

20 Excel Functions to Know and Use Before you Die...

Counting with COUNT, COUNTA, COUNTIF & COUNTIFS

Continuing our series of '20 Functions to Know and Use before You Die', this time it's all about counting.

How many times have you sat at your desk and counted cells while holding your finger or a pen against the screen and scrolling down the page? We've all been there...including myself, and we all know how painful it is especially as you always seem to be interrupted in the middle of counting and have to start all over again! Thankfully Excel has a number of functions to help you.

There are 2 basic counting functions; **COUNT** and **COUNTA**.

Which one you use is determined by what you are trying to count.

If you want to count cells that **ONLY** have numbers in them then use **COUNT**.

=COUNT(B2:B9). Using fig.1 this returns the answer 8.

If you want to count cells that **ONLY** have text then you have to use **COUNTA**.

=COUNTA(B2:B11) Using fig.2 returns the answer 10.

Note: if we were to use **COUNT** with the same data it would give us the answer 3 as it will only count cells with numbers.

Now...to make matters a little confusing **COUNTA** will count cells that contain text **OR** numbers. Using fig.3 that would give us 8. Look further to see how to only count cells with text when you have a mixture of text and numeric values.

So that solves counting cells that have data, but what if we want to count cells that have nothing? For that we need

COUNTBLANK. Bear in mind that if you have accidentally entered a space in a cell that is classed as a character and the cell is therefore not blank even though you can't see anything in it.

What if you want to count the number of times a particular value or text appears in a given range of cells? For that we have to use **COUNTIF** and for those with 2007 or 2010 you also have the option of **COUNTIFS**.

Whereas the previous counting functions simply counted a 'type' of cell the **COUNTIF** function is made up of two sections;

=COUNTIF(range to check, values to look for and count)

So if for example, I wanted to count the number of people who asked for fish as their main dish at an up-coming dinner, my formula would be:

B
August
269
141
206
12
344
70
213
109

Fig.1

A
Main Course
Beef
Vegetarian
Fish
Vegetarian
Beef
Fish
Fish
Fish
Beef
Beef

Fig.2

D
Helen
Mark
Kate
32
Bob
97
Helen
94

Fig.3

=COUNTIF(A2:A11,"Fish") In this example it returns the value 4

I could then repeat this for each menu choice. No more running your finger along the screen counting cells/words! No more filtering or sorting data to make it easier to count manually! So for those of you who regularly have to organise conferences or works events your lives will now become so much easier.

If counting specific numerical values the formula is =COUNTIF(A2:A21,5). In this case Excel will count the number of cells containing the number 5. But what if I want to find cells with a value greater than 5? Simply entering the criteria >5 will not work. You have to put this in speech marks. So our formula will read;

=COUNTIF(A2:A21,">5")

If you have Excel 2003 or earlier, then you are limited to only one **COUNTIF** criteria unless you know how to build up array formulas. For those of you blessed with 2007 or later you have the additional option of **COUNTIFS** that allows you build up multiple count criteria.

To perform multiple tests the formula is made up as follows;

=COUNTIFS(first range to check, criteria for range 1, next range to check, criteria for that range,)

Keep on going until all your ranges have been selected and criteria set up. In fact you can have up to 127 range/criteria pairs in your formula. Note, however, that all the ranges you use must be of equal size i.e. they must all have the same number of rows.

When using **COUNTIF** or **COUNTIFS** you can also use wildcards:

- * (asterisk) for any number of characters
- ? for any single character

If you want to count items excluding a value then use <> (less than – greater than symbols back to back) to represent "does not equal".

Some examples:

=COUNTIF(RANGE,"*?") will only count cells containing text

=COUNTIF(RANGE,"????*") will count cells containing 4 or more characters

=COUNTIF(RANGE,"??P*") will count cells containing text with 2 letters followed by 'p' and any number of characters after that.

=COUNTIF(RANGE,"<>5") will count cells that do not equal 5

=COUNTIF(RANGE,CELL REF)>1 if used in DATA VALIDATION, prevents duplicate entries!

Who would have thought counting could do so much? A versatile bunch of functions that have a basic use i.e. counting cells, as well as being used in other functions such as data validation to control data entry.

Next time how to use **SUMIF** and **SUMIFS**.