

Excel 2010: Basics

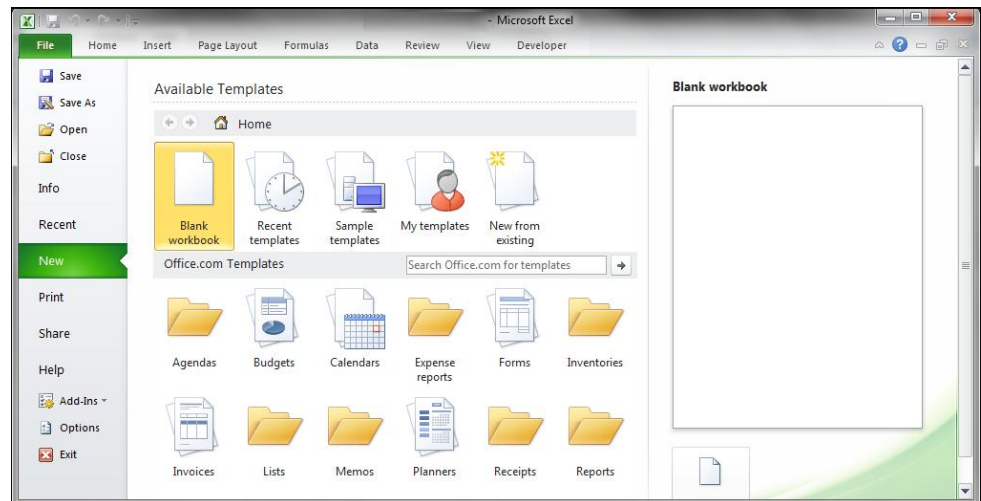
Learning Guide

Exploring Excel 2010

At first glance, Excel 2010 is largely the same as before. This guide will help clarify the new changes put into Excel 2010.

The File Button

The purple **File** button, located in the top left corner of your screen, replaces the **Office** button found in Excel 2007. The File button allows you to carry out the same functions as the old **Office** button, albeit in a more condensed form. In what Microsoft has deemed the “Backstage” view, the **File** button now visualizes more hidden information about a file than before.



Printing

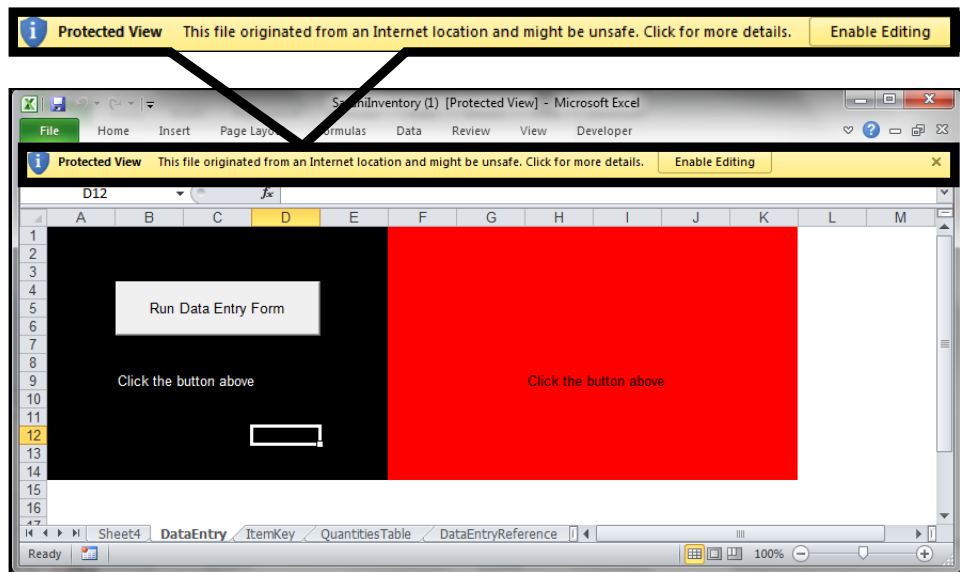
Discussed in detail on page XX, Excel 2010 eliminates the **Print Preview** button and integrates it into the **Print** section of the **File** button.

Copying and Pasting

Discussed in more detail on page 7, Excel 2010 allows you to select if you would like to cut, copy, and paste the formatting of cell contents, cell formulas, links to a particular cell, etc., should you so choose. The default copy and paste copies everything about a cell (formulas, values, formatting, etc.) into another cell, as usual.

