

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.



SUM	Adds up the total of a set of values.
AVERAGE	Calculates the mean average of a set of values.
COUNT	Counts the number of cells in a range that contain a number.
MIN	Displays the lowest number in a set of values.
MAX	Displays the highest number in a set of values.

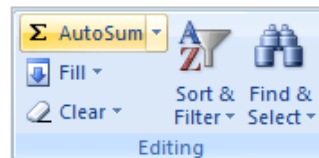
Insert a function into an empty cell

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

	A	B	C
1	2.5		3
2	1		5
3			2
4			

2. Click on the **Autosum** (Σ) 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

	A	B	C
1	2.5		3
2	1		5
3	=SUM(A1:A2)		2
4			

4. Notice the function **tooltip**, this is to help you complete the **function arguments**

	A	B	C
1	2.5		3
2	1		5
3	SUM(number1, [number2], ...)		2
4			

5. Click and drag to select the cells you would like to add up e.g. **C1 to C3**

	A	B	C
1	2.5		3
2	1		5
3	=SUM(C1:C3)		2
4			

6. Press **Enter** or click the tick on the **Formula Bar** to display the result

	A	B	C
1	2.5		3
2	1		5
3	10		2
4			



There are other ways of inserting functions, such as clicking the **fx** 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

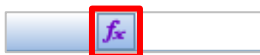
1. Double-click in the cell containing your formula e.g. **A3**

	A	B	C
1	2.5		3
2	1		5
3	=SUM(C1:C3)		2
4	SUM(number1, [number2], ...)		

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

	A	B	C
1	2.5		3
2	1		5
3	=SUM(C1:C3)-		2
4			

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



OR



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

Search for a function:

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

Select a function:

- COUNT
- DCOUNT
- DCOUNTA
- COUNTIF
- COUNTIFS
- COUNTA

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

COUNTA(value1,value2,...)
 Counts the number of cells in a range that are not empty.

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

COUNTA

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

Value1: C1:C3 = {3;5;2}

Value2: = number

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

Value 1: value1, value2,... are 1 to 255 arguments representing the values and cells you want to count. Values can be any type of information.

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

= 3 Formula result = 7

11. Click **OK** to display the result of your formula

	A	B	C
1	2.5		3
2	1		5
3	7		2
4			



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

Use MyIT to log calls with the IT Service Desk: <https://myit.abdn.ac.uk>