How can I use the AGGREGATE function in Excel to perform calculations on a range of data while excluding hidden or error cells?

Authored by

stats writer

June 28, 2024

The AGGREGATE function in Excel is a powerful tool that allows users to perform calculations on a range of data while excluding any hidden or error cells. This function is particularly useful when working with large data sets that may contain hidden or erroneous values, as it allows for accurate and efficient calculation without the need for manually identifying and excluding these cells. By utilizing the AGGREGATE function, users can easily perform various calculations such as sum, average, maximum, minimum, and many others, while ensuring that only visible and valid data is included in the calculation. This helps to maintain data integrity and provides accurate results for data analysis and decision-making purposes.

Returns an aggregate in a list or database. The AGGREGATE function can apply different aggregate functions to a list or database with the option to ignore hidden rows and error values.

Syntax

Reference form

AGGREGATE(function_num, options, ref1, , ...)

Array form

AGGREGATE(function_num, options, array,)

The AGGREGATE function syntax has the following arguments:

Function_num Required. A number 1 to 19 that specifies which function to use.

Function_num	Function
1	AVERAGE
2	COUNT
3	COUNTA
4	MAX
5	MIN
6	PRODUCT
7	STDEV.S
8	STDEV.P
9	SUM

Function_num	Function
10	VAR.S
11	VAR.P
12	MEDIAN
13	MODE.SNGL
14	LARGE
15	SMALL
16	PERCENTILE.INC
17	QUARTILE.INC
18	PERCENTILE.EXC
19	QUARTILE.EXC

Options Required. A numerical value that determines which values to ignore in the evaluation range for the function.

Note: The function will not ignore hidden rows, nested subtotals or nested aggregates if the array argument includes a calculation, for example: **=AGGREGATE(14,3,A1:A100*(A1:A100>0),1)**

Option	Behavior
0 or omitted	Ignore nested SUBTOTAL and AGGREGATE functions
1	Ignore hidden rows, nested SUBTOTAL and AGGREGATE functions
2	Ignore error values, nested SUBTOTAL and AGGREGATE functions
3	Ignore hidden rows, error values, nested SUBTOTAL and AGGREGATE functions
4	Ignore nothing
5	Ignore hidden rows
6	Ignore error values
7	Ignore hidden rows and error values

Ref1 Required. The first numeric argument for functions that take multiple numeric arguments for which you want the aggregate value.

Ref2,... Optional. Numeric arguments 2 to 253 for which you want the aggregate value.

For functions that take an array, ref1 is an array, an array formula, or a reference to a range of

cells for which you want the aggregate value. Ref2 is a second argument that is required for certain functions. The following functions require a ref2 argument:

Function
LARGE(array,k)
SMALL(array,k)
PERCENTILE.INC(array,k)
QUARTILE.INC(array,quart)
PERCENTILE.EXC(array,k)
QUARTILE.EXC(array,quart)

Remarks

Function_num:

As soon as you type the function_num argument when you enter the AGGREGATE function into a cell on the worksheet, you will see a list of all functions that you can use as arguments.

Errors:

If a second ref argument is required but not provided, AGGREGATE returns a #VALUE! error.

If one or more of the references are 3-D references, AGGREGATE returns the #VALUE! error value.

Type of Range:

The AGGREGATE function is designed for columns of data, or vertical ranges. It is not designed for rows of data, or horizontal ranges. For example, when you subtotal a horizontal range using option 1, such as AGGREGATE(1, 1, ref1), hiding a column does not affect the aggregate sum value. But, hiding a row in vertical range does affect the aggregate.

Example

Copy the example data in the following table, and paste it in cell A1 of a new Excel worksheet. For formulas to show results, select them, press F2, and then press Enter. If you need to, you can adjust the column widths to see all the data.

#DIV/0!	82	
72	65	
30	95	
#NUM!	63	
31	53	
96	71	
32	55	
81	83	
33	100	
53	91	
34	89	
Formula	**Description**	**Result**
=AGGREGATE(4, 6, A1:A11)	Calculates the maximum value while ignoring error values in the range	96
=AGGREGATE(14, 6, A1:A11, 3)	Calculates the 3rd largest value while ignoring error values in the range	72
=AGGREGATE(15, 6, A1:A11)	Will return #VALUE! error. This is because AGGREGATE is expecting a second ref argument, since the function (SMALL) requires one.	#VALUE!
=AGGREGATE(12, 6, A1:A11, B1:B11)	Calculates the median while ignoring error values in the range	68
=MAX(A1:A2)	Will return error value, since there are error values in the evaluation range.	#DIV/0!