2012	Rent	\$600.00	
	5/5/2012	Birthday Cake	\$20.42	
204	5/7/2012	Bandido's	\$34.61	

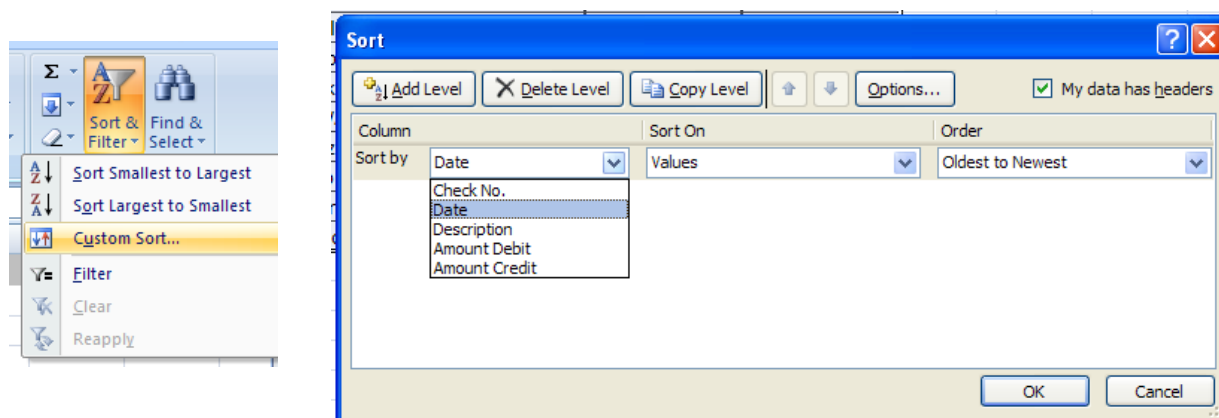
MS Excel has the power to sort this information by either Check No. or Date (or any other Column description).

First, **select** all the cells that represent the data to be sorted, including the header descriptions (Check No., Date, Description, etc.). Then, select the first cell in Row 1 (Check No.) Hold down the **Shift** key and highlight all the cells to the right using the **right arrow key** (→). The select all the cells down to Row 10 using the **down arrow key** (↓) (keep the **Shift** key held down). The selected cells should look like this:

Note that Row 1 is also highlighted.

Using your mouse, select **Sort & Filter** from the Editing group. Select **Custom Sort...**

The following window should appear



Now, select the column you wish to sort by (in this case, we have chosen "**Date**." Do you want the dates to be sorted **Oldest to Newest**? Once you select OK, the checking account information will be sorted by the date of the transaction.

### *AutoSum and Equations:*

One of the most powerful features of MS Excel is its ability to perform basic math functions on your existing data. Excel can **add, subtract, multiply, divide**, find the **average**, and perform general **counting** functions on the numerical data that you entered. To enable this feature, highlight all of the cells in a column, plus one additional empty cell in which to display the result. This will be the cell where the "answer" to your math function will appear. For our example, highlight cells 1 through 11 in column D.

Select the **AutoSum** icon from the Ribbon Menu:



Note the difference between selecting  $\Sigma$  (which immediately initiates the Sum command) or selecting the  $\blacktriangledown$  symbol (which gives you a choice of which command you wish to initiate).

If you double click the cell in which the answer appears, you will see an equation that looks something like this (you will also see this equation in the Equation Editor):

Amount Debit
\$60.70
\$80.00
\$43.27
\$600.00
\$20.42
\$34.61
=SUM(D2:D8)

= denotes that you have started an equation for the cell.

**SUM** tells you what the equation will do. In this case, the equation will add together the selected cells.

( ) parentheses contain the cells to which the math function will be performed.

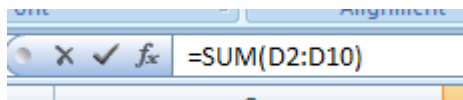
**D2** this is the first cell to be included in the addition formula.

**D10** this is the last cell to be included in the addition formula.

:

indicates that all cells in between the first and last should be included.

Usually, the spreadsheet will "select" the cells that it thinks you wish to include. But you can manually change the cell range by typing the desired cell range into the **Equation Editor**.



Press **Enter** to execute the formula.