Protected View

In an effort to increase Office 2010's security, Microsoft has instituted this feature across all its products. Documents that are opened from an "untrusted" source (i.e., a spreadsheet downloaded from Gmail or opened from Outlook) will appear in so-called **Protected Mode**. In **Protected Mode**, you cannot edit, print, or save files to your computer



Sparklines

Sparklines are the newest feature of Excel 2010, and are essentially mini-charts that fit within a cell and give a miniaturized graphical interpretation of data. Sparklines are fully explained in a separate tutorial, located [here](#).

{image – sparkline}

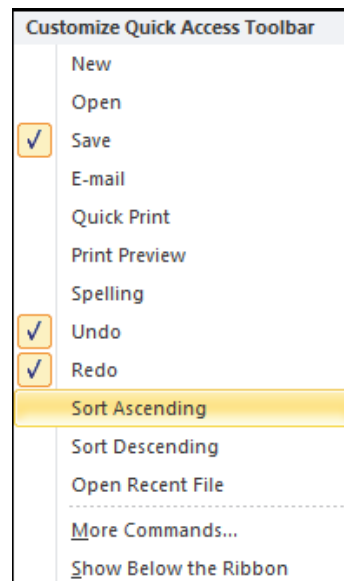
The Quick Access Toolbar

The **Quick Access** toolbar, which used to be located to the right of the Office button, is now directly above the **File** button. By default, it contains the three most frequently used buttons: **Save**, **Undo**, and **Redo**.



You can customize the Quick Access toolbar and add any button that you frequently use. To add any button to the Quick Access toolbar:

- Click on the downward-facing arrow with a bar on top of it.
- From the menu that appears, select what you would like to add to the Quick Access toolbar.



- The button will then appear on the Quick Access toolbar.
- If you want to add buttons that are not on the default ribbon, see the **Customizing Ribbon and Quick Access Toolbar** tutorial, available [here](#).

Excel Terminology

To understand Excel better, you should familiarize yourself with the following terminology: spreadsheet, workbook, and worksheet.

Spreadsheets and Workbooks

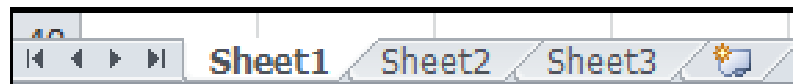
A **spreadsheet** is a grid of data divided into *numbered rows* and *lettered columns*. Each block in this grid is called a **cell**, and it can hold an individual piece of text or data. A cell has a lettered column and numbered row. In Excel, a file/document is considered a spreadsheet, although it is commonly referred to as a **workbook**.

	A	B	C	D
1	Sales Comparison, in dollars			
2				
3	Agent	January	February	March
4	Jack	1243	2241	2254
5	Alexis	3230	4000	3998.98
6	Max	2541.23	2356.66	2555.99
7	Samantha	4421.08	5000	5676.21
8				

Worksheets

The **worksheet** is a *page* of data in your spreadsheet (or workbook) that is organized by the labeled tabs displayed at the bottom of the Excel window. Each worksheet has 2^{14} (~16,000) available columns and 2^{20} (~1 million) available rows, so Excel can easily accommodate large datasets.

- Your spreadsheet can contain as many worksheets as you want. By default, however, all newly opened Excel spreadsheets have three worksheets.
- To view the contents of a worksheet, click on its tab at the bottom-left corner of the Excel window.
- To create a new worksheet, click the small button (📄) to the right of all the worksheets.

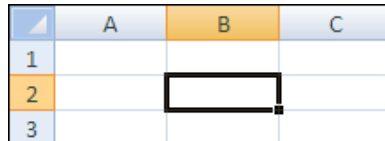


Navigating Around Your Spreadsheet

In order to enter data in Excel and/or create functions and formulas, you should be able to identify the active—or selected—cell(s).

Locating the Active Cell

- A thick dark border surrounds any active cell or range of cells.
- The corresponding column letter and row number will be highlighted in orange (in the example below, the active cell is B2).



	A	B	C
1			
2			
3			

Changing the Active Cell

To change the active cell:

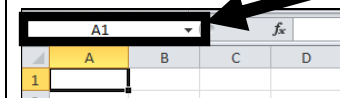
- Using your mouse, **click** on a cell.
- Press **Tab** to move right by one cell in the current row.
- Press **Shift + Tab** to move left by one cell in the current row.
- Press the **Enter** key to move down by one cell in the current column.
- Press **Shift + Enter** to move up by one cell in the current column.

