IDV460

INTERACTIVE DATA VIZ SPRING 16

How do I ...?

No. 1 > MICROSOFT EXCEL FUNCTIONS

In Excel, you can use functions to perform a number of valuable tasks that can help clean your data and make calculations based on your data.
For a full list of Excel functions — there are a lot of them! — go to

https://support.office.com/en-us/article/Excel-functions-by-category-5f91f4e9-7b42-46d2-9bd1-63f26a86c0eb

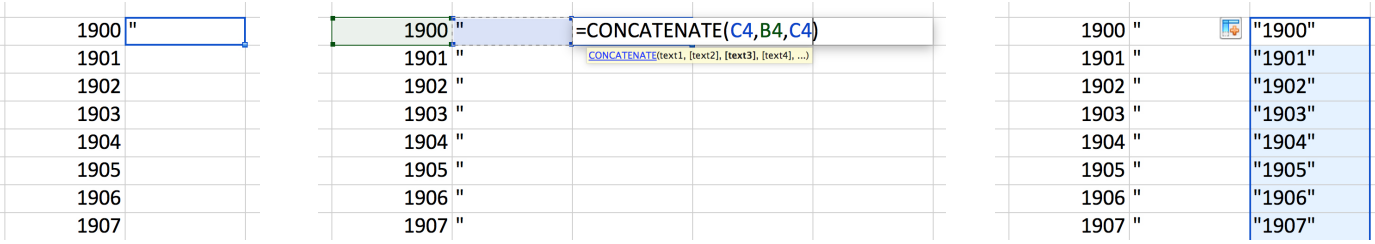
1. ...concatenate cells?

Concatenating takes data from separate cells and puts them together in a new cell. This is helpful for a number of reasons, but in our case, we may want to create a cell for a year that we can quickly copy and paste into Illustrator. (For an Illustrator chart, you need to represent the year 1900 as "1900".) here's how to create this:

1. Start with a column of text that has years.
2. In a blank, adjacent column, type a double quote (")
3. Double-click the blue square at the bottom right of this new cell.
4. Move to an empty cell in the same row.
5. Type ...

= CONCATENATE( )

6. Place your cursor inside the parentheses, and click on the cells you want to unite (or type their names).
7. Double-click the blue square at the bottom right of this new cell.



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2. ...separate data into new cells?

The reverse of concatenating is delimiting — we use this to separate connectd data in a cell. One example of this would be to isolate the a specific date from a combined cell into three — one for the month, one for the day and one for the year. (This is not a function exactly.) Here's how:

1. Start with a column of data — in this case, dates.

2. Make sure there are empty columns to fill in with new text. To create new columns, select the number of columns you want to add, and pull down Insert > Columns.

3. Select the column of data.

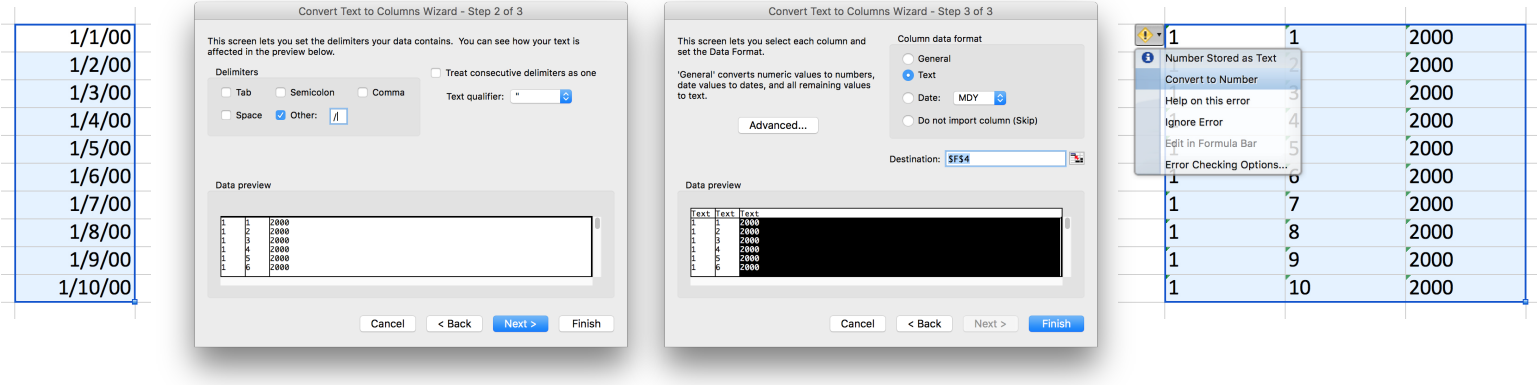
4. Pull down Data > Text to Columns ...

