Excel - Introduction to Functions

“How do I use functions in Excel?”

Excel functions are preset formulas, each defined by a specific name. You can insert a function into an empty cell, or into a formula. The name tells Excel which calculation to perform, and which function arguments you will require e.g.

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUM</td>
<td>Adds up the total of a set of values.</td>
</tr>
<tr>
<td>AVERAGE</td>
<td>Calculates the mean average of a set of values.</td>
</tr>
<tr>
<td>COUNT</td>
<td>Counts the number of cells in a range that contain a number.</td>
</tr>
<tr>
<td>MIN</td>
<td>Displays the lowest number in a set of values.</td>
</tr>
<tr>
<td>MAX</td>
<td>Displays the highest number in a set of values.</td>
</tr>
</tbody>
</table>

Insert a function into an empty cell

To use a function, you will need some cells that contain data. For this example, type the following into a new worksheet: =\((3+2)/2\) (in cell A1), =\(C1\times C3-C2\) (in cell A2), 3 (in cell C1), 5 (in cell C2), 2 (in cell C3).

1. Click in an empty cell where you would like the result of your formula to appear e.g. A3
2. Click on the AutoSum (\(\Sigma\)) icon on the Home tab (not Sum from the drop-down arrow!)
3. Excel will insert the SUM function, ready to add values or cell references
4. Notice the function tooltip, this is to help you complete the function arguments
5. Click and drag to select the cells you would like to add up e.g. C1 to C3
6. Press Enter or click the tick on the Formula Bar to display the result

There are other ways of inserting functions, such as clicking the \(\sqrt{x}\) button on the Formula Bar or clicking Insert Function on the Formula tab. You can try these in the next exercise.
Insert a function into an existing formula

1. Double-click in the cell containing your formula e.g. A3

2. Start to edit your formula e.g. =SUM(C1:C3)-

3. Click on the fx button on the Formula Bar (you can also find this on the Formula tab)

4. Use the search area to look for a keyword e.g. count and click Go

5. A list of relevant functions will appear e.g. COUNT, COUNTA, COUNTIF

6. Click on the COUNTA function to see a description below the list

7. Double-click on the COUNTA function to select it

8. Complete the Function Arguments e.g. Value1: C1:C3

9. Notice the tips that appear below the Function Arguments e.g.

10. The Function Arguments window also gives you a preview of the result of the function you are writing, as well as the overall formula result

11. Click OK to display the result of your formula

Function arguments are different for every function. Once you are familiar with a function, you can insert it by simply typing the name into your cell (preceded by =) or formula, and selecting the required function from the drop-down list.

Further information and help

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