*Tip: You can also use the **arrow keys** to navigate within a worksheet.*

Identifying an Active Cell

Every cell is identified using a combination of a **letter** and a **number**. The selected cell in the above graphic is **B2** (column **B** and row **2**).

*Tip: The active cell's location will always appear in the white box to the left of the **Formula** bar.*



Selecting Multiple Cells

To select multiple cells for use in a calculation, drag your mouse across the center of the desired cells.

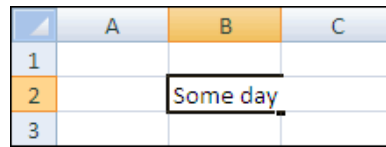
Moving Data

- Select the desired cell(s).
- Click on the black outline of the cells, but **NOT** at the corner with the black square, so that the move cursor (⬇) appears.
- While holding down on the left click button, drag the outline box to the desired recipient cell(s).

Creating a Basic Spreadsheet

Entering Data

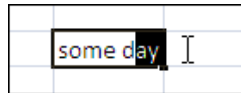
- Click to select the cell where you wish to enter your data.
- Type the new data into the cell.



	A	B	C
1			
2		Some day	
3			

Editing Existing Data

- Click the cell you wish to edit and begin typing. *This will replace your old data with new data.*
- You can change existing data by double-clicking on the cell. *You will be able to edit this info as you would in a Word Document.*
 - To replace only part of the data, highlight the desired section and begin typing.
 - To delete only part of the data, highlight the appropriate section and hit either the **BACKSPACE** (Windows) or **delete** (Mac) key.



		some day	
--	--	----------	--

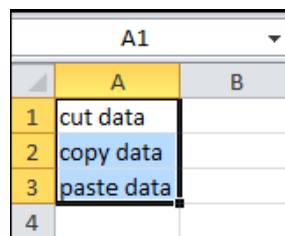
Tip: *If editing existing information in the cell is a hassle, you can also type into the **Formula** bar at the top.*

Copying and Pasting Data

Cutting, copying, and pasting allow you to move your data (or copies of that data) from its current location to another location in your spreadsheet.

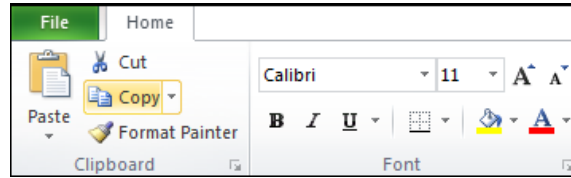
Copying and Pasting Data

- Select the cell or range of cells containing the data you wish to copy. *The selected data will have a black border around it.*



	A	B
1	cut data	
2	copy data	
3	paste data	
4		

- From the **Clipboard** area of the **Home** ribbon, click on the **Copy** button.



- Click in the destination cell for your data.
- From the **Clipboard** area of the **Home** ribbon, click on the button labeled **Paste**.



- Select the border of the original cell and press the **DELETE** key to delete the contents of the original cell.

***Note:** Cutting data uses the same process as copying data, except that instead of clicking the **Copy** button, you click the **Cut** button (). ITS recommends always to **copy** and paste data and delete the original cell's contents manually rather than cut and paste data, for if something goes wrong in the cutting process, the data is irretrievable.*

Tip: Cut, Copy, and Paste Shortcut Keys
To simplify the process of cutting, copying, and pasting data, use one of the following shortcut key combinations:

To...	Type...
Cut	Ctrl-X
Copy	Ctrl-C
Paste	Ctrl-V

Advanced Pasting

One of the new features of Excel 2010 is the amount of pasting options that you have. Please see **Note 1 – Advanced Pasting (HL)** at the end of this tutorial, on page **XX**, to learn how to use all the pasting options available.

Fixing Mistakes

For every document that you create, you will make at least a few mistakes. Excel allows you to quickly and easily fix your mistakes using the Undo and Redo buttons.

Undoing a Mistake

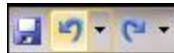
- From the **Quick Access** toolbar, locate the **Undo** button. Click it once to undo the most recent action you completed.



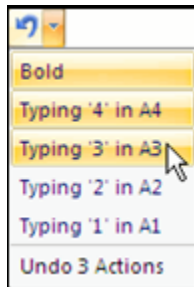
- Click on the **Undo** button again to undo the second most recent action.

Undoing Multiple Mistakes at Once

- From the **Quick Access** toolbar, locate the **Undo** button.



