



SCEA 2013 Conference Paper: Cost Estimating Tips: Learn tricks in Excel and best practices

New Orleans, LA
Date

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Agenda

- ▶ Subtotal
- ▶ Naming
- ▶ Sumifs
- ▶ Countifs
- ▶ Vlookup
- ▶ Hlookup
- ▶ Tech Refresh (Mod)

Subtotals

- ▶ Action: Returns a subtotal in a list or database
- ▶ Formula: =subtotal(function_num, ref1, ref2, ...)
 - Function_num is the number 1 to 11 (includes hidden values) that specifies which function to use in calculating subtotals within a list
 - Ref1, Ref2 are 1 to 254 ranges or references for which you want the subtotal
- ▶ Uses: When rolling up costs by CES, you should use subtotals instead of selecting each individual cell

Function_Num	Function
1	Average
2	Count
3	Counta
4	Max
5	Min
6	Product
7	Stdev
8	Stdevp
9	Sum
10	Var
11	Varp

Define and use names in formulas

- ▶ Action: Define a name for a cell range, function, constant, or table
- ▶ Uses: By using names, you can make your formulas much easier to understand and maintain

Sumifs

- ▶ Action: Adds the cells specified by a given set of conditions or criteria
- ▶ Formula: **=sumifs**(*sum_range*, *criteria_range1*, *criteria1*, [*criteria_range2*, *criteria2*], ...)
 - *Sum_range* is one or more cells to sum, including numbers or names, ranges, or cell references that contain numbers. Blank and text values are ignored
 - *Criteria_range1* is the first range in which to evaluate the associated criteria
 - *Criteria1* is the form of a number, express, cell reference, or text that define which cells in the *Criteria_range1* argument will be added
 - *Criteria_range2*, *criteria2*, ... are the additional ranges and their associated criteria up to 127 range/criteria pairs are allowed
- ▶ Uses: When there is need to quickly report costs by categories and to sum multiple entries. For example, summing up all HW in a Bill of Materials (BOM)

Countifs

- ▶ Action: Counts the cells specified by a given set of conditions or criteria
- ▶ Formula: =**countifs**(*criteria_range1*, *criteria1*, [*criteria_range2*, *criteria2*], ...)
 - *Criteria_range1* is the first range in which to evaluate the associated criteria
 - *Criteria1* is the form of a number, express, cell reference, or text that define which cells in the *Criteria_range1* argument will be added
 - *Criteria_range2*, *criteria2*, ... are the additional ranges and their associated criteria up to 127 range/criteria pairs are allowed
- ▶ Uses: When there is need to quickly report quantities by categories and to count multiple entries. For example, counting all servers in a Bill of Materials (BOM)

Vlookup, Hlookup

- ▶ Action: Searches for a value in the first column of a table array and returns a value in the same row from another column in the table array
- ▶ Formula: =**VLOOKUP**(lookup_value, table_array, col_index_num, range_lookup)
 - *Lookup_value* is the value to search in the first column of the table array. Lookup_value can be a value or a reference
 - *Table_array* is two or more columns of data. Use a reference to a range or a range name. The values in the first column of *table_array* are the values searched by *lookup_value*. These values can be text, numbers, or logical values. Uppercase and lowercase text are equivalent.
 - *Col_index_num* is the column number in *table_array* from which the matching value must be returned
 - *Range_lookup* is the logical value that specifies whether you want **vlookup** to find an exact match or an approximate match
- ▶ Uses: Lookup tables are useful when you want to compare a particular value to a set of values, and depending on where your value falls, assign a given “answer.”

Hlookup

- ▶ Action: Searches for a value in the first row of a table array and returns a value in the same column from another row in the table array
- ▶ Formula: =**HLOOKUP**(lookup_value, table_array, row_index_num, range_lookup)
 - *Lookup_value* is the value to search in the first row of the table array. Lookup_value can be a value or a reference
 - *Table_array* is two or more columns of data. Use a reference to a range or a range name. The values in the first row of *table_array* are the values searched by *lookup_value*. These values can be text, numbers, or logical values. Uppercase and lowercase text are equivalent.
 - *Row_index_num* is the row number in *table_array* from which the matching value must be returned
 - *Range_lookup* is the logical value that specifies whether you want **hlookup** to find an exact match or an approximate match
- ▶ Uses: Lookup tables are useful when you want to compare a particular value to a set of values, and depending on where your value falls, assign a given “answer.”

Tech Refresh using (Mod)

- ▶ Action: Returns the remainder after number is divided by divisor. The result has the same sign as divisor
- ▶ Formula: =**MOD**(number, divisor)
 - *Number* is the number for which you want to find the remainder
 - *Divisor* is the number by which you want to divide number
- ▶ Uses: Use the mod function to create a dynamic tech refresh

Questions?



Contact Information & Bio

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