How can I use the MAP function in Excel?

Authored by

stats writer

June 30, 2024

The MAP function in Excel is a powerful tool that allows users to apply a specific formula or function to a range of cells in a spreadsheet. This function can be used to quickly and efficiently perform calculations, such as adding or multiplying values, on a large set of data. By specifying the range of cells and the desired formula, the MAP function will automatically apply the formula to each cell in the range, saving time and effort for the user. This feature is particularly useful for analyzing and manipulating large amounts of data in a structured and organized manner. Overall, the MAP function in Excel offers a convenient and effective way to perform calculations on multiple cells simultaneously.

Returns an array formed by mapping each value in the array(s) to a new value by applying a LAMBDA to create a new value.

Syntax

=MAP (array1, lambda_or_array<#>)

The MAP function syntax has the following arguments and parameters:

array1 An array to be mapped.

lambda_or_array<#> A LAMBDA which must be the last argument and which must have either a parameter for each array passed, or another array to be mapped.

Errors

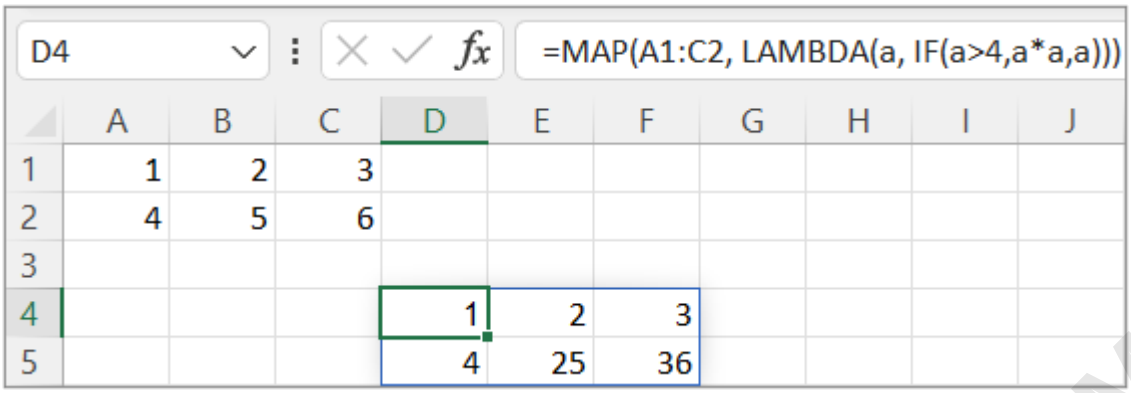
Providing an invalid LAMBDA function or an incorrect number of parameters returns a #VALUE! error called "Incorrect Parameters".

Examples

Example 1: Square numbers above a certain value

Enter the sample data into cells A1:C2, and then copy the formula into cell D4:

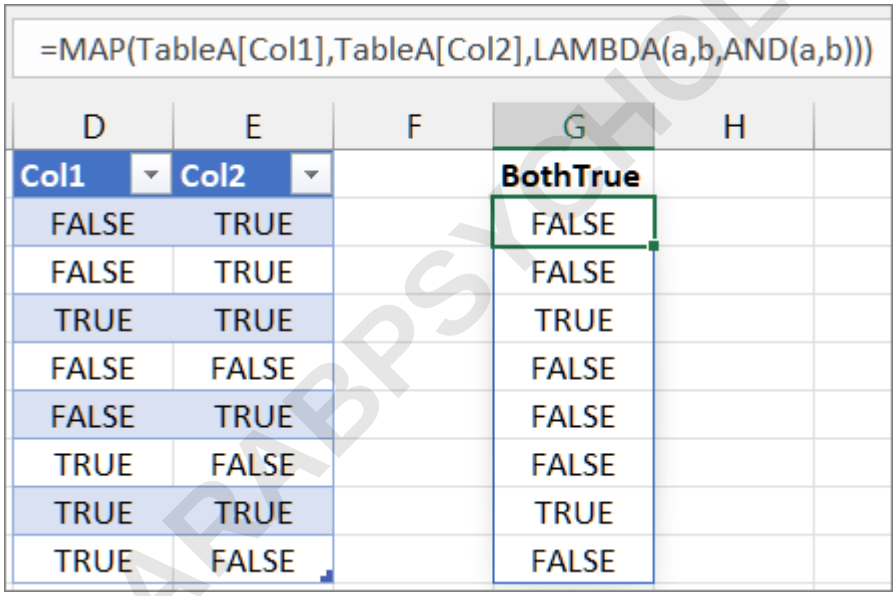
=MAP(A1:C2, LAMBDA(a, IF(a>4,a*a,a)))



Example 2: Find values from two columns in one row that are both TRUE

Create a table named "TableA" with two columns named "Col1" and "Col2" starting in cell D1. Add a column named "BothTrue" in cell G1. Copy the formula into cell G2:

=MAP(TableA,TableA,LAMBDA(a,b,AND(a,b)))



Col1	Col2	BothTrue
FALSE	TRUE	FALSE
FALSE	TRUE	FALSE
TRUE	TRUE	TRUE
FALSE	FALSE	FALSE
FALSE	TRUE	FALSE
TRUE	FALSE	FALSE
TRUE	TRUE	TRUE
TRUE	FALSE	FALSE

Example 3: Find values from three columns in one row that meet certain criteria

Create a range of the sample data with two columns named "Size" and "Color" in cells D1:E11. Add two column headers named "Valid Size" and "Valid Color" in cells F1 and G1 respectively. Copy the formula into cell F2:

=FILTER(D2:E11,MAP(D2:D11,E2:E11,LAMBDA(s,c,AND(s="Large",c="Red"))))

```
=FILTER(D2:E11,MAP(D2:D11,E2:E11,LAMBDA(s,c,AND(s="Large",c="Red"))))
```

D	E	F	G	H	I	J
Size	**Color**	**Valid Size**	**Valid Color**			
Medium	Red	Large	Red			
Large	Green					
Medium	Blue					
Medium	Blue					
Medium	Red					
Large	Red					
Medium	Blue					
Small	Blue					
Medium	Green					
Large	Green					