Other math functions you can perform from the AutoSum icon are:

**Average** – this will calculate the average of the selected cells.

**Count Numbers** – this function simply counts the number of cells selected.

**Max** – this function will return the highest value of the selected cells.

**Min** – this function will return the lowest value of the selected cells.

**\*Remember\*** Excel equations are similar to programming languages, so have some **patience** and if at first you don't succeed, don't be afraid to try again and again. It is not uncommon for Excel professionals to create a wrong formula on the first try.

Once you get an equation to work, you will technically be a programmer!

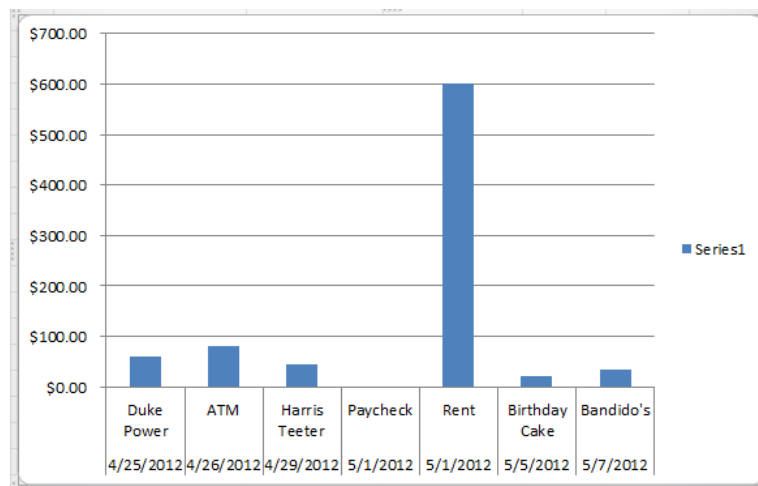
### *Inserting Charts and Graphs:*

MS Excel also provides a way for users to represent their spreadsheet data through charts and graphs.

To create a chart or graph, select the **Insert** tab from the Ribbon Menu bar. In the middle of this new menu, you will see a “**Charts**” box.

1. Select the range of data to be represented in the chart or graph. Click on your spreadsheet and select the data to be represented the same way you selected data in the **sorting exercise**. For our example, let’s pretend that we want to see a visual comparison of how much money was spent at each location/entity. Select rows 1 through 10 in rows B, C, and D.

2. Select the type of chart or graph you wish to create (for our example, choose a bar graph).



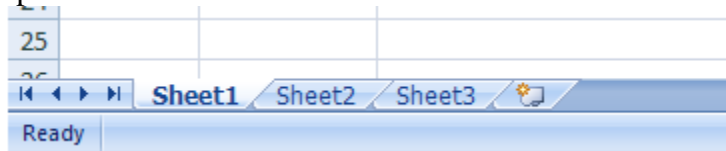
3. Once you have created your graph, you can now "customize" it by giving it a title and labeling different parts. You can also make certain design decisions regarding the appearance of your graph or chart by choosing the different elements under the **Design** tab that appears on the Ribbon Menu bar.

4. Finally, you will need to decide if your chart should be **pasted on to the existing spreadsheet** or if it should be **pasted on to a brand new sheet**. On the very right side of the Ribbon Menu bar, select **Move Chart**.

Once the chart or graph has been created and you realize a mistake has been made or it did not turn out the way you wanted it to, simply click on the chart or graph and hit the Backspace key on your keyboard to delete it from your spreadsheet. Don't be afraid to go back and try again!

### **Multiple Sheets:**

Sometimes it may be necessary to have multiple spreadsheets for related data. For example, personal finances are usually tracked on a monthly calendar and it's generally a good idea to keep records of the past transactions. Therefore, MS Excel can have multiple spreadsheets attached to the same Excel file. Tabs for the different sheets are located in the lower-left corner of the spreadsheet.



The spreadsheet that is currently being worked on is on the **top tab**. To access another spreadsheet, select the appropriate **tab**, such as **Sheet 2**. The default names for the sheets are usually **Sheet1**, **Sheet2**, and **Sheet3**. To **rename** a sheet or to create a new sheet, simply move the mouse pointer over the sheet name and right-click. Select "**Rename**" to rename the sheet or select "**Insert**" to create a new sheet.