- Click on the down-facing arrow of the **Undo** button.
- From the list that appears, select the actions you wish to undo. *Excel will highlight the actions in orange.*



Redoing an Action

Do you wish you had not just undone an action? The **Redo** button allows you to restore the action

- From the **Quick Access** toolbar, locate the **Redo** button. Click it once to restore your previous content.

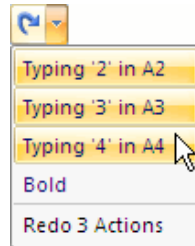


Redoing Multiple Actions at Once

- From the **Quick Access** toolbar, locate the **Redo** button.



- Click on the down-facing arrow of the **Redo** button.
- From the list that appears, select the actions you wish to restore. *Excel will highlight the actions in orange.*



***Note:** You can only reverse an action immediately after it has been undone. Once you make further changes to your document you can no longer redo previous actions.*

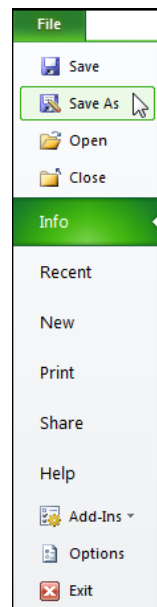
Saving Your Document

Most people save their spreadsheet only after they have completed some substantial work on it. If you delay saving you risk losing your work if you encounter computer problems or a power outage. To avoid (potentially catastrophic) data loss, **SAVE YOUR DOCUMENT EARLY AND OFTEN!** Also:

- Be sure you know where you are saving your document.
- Save whenever you complete a thought, not just when you complete a major section of your document.
- Save a backup copy when working on a critical document.
- Memorize the **Save** shortcut key: CTRL+S (Windows), ⌘+S (Mac).

Saving Your Spreadsheet

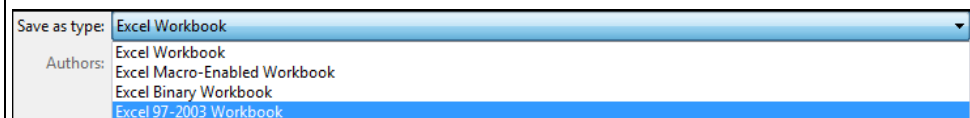
- From the **File** button, select **Save As**.



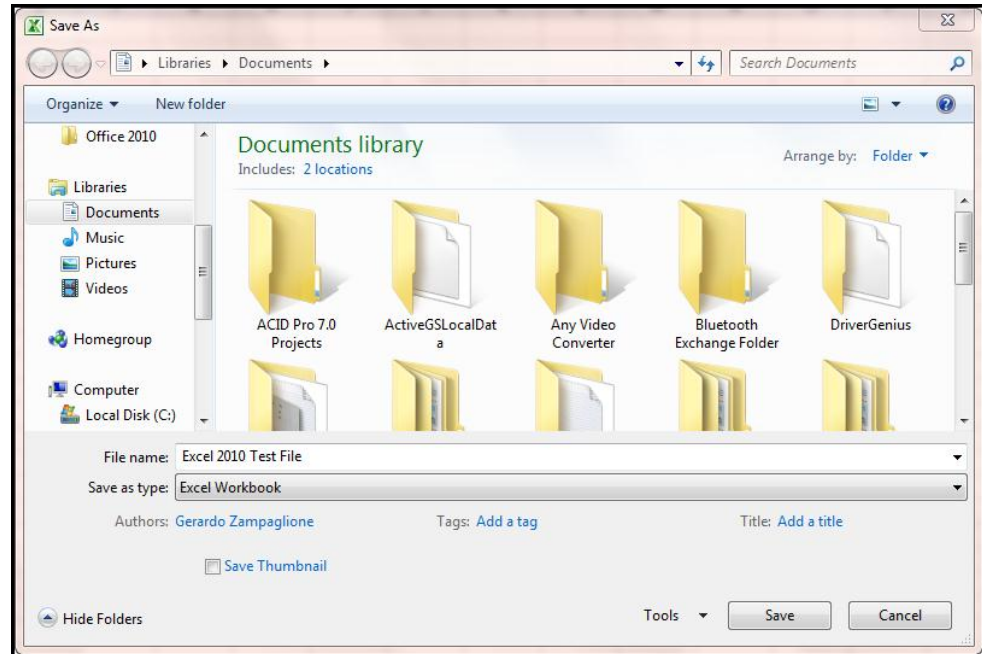
- The **Save As** window will appear.
- Navigate to the location where you wish to save your spreadsheet.
- In the box labeled **File Name**, type a descriptive name.

