



FOCUS Data Summit July 14, 2016

Useful formulas and values:

<p>DATE useful to embed in other formulas that need to reference a date</p> <p>=date(year in 4-digit, month in 2-digit, day in 2-digit)</p>	<p>TIME useful to embed in other formulas that need to reference a time</p> <p>=time(hour in 24-hour format, minute in 2-digit format, second in 2-digit format)</p>
<p>WEEKNUM calculates the number week of a date, assuming that Jan 1 is in Week 1 of a calendar year; can choose what day of the week the week starts on</p> <p>=weeknum(date to be referenced, what day of the week is day 1) weeknum(G2, 2)</p> <p>In the above example, the week starts on Monday</p>	<p>IFERROR determine what you'd like to appear in a cell if there is an error, rather than the standard #ERROR, #DIV/0, or #N/A result; this gets typed around another formula; empty quotes ("") will result in a blank cell</p> <p>=iferror((formula that is being run), "result you want if there is an error")</p> <pre>=iferror(countifs('IC Export'!\$M:\$M, "<>"&"Absent", 'IC Export'!\$A:\$A, "<>"&"")/countifs('IC Export'!A:A, "<>"&""), "")</pre>
<p>TODAY() with the empty parenthesis, auto-calculates today's date</p>	<p><>"" this is not a formula, but can be used in any of the below formulas to identify "not equal to blank" which means cells equal to 0 and cells that have text identify an error will be included, but a cell with no content or a cell that results in a blank (e.g., as the result of IFERROR) will be excluded</p>
<p>Single Criterion:</p>	<p>Multiple Criterion:</p>
<p>COUNTIF Counts all rows that meet a single criteria; can use >,<,<=; can embed DATE or TIME functions</p> <p>=countif(the range of columns or rows to be counted, criteria)</p> <pre>=countif('SY15-16 Data by Student'!L:L, ">="&50)/countif('SY15-16 Data by Student'!H:H, "Y")</pre>	<p>COUNTIFS counts all rows that meet every criteria set; can use >,<,<= and these can be used together to count data within a range of values; can embed DATE or TIME functions</p> <p>=countifs(range1,criteria1,range2,criteria2,...)</p> <p>All range/criteria must be in pairs</p> <pre>=countifs('SY15-16 Data by Student'!L:L, ">="&50, 'SY15-16 Data by Student'!D:D, "K")/countifs('SY15-16 Data by Student'!G:G, "Y", 'SY15-16 Data by Student'!D:D, "K")</pre> <pre>=countifs('SY15-16 Data by Student'!L:L, ">="&25, 'SY15-16 Data by Student'!L:L, "<50", 'SY15-16 Data by Student'!D:D, "K")/countifs('SY15-16 Data by Student'!G:G, "Y", 'SY15-16 Data by Student'!D:D, "K")</pre>
<p>SUMIF Calculates the sum of all rows that meet a single criteria; can use >,<,<=; can embed DATE or TIME functions</p> <p>=sumif(the range of columns that you want to filter by, criteria, the range to sum)</p> <pre>=sumif(\$G\$2:\$G, ">"&date(2016,3,31), \$L\$2:\$L)</pre>	<p>SUMIFS Calculates the sum of all rows that meet a single criteria; can use >,<,<=; can embed DATE or TIME functions</p> <p>=sumifs(the range of columns that you want to sum, the first range of columns you want to filter by, criteria1, the second range of columns you want to filter by, criteria2)</p> <pre>=sumifs(\$L\$2:\$L, \$G\$2:\$G, ">"&date(2016,3,31), \$A\$2:\$A, "<>"&"")</pre>
<p>AVERAGEIF finds the arithmetic mean for a range that is filtered by one criteria; can use >,<,<= and these can be used together to count data within a range of values; can embed DATE or TIME functions</p> <p>=averageif(range, criteria, range to be averaged)</p>	<p>AVERAGEIFS finds the arithmetic mean for one range that is filtered by many criteria; can use >,<,<= and these can be used together to count data within a range of values; can embed DATE or TIME functions</p> <p>=averageifs(range to be averaged, range1,criteria1,range2,criteria2,...)</p> <p>All range/criteria must be in pairs</p>

	<pre>=averageifs('Historical Final Scores and Percentiles'!\$G:\$G, 'Historical Final Scores and Percentiles'!\$C:\$C, "True", 'Historical Final Scores and Percentiles'!\$B:\$B, "Reading", 'Historical Final Scores and Percentiles'!\$K:\$K, "Fall 2015")</pre>
<p>VLOOKUP <i>searches for a value in a different range and returns another value in the same row, based on one exact match</i></p> <p>=vlookup(reference1,range that starts with the column your reference is in and ends with the column your answer is in, number of columns to get to answer from reference, exact match)</p>	<p>INDEXMATCH <i>returns an exact match from a range based on multiple criteria; basically a vlookup with more than one column to reference</i></p> <p>=index(<i>what you want</i>, match(ref1&ref2&...,matchcolumn1&matchcolumn2&...,0))</p> <p>Use control+shift+enter (PC) or command+shift+enter (Mac)</p>



Attendance Dashboard

DATA NEEDED FROM SIS:

- Student ID (either local, USI, or both)
- Attendance Date
- Attendance Code
- Student Grade
- Student Homeroom

HOW WE CALCULATE:

- ISA: *count of non-absent* divided by *all records*
 - uses **COUNTIF** or **COUNTIFS**
 - we've also put time-limits on this, such as "week to date" or "month to date" using **DATE** to restrict
- Tardy: *count of tardy* divided by *count of non-absent*
- Week to date
 - Change any **COUNTIF** to **COUNTIFS** and use **WEEKNUM** with **DATE** and **TODAY()** to restrict the options
- Month to date
 - Change any **COUNTIF** to **COUNTIFS** and use **MONTH** with **DATE** and **TODAY()** to restrict the options