

# What is the purpose of the SUMIFS function in Google Sheets?

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## RECOMMENDED CITATION

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The SUMIFS function in Google Sheets is designed to calculate the sum of a set of values that meet multiple criteria. This allows users to specify certain conditions that must be met for the values to be included in the sum calculation. The purpose of this function is to provide a more efficient and accurate way to perform complex sum calculations, especially when working with large data sets. It also allows for greater flexibility and customization in the summation process. Overall, the SUMIFS function helps users to quickly and accurately retrieve data that meets specific criteria, making data analysis and decision-making more efficient and effective in Google Sheets.

## Google Sheets SUMIFS Function

### SUMIFS Function

The **SUMIFS** function is a premade function in Google Sheets, 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**, **criterion1**, , )

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.

### 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	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>Generation</b>					
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 H3 Type =SUMIFS Click the **SUMIFS** command

	A	B	C	D	E	F	G	H	I	J	K
1	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>Generation</b>							
2	Bulbasaur	Grass	318	1		Type	Gen.	Total Sum			
3	Ivysaur	Grass	405	1		Water	1	=SUMIFS			
4	Venusaur	Grass	525	1		Water	2	SUMIFS			
5	Charmander	Fire	309	1		Water	3	Sums a range depending on multiple criteria.			
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
1	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>Generation</b>							
2	Bulbasaur	Grass	318	1		Type	Gen.	12744 ×			
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, ^ ×			
5	Charmander	Fire	309	1		Water	3	criteria_range2, ...],			
6	Charmeleon	Fire	405	1		Water	4	[criterion2, ...])			
7	Charizard	Fire	534	1				EXAMPLE			
8	Squirtle	Water	314	1				SUMIFS(A1:A10, B1:B10, ">20", C1:C10,			
9	Wartortle	Water	405	1				"<30")			
10	Blastoise	Water	530	1				ABOUT			
11	Caterpie	Bug	195	1				Returns the sum of a range depending on multiple criteria.			
12	Metapod	Bug	205	1							
13	Butterfree	Bug	395	1				sum_range			
14	Weedle	Bug	195	1				The range to sum.			
15	Kakuna	Bug	205	1				criteria_range1			
16	Beedrill	Bug	395	1				The range to check against criterion1.			
17	Pidgey	Normal	251	1				criterion1			
18	Pidgeotto	Normal	349	1				The pattern or test to apply to criteria_range1.			
19	Pidgeot	Normal	479	1				criteria_range2... - [optional] repeatable			
20	Rattata	Normal	253	1				Additional ranges to check.			
21	Raticate	Normal	413	1				criterion2... - [optional] repeatable			
22	Spearow	Normal	262	1				Additional criteria to check.			
23	Fearow	Normal	442	1				<a href="#">Learn more</a>			

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
1	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>Generation</b>					
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	5769 × S(C2:C759, B2:B759, F5, D2:D759, G5)	
6	Charmeleon	Fire	405	1		Water	?	=SUMIFS(C2:C759, B2:B759, F6, D2:D759, G6)	
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:** 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	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>Generation</b>					
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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