Finally, you can transfer cell information between two or more sheets by creating a simple formula. For example, most people who keep track of their personal finances don't begin every month with a balance of \$0. Instead, the balance at the beginning of the month is transferred over from the previous month. Therefore, if there is a March 2012 finance spreadsheet and an April 2009 finance spreadsheet (like the ones above), you can select a cell in the April 2012 sheet and write in the formula

**= 'March 2012' !D11**

**The equals sign (=)** tells Excel that the value for this cell is to be derived from somewhere in the spreadsheet (such as a formula or another cell location).

**'Sheet name'** tells Excel what sheet to refer to when it retrieves the value. The single quotation marks ( ' ') are important.

**!D11** tells Excel that it is to copy the value that is located in cell D11 (or whatever cells you wish to copy the value from).

If you want to transfer cell information from one cell to another on the same sheet, you can use the exact same formula; just exclude the **'Sheet name.'**

# CLOSING MICROSOFT EXCEL

## *Saving Spreadsheets:*

When you come to a stopping point and want to leave the computer, it is important to save your work (even if you printing a hard copy, saving should be a reflex). To save your work in MS Excel, it is essential to know **WHAT** you are trying to save as well as **WHERE** you are trying to save it.

Click the **File** tab, then select **Save As**.

You can change the filename that Excel has chosen just by typing a new one in the File name box at the bottom of the window that appears.

The My Documents folder on your computer's hard drive is a good place to store your documents. A blank CD (compact disc) or a USB Jump Drive are great portable storage devices and can contain a LOT of data.

MS Excel will automatically save your document with the suffix ".xlsx" – this is simply a tag that lets Excel know that your work is specific to this program and what version it is in. You do not have to type it – just highlight what is there (default is "Book1") and write a new file name. You may also choose to save it in an older format so that it can be opened with older versions of Excel.

It is important to note that every consequent command of **SAVE** will overwrite your original file, creating the most up-to-date version.

If you want to save any changes to your Excel spreadsheet without destroying the original one:

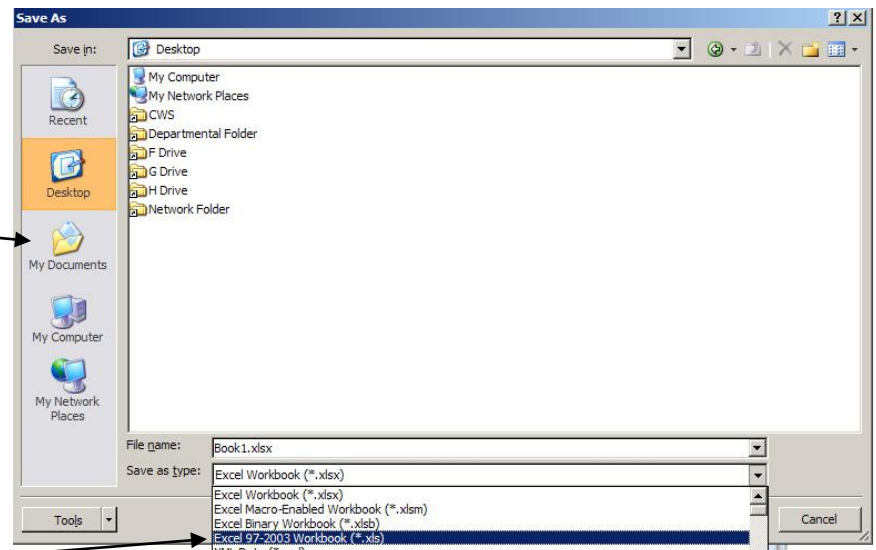
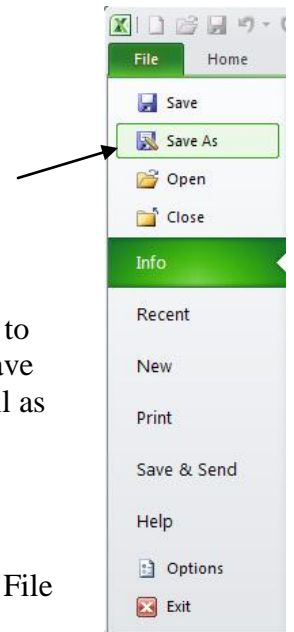
Click the **Office Button**, then hover your mouse over **Save As**, then select **Excel Workbook**. In the window that appears, give your document a new and unique filename and click **Save**.

