

*I can give you a six-word formula for success: Think things through - then follow through.*

*Sir Walter Scott*

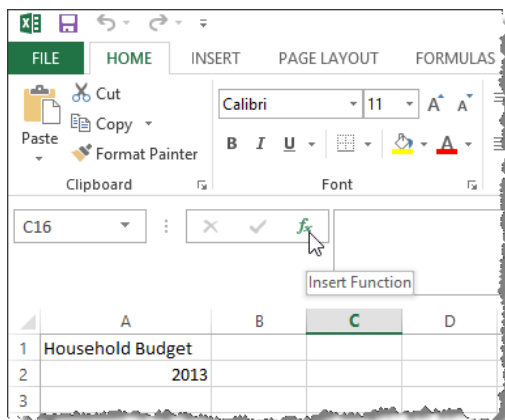
## Module Seven: Using Excel Functions

This module introduces Excel functions, which are a little like templates for common formulas. There are many different types of functions. First, we'll look at the SUM function. You'll learn about using AutoComplete for entering formulas. We'll look at other basic common functions as well. We'll take a look at the Formulas tab introduced in the Ribbon for Excel 2007. Finally, we'll take a look at the function names.

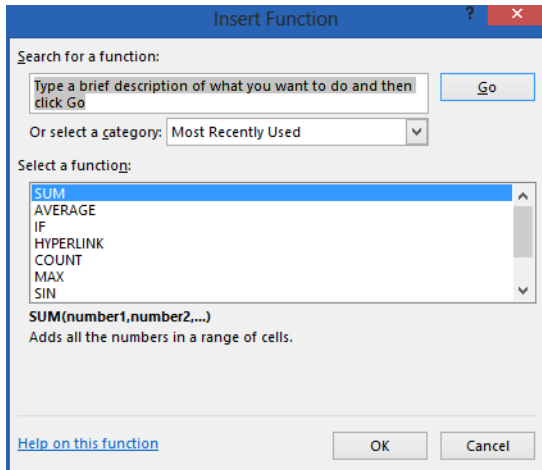
### Formulas vs. Functions

To open the Insert Function dialog box, use the following procedure.

1. Select the **Insert Function** tool right next to the Formula Bar.



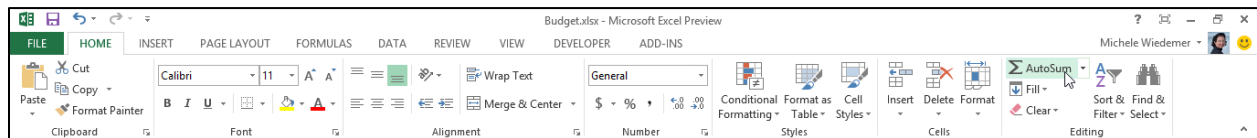
Investigate the different categories and functions in the *Insert Function* dialog box. Point out the bottom part of the screen where the syntax and description of the function appear.



## Using the SUM Function

Review how to use a SUM function to add the total for each category in the sample file, use the following procedure.

1. Select the Total –First Six Months column for the first category (cell H5).
2. Select the **AutoSum** tool in the Editing Group on the **Home** tab of the Ribbon.



3. Excel enters the function with a default selection of the cell references you want to use in the function highlighted.

	A	B	C	D	E	F	G	H	I	J
1	Household Budget									
2	2013									
3										
4		January	February	March	April	May	June	Total - first six months		
5	Mortgage	890	890	890	890	890	890	=SUM(B5:G5)		
6	Heat	250	250	175	125	80	0	SUM(number1, [number2], ...)		
7	Power	225	225	175	175	150	150			

4. If the cell references are not accurate, you can drag the highlighted area to include additional cells or remove cells you do not want used in the function.
5. Press **ENTER** to complete the function.

Excel performs the calculation and moves to the next row. In the following illustration, the cell with the function is active, so that you can see the function syntax in the Formula Bar and the result in the cell.

	A	B	C	D	E	F	G	H
1	Household Budget							
2		2013						
3								
4		January	February	March	April	May	June	Total - first six months
5	Mortgage	890	890	890	890	890	890	5340
6	Heat	250	250	175	125	80	0	
7	Power	225	225	175	175	150	150	

## Using AutoComplete

To use the AutoComplete feature, use the following procedure.

1. Begin typing the SUM function. As soon as you type the Equals sign and the letter S, Excel displays a possible list of matching functions.