Tip: By default, Excel saves your spreadsheet in a format that is unreadable by versions older than Excel 2007. To save your spreadsheet and maintain backwards compatibility:

- Click on the menu to the right of the **Save as type:** label
- From the list that appears, select **Excel 97-2003 Workbook**.



- Click on the button labeled **Save**.



The Save As window

The Save Button

In addition to the office button, you can use the Save button to save changes that you have made to your spreadsheet.

- From the **Quick Access Toolbar**, click on the **Save** button.



- Alternatively, as previously mentioned, the shortcut keys CTRL+S (Windows) and ⌘+S (Mac) will automatically save your document just as the **Save** button does.



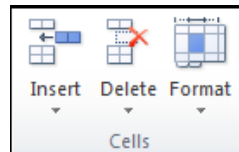
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Formatting Your Spreadsheet

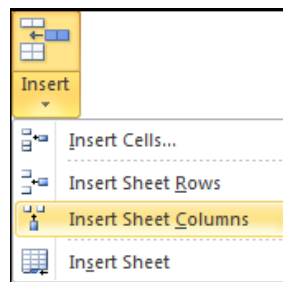
Sometimes you may think that your worksheet looks downright boring, or it doesn't cleanly display your data. In this situation, you can adjust your worksheet to make it look more presentable.

Inserting Columns

- Click to select an active cell **to the right** of the location where you wish to insert your new column.
- Locate the **Cells** area of the **Home** ribbon.



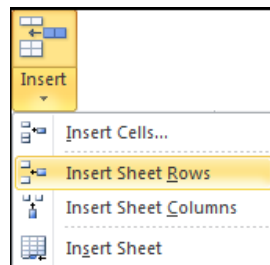
- Click on the down-facing arrow below the button labeled **Insert**.
- From the menu that appears, select **Insert Sheet Columns**.



- Excel will insert a new column **to the left** of your active cell.

Inserting Rows

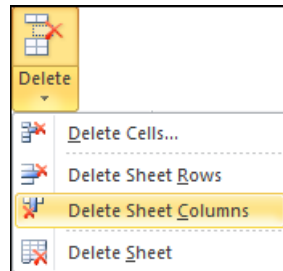
- Click to select an active cell **below** the location where you wish to insert your new row.
- Locate the **Cells** area of the **Home** ribbon (it is on the right).
- Click on the down-facing arrow below the button labeled **Insert**.
- From the menu that appears, select **Insert Sheet Rows**.



- Excel will insert a new row **above** your active cell.

Deleting Columns

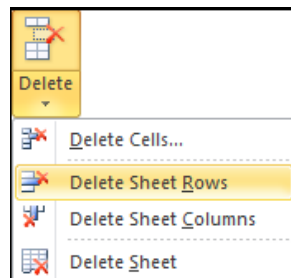
- Select the column(s) you wish to delete.
- Locate the **Cells** area of the **Home** ribbon.
- Click on the down-facing arrow below the button labeled **Delete**
- From the menu that appears, select **Delete Sheet Column**.



- Excel will delete the column(s) you selected and shift the rest of the data to the left.

Deleting Rows

- Select the row(s) you wish to delete.
- Locate the **Cells** area of the **Home** ribbon.
- Click on the down-facing arrow below the button labeled **Delete**

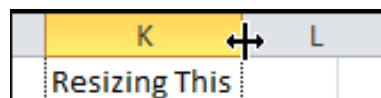


- Excel will delete the row(s) you selected and shift the rest of the data up.

Resizing Columns

In many situations, a cell will be too wide or too narrow to properly display the data it contains. To resize a column to a new width:

- Place your cursor on the **gridline** between the column to be resized and the column to the right of it.

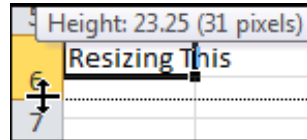


- Drag the column gridline left or right to resize the column and release the mouse when the column is at the desired width.

Resizing rows

To resize a row to a new height:

- Place your cursor on the **gridline** between the row to be resized and the one directly below it.



- Drag the gridline up or down to resize the row and release the mouse when the row is at the desired height.

Tip: Double-clicking on a gridline (whether that of a column or a row) will resize that column or row precisely to the width or height of the text.