To bring a saved document back up on the screen in MS Excel:

Click the **Office Button**, then select **Open**.

Find where the file is located (what folder it's in) and click on the filename of the document.

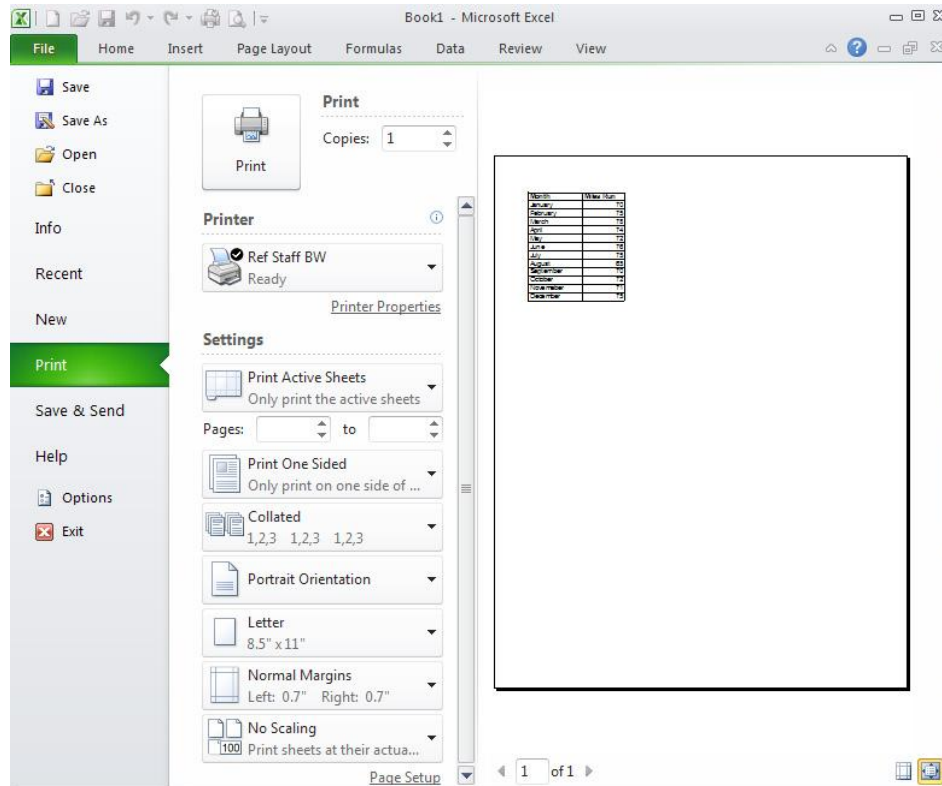
Click ► **Open**.



## *Printing Spreadsheets:*

To print your MS Excel document:

Click ► **File Tab** ► **Print** and a Print Preview and printing options will appear in your Excel Window.

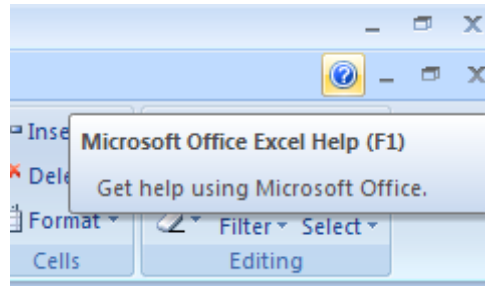


Click ► **Print** for your document to start printing.

As with all commands in MS Excel, you can make changes along the way. From the Print Menu, you can alter how many copies will be made, in what order the pages will be, what printer to print from and much more.

### *Finding More Help:*

You can get help with MS Excel 2010 by clicking on the Question Mark symbol in the upper-right hand corner of the main menu bar.



Tutorials are also available on the Internet. Your instructor can help you with locating some of these resources.

### *Closing the Program:*

Congratulations! You have completed this course in Microsoft Excel Basics. As you become more and more comfortable with the program, it is always helpful to continue to experiment with options that you come across – sometimes, you can uncover a tool that would have stayed hidden – and you can improve proficiency by learning the fine details of the program. When you are finished,

Choose ► **File tab** ► **Exit**

OR

Click on the **X** in the top right corner of the computer screen.