Excel 2013 Functions & Formulas

Common Formula Signs
+......................adding
-..............subtraction
*.........multiplication
/.....................divide
%................percent

Some Excel functions apply to specific subject areas, but others are general and apply to all needs. The following list shows an array of Excel functions used by one and all. Check here for a quickie reference to the purpose of each Excel function.

Excel Function	Description
SUM	Calculates the sum of a group of values
AVERAGE	Calculates the mean of a group of values
COUNT	Counts the number of cells in a range that contains numbers
INT	Removes the decimal portion of a number, leaving the integer portion
ROUND	Rounds a number to a specified number of decimal places or digit positions
IF	Tests for a true or false condition and then returns one value or another
NOW	Returns the system date and time
TODAY	Returns the system date, without the time
SUMIF	Calculates a sum from a group of values, but just of values that are included because a condition is met
COUNTIF	Counts the number of cells in a range that match a criteria

Excel Text Functions You'll Find Helpful

Excel's text functions are very helpful when you're working with names, addresses, customer lists, or any other text-based data. Here is list of Excel functions associated with text, along with a description of what each function does:

Function	Description
LEFT	Extracts one or more characters from the left side of a text string
RIGHT	Extracts one or more characters from the right side of a text string
MID	Extracts characters from the middle of a text string; you specify which character position to start from and how many characters to include
CONCATENATE	Assembles two or more text strings into one
REPLACE	Replaces part of a text string with other text
LOWER	Converts a text string to all lowercase
UPPER	Converts a text string to all uppercase
PROPER	Converts a text string to proper case
LEN	Returns a text string's length (number of characters)

Excel Order of Operations to Keep in Mind

Mathematics dictates a protocol of how formulas are interpreted, and Excel follows that protocol. The following is the order in which mathematical operators and syntax are applied both in Excel and in general mathematics. You can remember this order by memorizing the mnemonic phrase, "*P*lease *e*xcuse *m*y *d*ear *a*unt *S*ally."

1. Parentheses
2. Exponents
3. Multiplication and division
4. Addition and subtraction

Excel Cell References Worth Remembering

In Excel formulas, you can refer to other cells either relatively or absolutely. When you copy and paste a formula in Excel, how you create the references within the formula tells Excel what to change in the formula it pastes. The formula can either change the references relative to the cell where you're pasting it (relative reference), or it can always refer to a specific cell. You can also mix relative and absolute references so that, when you move or copy a formula, the row changes but the column does not, or vice versa.

Preceding the row and/or column designators with a dollar sign ($) specifies an absolute reference in Excel.

Example	Comment
=A1	Complete relative reference
=$A1	The column is absolute; the row is relative
=A$1	The column is relative; the row is absolute
=A1	Complete absolute reference

Excel Error Messages to Get to Know

If you create a formula in Excel that contains an error or circular reference, Excel lets you know about it with an error message. A handful of errors can appear in a cell when a formula or function in Excel cannot be resolved. Knowing their meaning helps correct the problem.

Error	Meaning
#DIV/0!	Trying to divide by 0
#N/A!	A formula or a function inside a formula cannot find the referenced data
#NAME?	Text in the formula is not recognized
#NULL!	A space was used in formulas that reference multiple ranges; a comma separates range references
#NUM!	A formula has invalid numeric data for the type of operation
#REF!	A reference is invalid
#VALUE!	The wrong type of operand or function argument is used