

# How can I use the SORTBY function in Excel?

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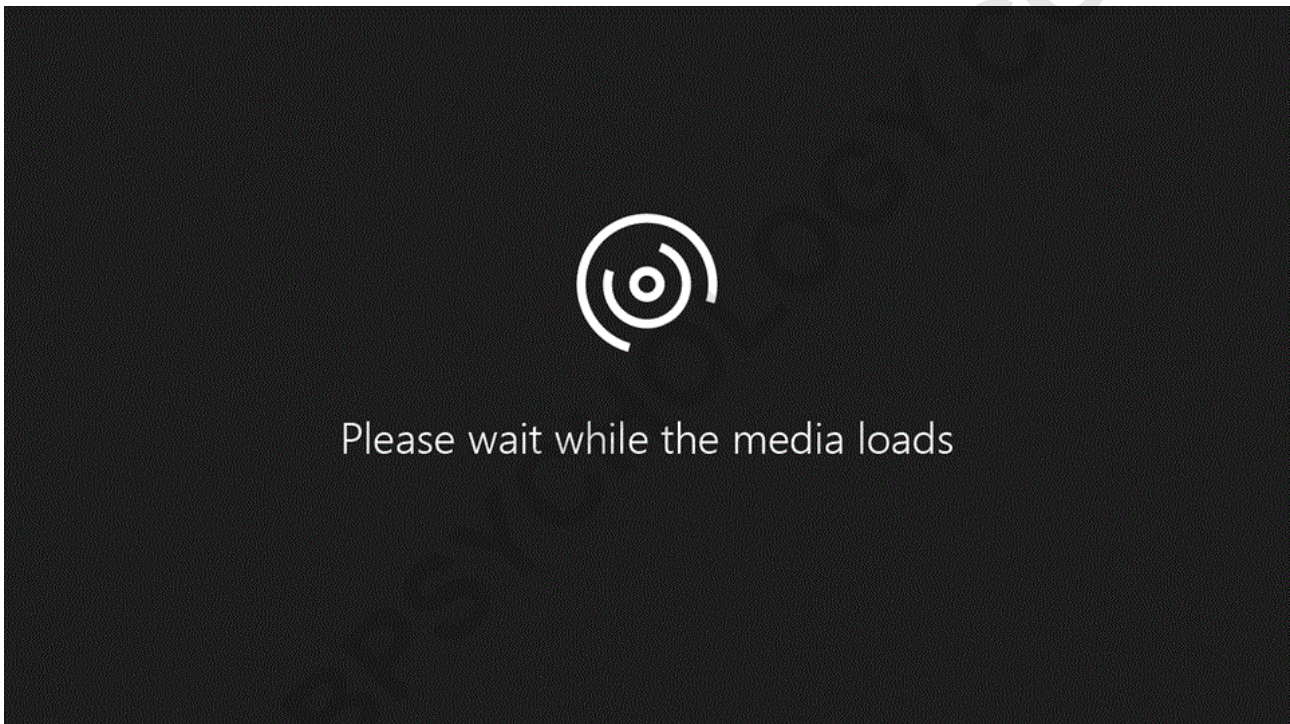
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## RECOMMENDED CITATION

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The SORTBY function in Excel is a powerful tool that allows users to sort data in a specific order based on one or more selected criteria. This function is particularly useful for organizing large sets of data and quickly identifying patterns or trends. To use the SORTBY function, simply select the data range and then specify the columns or criteria by which you want to sort the data. This function also allows for the flexibility to sort data in ascending or descending order. Overall, the SORTBY function is a useful feature in Excel for efficiently organizing and analyzing data.

The SORTBY function sorts the contents of a range or array based on the values in a corresponding range or array.