Note: The default width for columns is 64 pixels and the default height for rows is 20 pixels.

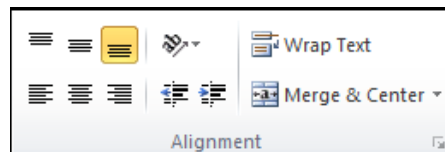
Merging Cells

Especially when making headers for tables, it is often useful to merge two cells together. Cells can be merged both vertically and horizontally. To merge cells:

- Select the cells you wish to merge together.

Note: If both cells have text in them, Excel will delete the text from the right-hand or bottom cell (depending on the direction of the merger) and only keep that in the left-hand or top cell. ITS recommends merging only empty cells to avoid the confusion; if necessary, cut and paste text to other cell(s), merge the original ones, and then cut and paste the text back.

- Locate the **Alignment** area of the **Home** ribbon.



- Click the **Merge & Center** button.

Wrapping Text

When text exceeds column width, it is possible to automatically have the text create a new line at the column width (“wrap” the text). To do so:

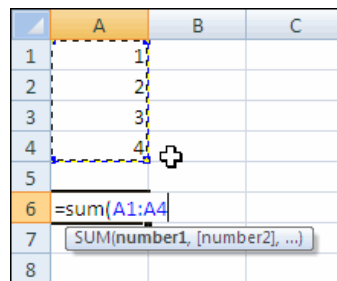
- Select the cell or range of cells you wish to enable wrapping for.
- Locate the **Alignment** area of the **Home** ribbon.
- Click the **Wrap Text** button.

Inserting a Function

Calculating a Sum

The **sum** function, one of the most commonly used functions in Excel, will produce a sum of the values of a range of cells.

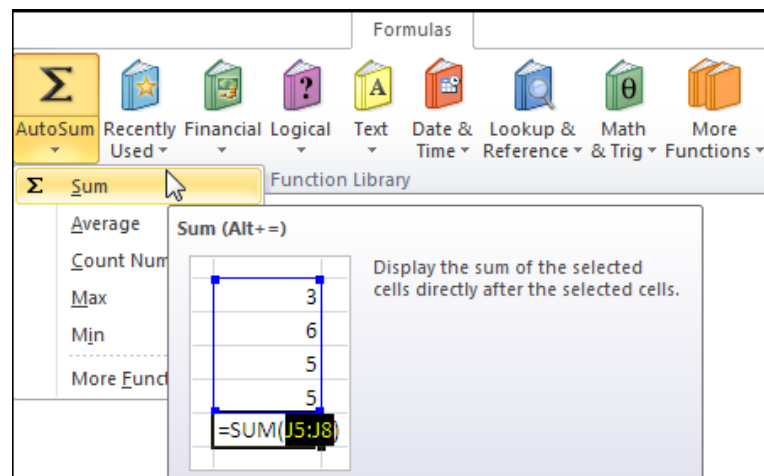
- Click on the cell into which you want to enter your function.
- Type `=sum(`
- Select the range of cells you wish to sum. *A blinking dashed border will be around the cell range.*
- Type `)`
- If you wanted to calculate the sum of the values in the range beginning with A1 and ending with A4, you would type `=sum(A1:A4)`



Calculating a Sum with the AutoSum Button

Excel's AutoSum tool allows you to quickly create sums without needing to type any function syntax. To calculate a sum:

- Click in the cell into which you want to enter your sum.
- Locate the **Function Library** area of the **Formulas** ribbon.
- Click on the down-facing arrow below the **AutoSum** button.



- Select **Sum** from the resulting menu.
- Select the range of cells to be summed.
- Type the **Enter** key on your keyboard to complete the calculation.

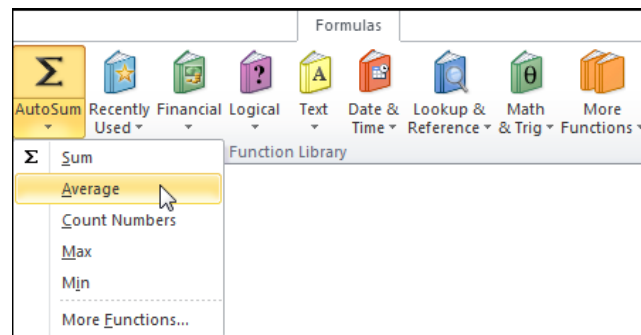
Calculating Other Functions with the AutoSum Button

