

# TIPS & TRICKS

## DADE COUNTY TECHNOLOGY

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Week of March 10, 2014

### **Simple Formulas in Google Spreadsheet (and Microsoft Excel)**

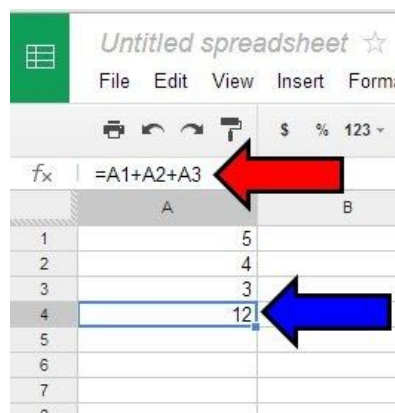
The Spreadsheet option in Google Docs (and Microsoft Excel) can be a very powerful tool if you know a little bit about formulas. This week's Tips and Tricks installment is going to just touch the surface of this topic.

A formula allows you to perform calculations on data that has been entered into the spreadsheet. You can use simple mathematical operations such as addition, subtraction, multiplication, division, etc... or much more complex operations. Also, if you change (or update) the data that has been entered, the formulas will update and give new appropriate totals based on the new data.

Here is a very basic formula...

First, enter your data. Open a new spreadsheet and in cell A1 type the number 5, in cell A2 type the number 4, and in cell A3 type the number 3. The data has now been entered. To add up the data and place the total in cell A4, simply type the following into cell A4: `=A1+A2+A3`

When you press [ENTER], cell A4 will display the result of the formula (12).



The screenshot shows a Google Spreadsheet interface. The title bar reads "Untitled spreadsheet" with a star icon. Below the title bar are menu options: "File", "Edit", "View", "Insert", and "Form:". A toolbar contains icons for print, undo, redo, and a text color selector set to "123". The formula bar shows the formula `=A1+A2+A3` with a red arrow pointing to it. The spreadsheet grid has columns A and B, and rows 1 through 8. Cell A1 contains the number 5, A2 contains 4, and A3 contains 3. Cell A4 is selected and contains the result 12, with a blue arrow pointing to it.

	A	B
1	5	
2	4	
3	3	
4	12	
5		
6		
7		
8		

Notice that what displays in the actual cell is the result of the formula (see the blue arrow above). You can see the formula in the formula bar (see the red arrow above).

Another way to write this same formula would be to use the *SUM* item. The format for this item is as follows:

=SUM(<first cell>:<last cell>)

or, in this specific case

=SUM(A1:A3)

The result displayed in cell A4 would still be 12.

Writing a formula is not really difficult. You just need to think through what you need the formula to do.

Remember to use the proper characters for the mathematical operations:

- plus sign (+) = addition
- minus sign (-) = subtraction
- asterisk (\*) = multiplication
- forward slash (/) = division
- caret (^) = exponents (example: to square x would be x^2)

And also remember the order of operations that Google Spreadsheet follows:

### **BEDMAS**

- **B**rackets
- **E**xponents
- **D**ivision
- **M**ultiplication
- **A**ddition
- **S**ubtraction

Any operation(s) contained in brackets will be carried out first, followed by any exponents. Next, division and multiplication are considered to be of equal importance so they are carried out in the order they appear, left to right. Following these, calculations addition and subtraction are considered to be of equal importance so they are carried out in the order they appear, left to right.

If you'd like more information on more complicated formulas let us know and we can do a more advanced tutorial in a future Tips and Tricks.

## BONUS Information:

There are also some cool tricks concerning the entering of data in a spreadsheet (both in Google Spreadsheet and Microsoft Excel). Here's a few...

1) If you want to list the same number many times, simply type the number in a few cells, highlight the cells where you typed, and then grab the little handlebar (the blue dot in the example below) that appears when you move to the bottom right of the cells highlighted. Drag the handlebar and the number will be placed in the cells within the area selected (ie. a row or a column).



2) If you want to list a number progression (ie, 1, 2, 3, 4, 5, etc...), simply type the beginning of the progression in a few cells, then highlight and drag the handlebar just like in the first example and the progression will appear in the row or column selected.

3) Days of the Week. Just like in the example above, type a few days of the week in order and when you drag with the handlebar, the area selected will be populated by a progression of days.

4) Months. You can do the same with months.

5) Patterns. If you create a pattern (ie. James, Alan, Rex, Tina, Larry, etc...) and highlight and drag the handlebar, the pattern will repeat.

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Please send any questions or comments about this installment of Tips & Tricks to [technology@dadecs.org](mailto:technology@dadecs.org).