5. A dialog box appears, based on the data in your selected columns.

6. Click Next, then define the delimiter. In the case of our dates, that will be a slash. Deselect any other checked boxes in this section and click Next.

7. *(Recommended) Dates have tricky formatting, so when converting dates in this way, change the data type for all three new columns to Text before clicking "Finish."*

8. *With the new text in place in formerly blank columns, convert the data to numbers by pulling down under the Excalamtion point icon (which is warning you that the cells have numbers stored as text).*



OR ... if you only want isolate the year, try the YEAR function. Type **=YEAR( )** into an empty cell and click the cell you want to pull the year from. (Double-click the small blue square to apply this to a column.)

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3. …determine how many times a value appears?

This function provides a quick method for counting the number of times a value appear in a column (or in several columns) in a dataset.

1. Go to an empty column (preferably outside your data).

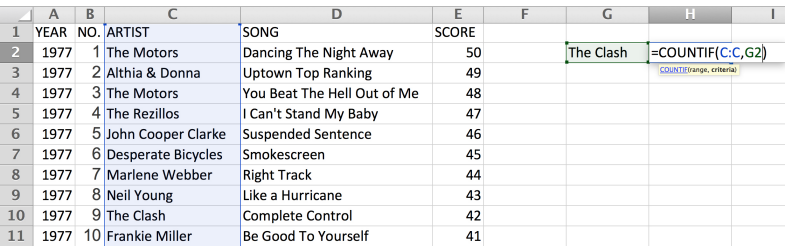
2. Copy and paste a value from one of your columns — the one you want to count.

3. In an adjacent and empty cell, type …

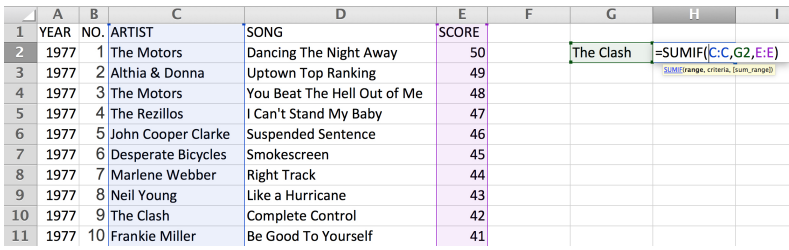
=COUNTIF( )

4. There are two parameters to pass into the parentheses; the first is the range — in other words, in which column or columns are you looking for the value? We are looking for the value to appear in column C, so we type C:C, which will look through the entire column. The second parameter is the criteria — the value you are looking for. You can type this as a string, in a set of quotes, but it is easier to click the adjacent cell.

5. The number of times the value appears in your dataset is now diplayed in the cell.



	A	B	C	D	E	F	G	H	I
1	YEAR	NO.	ARTIST	SONG	SCORE				
2	1977	1	The Motors	Dancing The Night Away	50		The Clash	=COUNTIF(C:C,G2)	
3	1977	2	Althia & Donna	Uptown Top Ranking	49			COUNTIF(range, criteria)	
4	1977	3	The Motors	You Beat The Hell Out of Me	48				
5	1977	4	The Rezillos	I Can't Stand My Baby	47				
6	1977	5	John Cooper Clarke	Suspended Sentence	46				
7	1977	6	Desperate Bicycles	Smokescreen	45				
8	1977	7	Marlene Webber	Right Track	44				
9	1977	8	Neil Young	Like a Hurricane	43				
10	1977	9	The Clash	Complete Control	42				
11	1977	10	Frankie Miller	Be Good To Yourself	41				



	A	B	C	D	E	F	G	H	I
1	YEAR	NO.	ARTIST	SONG	SCORE				
2	1977	1	The Motors	Dancing The Night Away	50		The Clash	=SUMIF(C:C,G2,E:E)	
3	1977	2	Althia & Donna	Uptown Top Ranking	49			SUMIF(range, criteria, [sum_range])	
4	1977	3	The Motors	You Beat The Hell Out of Me	48				
5	1977	4	The Rezillos	I Can't Stand My Baby	47				
6	1977	5	John Cooper Clarke	Suspended Sentence	46				
7	1977	6	Desperate Bicycles	Smokescreen	45				
8	1977	7	Marlene Webber	Right Track	44				
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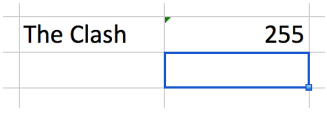
4. …add numbers from certain cells?

A variation of the function above is to add values in a column of cells that have a certain value. This is a similar function, with an added parameter.

1. Follow setps 1 to 3 above, except that in the third step, type …

=SUMIF( )



The Clash	255

2. You would pass the same two values as above, but add a third — in this case, to allow the "score" totals for this value. In our example, that would mean we would look for the score amounts in column E.