

What is the Excel SUMIFS function and how is it used?

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June 29, 2024

RECOMMENDED CITATION

stats writer (2024). *What is the Excel SUMIFS function and how is it used?*.

PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=158326>

The Excel SUMIFS function is a built-in formula that allows users to sum values in a range based on multiple criteria. It is used to calculate the total of a specific set of data that meets certain conditions. This function is particularly useful when working with large datasets that require complex calculations. By specifying the criteria for the data to be included in the sum, the SUMIFS function can quickly and accurately produce the desired result. It is commonly used in financial analysis, data management, and other business applications. Overall, the Excel SUMIFS function simplifies the process of summing data in a spreadsheet while providing flexibility and efficiency.

Excel SUMIFS Function

SUMIFS Function

The **SUMIFS** function is a premade function in Excel, which calculates the sum of a range based on one or more **true** or **false** condition.

It is typed =SUMIFS:

=SUMIFS(**sum_range**, **criteria_range1**, **criteria1**, ...)

The **conditions** are referred to as criteria1, criteria2, and so on, which can check things like:

If a number is **greater than** another number > If a number is **smaller than** another number < If a number or text is **equal** to something =

The **criteria_range1**, **criteria_range2**, and so on, are the ranges where the function check for the conditions.

The is the range where the function calculates the sum.

Note: The different parts of the function are separated by a symbol, like comma , or semicolon ;

The symbol depends on your Language Settings.

Example SUMIFS function

Find the sum of total stats for Water type 1st Generation Pokemon:

The conditions are that the type is "Water" and Generation is 1.

	A	B	C	D	E	F	G	H	I
1	Name	Type 1	Total	Generation					
2	Bulbasaur	Grass	318	1		Type	Gen.	Total Sum	
3	Ivysaur	Grass	405	1		Water	1		
4	Venusaur	Grass	525	1		Water	2		
5	Charmander	Fire	309	1		Water	3		
6	Charmeleon	Fire	405	1		Water	4		
7	Charizard	Fire	534	1					
8	Squirtle	Water	314	1					
9	Wartortle	Water	405	1					
10	Blastoise	Water	530	1					
11	Caterpie	Bug	195	1					
12	Metapod	Bug	205	1					
13	Butterfree	Bug	395	1					
14	Weedle	Bug	195	1					

Note: The full dataset continues after row 14, all the way down to row 759.

Example **SUMIFS** function, step by step:

Select the cell H3Type =SUMIFSDouble click the **SUMIFS** command

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Name	Type 1	Total	Generation									
2	Bulbasaur	Grass	318	1		Type	Gen.	Total Sum					
3	Ivysaur	Grass	405	1		Water	1	=SUMIFS					
4	Venusaur	Grass	525	1		Water	2						
5	Charmander	Fire	309	1		Water	3						
6	Charmeleon	Fire	405	1		Water	4						
7	Charizard	Fire	534	1									
8	Squirtle	Water	314	1									
9	Wartortle	Water	405	1									
10	Blastoise	Water	530	1									
11	Caterpie	Bug	195	1									
12	Metapod	Bug	205	1									
13	Butterfree	Bug	395	1									
14	Weedle	Bug	195	1									

Specify the range for the sum C2:C759 (the Total values)Type , Specify the range for the first conditionB2:B759 (the Type 1 values)Type , Specify the criteria (the cell F3, which has the value "Water")Type , Specify the range for the second conditionD2:D759 (the Generation values)Type , Specify the criteria (the cell G3, which has the value "1")Hit enter

Note: You can add more conditions by repeating steps 9-12 before hitting enter.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Name	Type 1	Total	Generation										
2	Bulbasaur	Grass	318	1		Type	Gen.	Total Sum						
3	Ivysaur	Grass	405	1		Water	1	=SUMIFS(C2:C759; B2:B759; F3; D2:D759; G3)						
4	Venusaur	Grass	525	1		Water	2	SUMIFS (sum_range; criteria_range1; criteria1; [criteria_range2; criteria2]; [criteria_range3; ...])						
5	Charmander	Fire	309	1		Water	3							
6	Charmeleon	Fire	405	1		Water	4							
7	Charizard	Fire	534	1										
8	Squirtle	Water	314	1										
9	Wartortle	Water	405	1										
10	Blastoise	Water	530	1										
11	Caterpie	Bug	195	1										
12	Metapod	Bug	205	1										
13	Butterfree	Bug	395	1										
14	Weedle	Bug	195	1										

The function now calculates the sum of total stats for the 1st Generation Water type Pokemon.

The function can be repeated for the following Generations to compare them:

	A	B	C	D	E	F	G	H	I	J	K
1	Name	Type 1	Total	Generation							
2	Bulbasaur	Grass	318	1		Type	Gen.	Total Sum			
3	Ivysaur	Grass	405	1		Water	1	=SUMIFS(C2:C759; B2:B759; F3; D2:D759; G3)			
4	Venusaur	Grass	525	1		Water	2	=SUMIFS(C2:C759; B2:B759; F4; D2:D759; G4)			
5	Charmander	Fire	309	1		Water	3	=SUMIFS(C2:C759; B2:B759; F5; D2:D759; G5)			
6	Charmeleon	Fire	405	1		Water	4	=SUMIFS(C2:C759; B2:B759; F6; D2:D759; G6)			
7	Charizard	Fire	534	1				SUMIFS (sum_range; criteria_range1; criteria1; [criteria_range2; criteria2]; [criteria_range3; ...])			
8	Squirtle	Water	314	1							
9	Wartortle	Water	405	1							
10	Blastoise	Water	530	1							
11	Caterpie	Bug	195	1							
12	Metapod	Bug	205	1							
13	Butterfree	Bug	395	1							
14	Weedle	Bug	195	1							

Note: You can use the filling function for the other rows, but make sure to use absolute references for the ranges.

Now, we can see the sum of total stats of Water type Pokemon between generations:

	A	B	C	D	E	F	G	H	I
1	Name	Type 1	Total	Generation					
2	Bulbasaur	Grass	318	1		Type	Gen.	Total Sum	
3	Ivysaur	Grass	405	1		Water 1		12744	
4	Venusaur	Grass	525	1		Water 2		7514	
5	Charmander	Fire	309	1		Water 3		10497	
6	Charmeleon	Fire	405	1		Water 4		5769	
7	Charizard	Fire	534	1					
8	Squirtle	Water	314	1					
9	Wartortle	Water	405	1					
10	Blastoise	Water	530	1					
11	Caterpie	Bug	195	1					
12	Metapod	Bug	205	1					
13	Butterfree	Bug	395	1					
14	Weedle	Bug	195	1					

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