

How can I use the MINIFS function in Excel to find the smallest value in a range that meets certain criteria?

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The MINIFS function in Excel is a useful tool for finding the smallest value within a given range that meets specific criteria. This function allows users to set multiple criteria, such as a certain value or condition, and only returns the smallest value that satisfies all of the specified criteria. By using the MINIFS function, users can efficiently and accurately identify the smallest value in a range that meets their desired requirements, providing a quick and effective solution for data analysis and decision making.

The MINIFS function returns the minimum value among cells specified by a given set of conditions or criteria.

Note: This feature is available on Windows or Mac if you have Office 2019, or if you have a [Microsoft 365 subscription](#). If you are a Microsoft 365 subscriber, [make sure you have the latest version of Office](#).

Syntax

MINIFS(min_range, criteria_range1, criteria1, , ...)

Argument	Description
min_range (required)	The actual range of cells in which the minimum value will be determined.
criteria_range1 (required)	Is the set of cells to evaluate with the criteria.
criteria1 (required)	Is the criteria in the form of a number, expression, or text that defines which cells will be evaluated as minimum. The same set of criteria works for the MAXIFS , SUMIFS and AVERAGEIFS functions.
criteria_range2, criteria2, ... (optional)	Additional ranges and their associated criteria. You can enter up to 126 range/criteria pairs.

Remarks

The size and shape of the min_range and criteria_rangeN arguments must be the same, otherwise these functions return the #VALUE! error.

Examples

Copy the example data in each of the following tables, 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.

Example 1

Grade	Weight
89	1
93	2
96	2
85	3
91	1
88	1
Formula	Result
=MINIFS(A2:A7,B2:B7,1)	88 In criteria_range1 the cell B2, B6, and B7 match the criteria of 1. Of the corresponding cells in min_range, A7 has the minimum value. The result is therefore 88.

Example 2

Weight	Grade
10	b
11	a
100	a
111	b
1	a
1	a
Formula	Result
=MINIFS(A2:A5,B3:B6,"a")	10 Note: The criteria_range and min_range aren't aligned, but they are the same shape and size. In criteria_range1, the 1st, 2nd, and 4th cells match the criteria of "a." Of the corresponding cells in min_range, A2 has the minimum value. The result is therefore 10.

Example 3

Weight	Grade	Class	Level
10	b	Business	100

Weight	Grade	Class	Level
11	a	Technical	100
12	a	Business	200
13	b	Technical	300
14	b	Technical	300
15	b	Business	400
Formula	Result		
=MINIFS(A2:A7,B2:B7,"b",D2:D7,">100")	13 In criteria_range1, B2, B5, B6 and B7 match the criteria of "b." Of the corresponding cells in criteria_range2, D5, D6, and D7 match the criteria of >100. Finally, of the corresponding cells in min_range, D5 has the minimum value. The result is therefore 13.		

Example 4

Weight	Grade	Class	Level
10	b	Business	8
1	a	Technical	8
100	a	Business	8
11	b	Technical	0
1	a	Technical	8
1	b	Business	0
Formula	Result		
=MINIFS(A2:A7,B2:B7,"b",D2:D7,A8)	1 The criteria2 argument is A8. However, because A8 is empty, it is treated as 0 (zero). The cells in criteria_range2 that match 0 are D5 and D7. Finally, of the corresponding cells in min_range, A7 has the minimum value. The result is therefore 1.		

Example 5

Weight	Grade
10	b
1	a
100	a
1	b
1	a
1	a
Formula	Result
=MINIFS(A2:A5,B2:C6,"a")	#VALUE! Because the size and shape of the min_range and criteria_range aren't the same, MINIFS returns the #VALUE! error.

Example 6

Weight	Grade	Class	Level
10	b	Business	100
1	a	Technical	100
100	a	Business	200
1	b	Technical	300
1	a	Technical	100
1	a	Business	400
Formula	Result		
=MINIFS(A2:A6,B2:B6,"a",D2:D6,">200")	0 No cells match the criteria.		

See Also

[MAXIFS function](#)

[SUMIFS function](#)

[AVERAGEIFS function](#)

[COUNTIFS function](#)