

# Excel Function Guide : basic

Over 400 functions are built into Excel and in this guide we cover some of the more straightforward ones - many of which are among the most widely used. The first batch (Sum, Average, Max and Min) deal with numerical data while the second batch mostly work with text data but in many cases can handle numerical data as well.

The Sum function, perhaps the most widely used of all, simply sums a range of numbers. With data entered on to a worksheet as shown in the image on the right, go to any blank cell and enter **=sum(A2:A6)** to generate the answer 71. Alternatively, click on the AutoSum icon on either the Home ribbon or Formulas ribbon, select the range of cells and press Enter. Or press and hold the Alt key then press the equals key, select the range and press Enter.

	A	B	C
1			
2	21		
3	16		
4	15		
5	7		
6	12		
7			
8			
9			

The Average function will average a range of numbers. In any cell, enter **=average(A2:A6)** and press Enter, or click on the drop-down arrow next to the AutoSum icon and choose Average. Select the range and press Enter. The Max and Min functions identify the largest and smallest number in a range. In any cell, enter **=max(A2:A6)** and in another cell enter **=min(A2:A6)**. There is also a Large and a Small function. To identify the third largest number in a range enter **=large(A2:A6,3)**

	A	B	
1			The Upper and Lower functions convert text to upper and lower case. Set up a worksheet as shown in the image to the left and in a blank cell, enter <b>=upper(A2)</b> . Then, in another cell, enter <b>=lower(A2)</b> . Proper case means that the first letter of each word is in upper case, all other letters are in lower case. Enter <b>=proper(A2)</b> into any cell.
2	Excel TRAINING course		
3			
4	Excel Training		
5			
6	John	Smith	
			The text in cell A4 includes a number of unwanted spaces - before the first word, between the two words and after the second word.

To remove the surplus spaces, go to a blank cell and enter **=trim(A4)**. This will leave a single space between the words but remove all other spaces. The concatenate function combines two or more cells into one. In a blank cell, enter **=concatenate(A6,B6)** or **=A6&B6**. To put a space between the words, enter **=concatenate(A6," ",B6)** or **=A6&" "&B6** with a space between the quote marks.

The left and right functions extract the first few or last few characters from a longer string. Go to a blank cell and enter **=left(A2,4)**. This will generate the text "Exce" - the first four characters from cell A2. Entering the function **=right(A2,3)** will generate the text "rse" - the last three characters from the cell.

The find function finds the location of a character within a cell. So, for example, **=find("h",A6)** will generate the number 3 as "h" is the third letter of the word John. It can also be used to find symbols and spaces. Entering **=find(" ",A2)** will generate the number 6 as the first space is in the sixth position (with 5 letters before it). All these functions can be used in combination so **=left(A2,find(" ",A2))** will generate the word "Excel" followed by a space. Note that the find function is case sensitive and by default will find the first matching character. There is also a search function which works in the same way but is not case sensitive.