\$685.75	\$2,057.25
Total	=su
	<ul style="list-style-type: none"> <li>ⓧ SUBSTITUTE</li> <li>ⓧ SUBTOTAL</li> <li>ⓧ SUM</li> <li>ⓧ SUMIF</li> <li>ⓧ SUMIFS</li> <li>ⓧ SUMPRODUCT</li> <li>ⓧ SUMSQ</li> <li>ⓧ SUMX2MY2</li> <li>ⓧ SUMX2PY2</li> <li>ⓧ SUMXMY2</li> </ul>
Sheet2	

2. To select the SUM Function from the list, double-click on the SUM function.
3. Excel enters the function, but you must still enter the arguments. You can simply click on multiple cells, or click and drag to select a cell range. You can also type in the cell references.

The screenshot shows the Microsoft Excel interface with the following data in the spreadsheet:

Inventory					
Part No.	# In Stock	Unit Price	Total Value	Reorder level	# left to reorder
QS12578	26	\$ 248.89	\$ 6,471.14	20	
DSP4543	14	\$ 124.50	\$ 1,743.00	10	
DS45848	2	\$ 588.00	\$ 1,176.00	1	
SS12566	18	\$ 224.67	\$ 4,044.06	10	
SSP2777	12	\$ 118.00	\$ 1,416.00	5	
QS12585	5	\$ 555.22	\$ 2,776.10	5	
DS12566	2	\$ 470.99	\$ 941.98	1	
DS12556	8	\$ 430.37	\$ 3,442.96	5	
KSP4333	4	\$ 585.00	\$ 2,340.00	2	
QP133	12	\$ 255.23	\$ 3,062.76	10	
KS36678	3	\$ 685.75	\$ 2,057.25	1	
		Total	=SUM(D4:D14)		
Tax rate	10%				

The formula bar shows the formula: `=SUM(D4:D14`

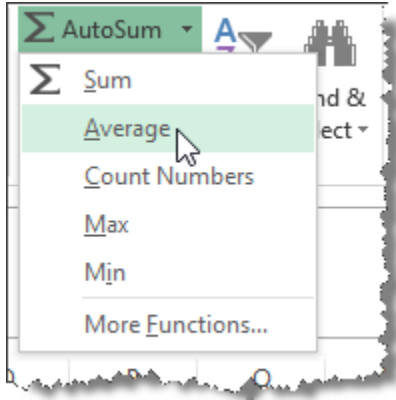
A tooltip for the SUM function is visible, showing: `SUM(number1, [number2], ...)`

4. Enter the final parenthesis mark to end the function.
5. Press ENTER to enter the function in the cell.

## Using Other Basic Excel Functions

Review how to use the AVERAGE function as an example of another function, use the following procedure.

1. Add a new label in column I: Average.
2. Select the cell in the Average column for the first category.
3. Select the arrow next to the SUM function on the Home tab of the Ribbon to see the list of other common functions.



4. Select **Average**.

Excel enters the function with the most likely cell references.

		January	February	March	April	May	June	Total - first six months	Average
4									
5	Mortgage	890	890	890	890	890	890	5340	=AVERAGE(B5:H5)
6	Heat	250	250	175	125	80	0		AVERAGE(number1, [number2], ...)
7	Power	225	225	175	175	150	150		

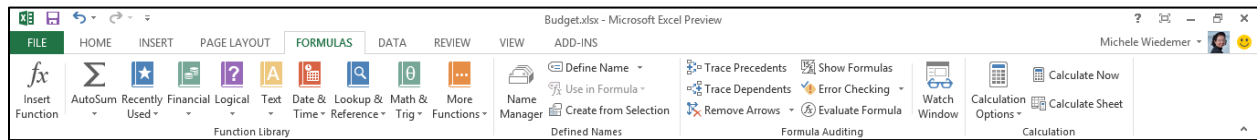
5. Replace the cell references so that cell H5 is not included in the average.

		January	February	March	April	May	June	Total - first six months	Average
4									
5	Mortgage	890	890	890	890	890	890	5340	=AVERAGE(B5:G5)
6	Heat	250	250	175	125	80	0		AVERAGE(number1, [number2], ...)
7	Power	225	225	175	175	150	150		

6. Press **ENTER** to complete the function.

## Understanding the Formulas Tab

Explore the **Formulas** tab on the Ribbon.



## Understanding Function Compatibility

Explore the icons that appear when entering a function name. The old names have a yellow warning triangle next to them.