In this example, we're sorting a list of people's names by their age, in ascending order.

fx		=SORTBY(D2:E9,E2:E9)			
	D	E	F	G	H
	Name	Age	Name	Age	
	Tom	52	Fritz	19	
	Fred	65	Xi	19	
	Amy	22	Amy	22	
	Sal	73	Srivan	39	
	Fritz	19	Tom	52	
	Srivan	39	Fred	65	
	Xi	19	Hector	66	
	Hector	66	Sal	73	

**=SORTBY(array, by\_array1, , ...)**

Argument	Description
<b>array</b> Required	The array or range to sort
<b>by_array1</b> Required	The array or range to sort on
Optional	The order to use for sorting. 1 for ascending, -1 for descending. Default is ascending.
Optional	The array or range to sort on
Optional	The order to use for sorting. 1 for ascending, -1 for descending. Default is ascending.

#### Notes:

An array can be thought of as a row of values, a column of values, or a combination of rows and columns of values. In the example above, the array for our SORTBY formula is range D2:E9.

The SORTBY function will return an array, which will spill if it's the final result of a formula. This means that Excel will dynamically create the appropriate sized array range when you press **ENTER**. If your supporting data is in an Excel Table, then the array will automatically resize as you add or remove data from your array range if you're using Structured References. For more details, see this article on Spilled Array Behavior.

Excel has limited support for dynamic arrays between workbooks, and this scenario is only supported when **both** workbooks are open. If you close the source workbook, any linked dynamic array formulas will return a #REF! error when they are refreshed.

## Examples

Sort a table by Region in ascending order, then by each person's age, in descending order.

`=SORTBY(tbl_NameAge2,tbl_NameAge2[Region],1,tbl_NameAge2[Age],-1)`

Region	Name	Age	Region	Name	Age
East	Tom	52	East	Tom	52
West	Fred	65	East	Fritz	19
North	Amy	22	North	Amy	22
South	Sal	73	North	Xi	19
East	Fritz	19	South	Sal	73
West	Srivan	39	South	Hector	66
North	Xi	19	West	Fred	65
South	Hector	66	West	Srivan	39

Use SORTBY with RANDARRAY, and COUNTA to randomize a list of values. In this case, E2# references the dynamic array range beginning in cell E2, as that was populated by using =SEQUENCE(10). The # sign is called the spilled range operator.

`=SORTBY(E2#,RANDARRAY(COUNTA(E2#)))`

Units	SORTBY
1	2
2	9
3	5
4	3
5	4
6	1
7	7
8	8
9	6
10	10

Use SORTBY to sort a table of temperature and rainfall values by high temperature.

	A	B	C	D	E	F	G	H	I
1	Month	High	Low	Precip		Month	High	Low	Precip
2	Jan	45	36	5.20		Jan	45	36	5.20
3	Feb	48	37	3.90		Dec	47	38	5.43
4	Mar	52	39	3.31		Feb	48	37	3.90
5	Apr	58	43	1.97		Nov	51	41	5.00
6	May	64	47	1.57		Mar	52	39	3.31
7	Jun	69	52	1.42		Apr	58	43	1.97
8	Jul	72	54	0.63		Oct	59	47	3.27
9	Aug	73	55	0.75		May	64	47	1.57
10	Sep	67	52	1.65		Sep	67	52	1.65
11	Oct	59	47	3.27		Jun	69	52	1.42
12	Nov	51	41	5.00		Jul	72	54	0.63
13	Dec	47	38	5.43		Aug	73	55	0.75

## Error conditions

The `by_array` arguments must either be one row high, or one column wide.

All of the arguments must be the same size.

If the sort order argument is not -1, or 1, the formula will result in a `#VALUE!` error. If you leave out the sort order argument, Excel will default to ascending order.

## See Also

[FILTER function](#)

[RANDARRAY function](#)

[SEQUENCE function](#)

[SORT function](#)

[UNIQUE function](#)

[#SPILL! errors in Excel](#)

[Dynamic arrays and spilled array behavior](#)

[Implicit intersection operator: @](#)