In addition to calculating the sum, the **AutoSum** button also allows you to quickly calculate other mathematical results. The table below summarizes the functions included within the **AutoSum** button:

The function...	Allows you to ...
Average	Calculate the average value of a range of cells
Count Numbers	Count the number of cells in a range that contain a numeric value
Max	Find the largest value in a range of cells
Min	Find the smallest value in a cell range

To insert an AutoSum function:

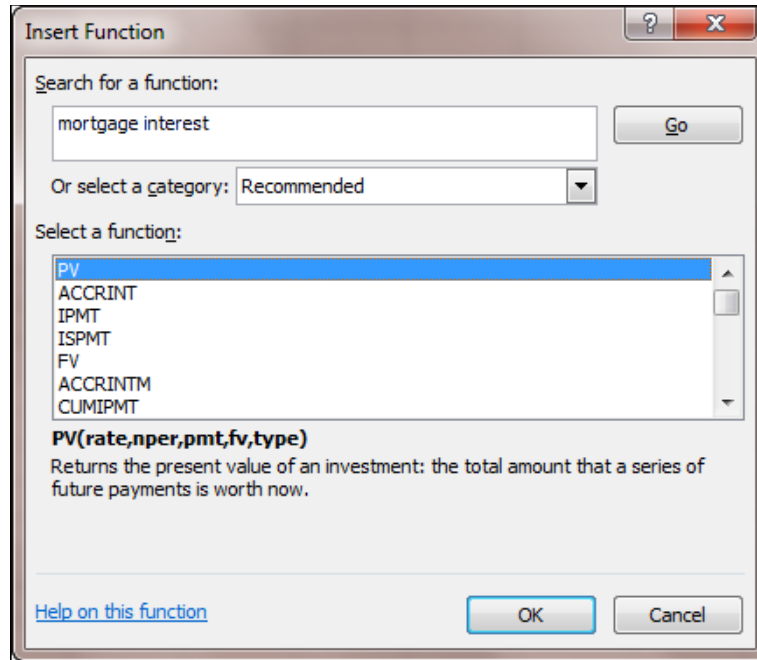
- Click in the cell into which you want to enter your sum.
- Locate the **Function Library** area of the **Formulas** ribbon.
- Click on the down-facing arrow below the **AutoSum** button.
- From the menu that appears, select the function you wish to insert (for example, **Average**).



- Select the range of cells you wish to use.
- Type the **Enter** key on your keyboard to complete your calculation.

To insert a function beyond the AutoSum button:

- Click in the cell into which you want to enter your sum.
- Locate the **Function Library** area of the **Formulas** ribbon.
- Click on the down-facing arrow below the **AutoSum** button.
- Select **More Options**.
- From the window that appears (see graphic on following page), either type a description of an aspect of the function you are seeking (for example, **mortgage interest**) or select an applicable category from the dropdown menu.



- Select the function you would like to insert, and then click the **OK** button to exit out of the **Insert Function** window.

Constructing Your Own Formula

In addition to Excel's built in functions, you can create custom formulas. In order to successfully calculate your values, you must take into consideration the following guidelines.

Guidelines for Creating Formulas

- All formulas must begin with the = symbol. Excel will not recognize your formula as a formula without an = as the first character.
- Excel uses the following symbols as mathematical operators.

The symbol...	Is used for...
*	Multiplication
/	Division
+	Addition
-	Subtraction
^	Raise to an exponent

- Excel calculates your formula in the following order:
 1. From left to right
 2. Starts with any exponents
 3. Performs all operations within parentheses.
 4. Then performs any *multiplication* and/or *division*
 5. Followed by *addition* and/or *subtraction*.

- To perform a calculation that does follow the previously described order, use parenthesis to indicate the order in which your formula should be calculated.
 - In the formula $= (8-3)*4$, Excel will subtract the values in the parenthesis before multiplying.
- You can create formulas using numbers to calculate a result that will not change.
 - The formula $=3*8$ produces the result 24
- You can create formulas using cell references so that the calculated result will update itself as the data in the cells are changed.
 - The formula $=A1+C1+B2$ produces a result based upon the data in cells A1, C1, and B2.

	A	B	C	D
1	1		2	
2		3		
3			=A1+C1+B2	
4				

A Sample Function

- To calculate $10 \times (5 - 2) - \frac{18}{9}$:
- Click in the cell into which you want to enter your formula.
- Type $=10*(5-2)-18/9$. Excel will first calculate $(5-2)$, then multiply that by 10, and then subtract the result of 18 divided by 9.

	A	B	C
1	=10*(5-2)-18/9		
2			
3			

- Type the **Enter** key on your keyboard to complete your calculation.

Formatting Text

Excel provides many of the same text formatting options as Microsoft Word. Proper text formatting can transform a plain spreadsheet into one that is both attractive and persuasive.

Changing the Font of Text

- Select the cell or range of cells you wish to reformat.
- Locate the **Font** area of the **Home** ribbon.



- Click on the down-facing arrow to the right of the drop-down **Font** list (). *The default font in Excel 2010 is **Calibri**.*
- From the list that appears, click on the **name** of the font you want.

Changing the Size of Text

- Select the cell or range of cells you wish to reformat.
- Locate the **Font** area of the **Home** ribbon.

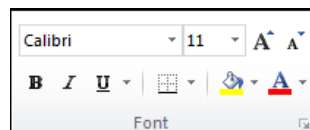


- Click on the down-facing arrow to the right of the **Font Size** () menu. *The default font size in Excel 2010 is **11** points.*
- From the list that appears, click on the **size** of the font you want.




Note: *The selected cells will automatically increase or decrease in height.*



Making your Text Bolded, Italicized, and/or Underlined

- Select the cell or range of cells you wish to format.
- Locate the **Font** area of the **Home** ribbon.



- Click on one of the following buttons to apply text formatting


To format your text...	Click on...
Bold	
Italic	
Underline	

Tip: By clicking the down-facing arrow to the right of the **Underline** button, you can choose whether or not to double-underline or single-underline your text. If you choose the former, the button will display a **D** () instead of a **U** ().

Changing the Color of Text

- Select the cell or range of cells you wish to format.
- Locate the **Font** area of the **Home** ribbon.




- Click on the down-facing arrow to the right of the **Font Color** () button.
- From the font colors that appear, select the color you want.

Adding a Cell Border

- Select the cell or range of cells you wish to add a border to.
- Locate the **Borders** area of the **Font** area of the **Home** ribbon.




- Click on the down-facing arrow to the right of the **Borders** () button.
- From the borders styles that appear, select the one you want.

Applying a background color

- Select the cell or range of cells you wish to add a border to.
- Locate the **Font** area of the **Home** ribbon.



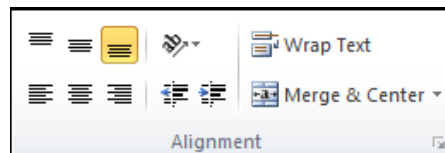
- Click on the down-facing arrow to the right of the **Fill Color** () button.
- From the fill colors that appear, select the one you want.

***Tip:** Once you have applied a border, text color, or fill color, the last selected border or color will be displayed below each button, respectively. To reapply that border or color, simply click the desired button again.*




Changing Cell Alignment

It is much easier in Excel to align your text both vertically within the cell (**Top, Center, Bottom**), and horizontally (**Left, Center, Right**). This alignment becomes useful if you have several larger cells.




- Select the cell or range of cells you wish to format.
- Locate the **Alignment** area of the **Home** ribbon.



- Click the one of the following buttons in the **first row** of the left pane to change the vertical alignment of your text.

To align your text ...	Click on...
At the Top	
In the Center	
At the Bottom	

- Click the one of the following buttons in the **second row** of the left pane to change the horizontal alignment of your text.

To align your text ...	Click on...
To the Left	
In the Center	
To the Right	

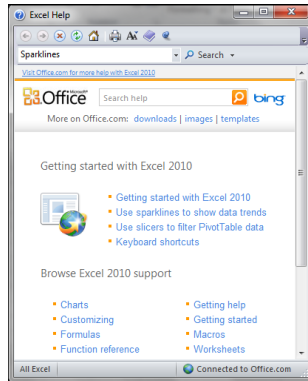
Getting Help in Excel

Excel's Help index is a good resource when you are trying to use an unfamiliar feature or starting a new project. To get help in Excel:

- Click on the blue question mark, the **Microsoft Office Excel Help** button, located in the upper right corner of the Excel window.



- The **Excel Help** window will appear. Type a question into the search bar and (hopefully), Excel will produce a solution.



- Click in the box next to the blue question mark, and type a description of the task in Excel about which you would like to learn. Then click on the button labeled **Search**.



- The topics that relate to the task you described will be display below. From the list that appears, click one of the topics to display its contents.

