

How can the AVERAGEIFS function in Google Sheets be used to calculate the average of a range based on multiple criteria?

Authored by
stats writer

June 29, 2024

RECOMMENDED CITATION

stats writer (2024). *How can the AVERAGEIFS function in Google Sheets be used to calculate the average of a range based on multiple criteria?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=160240>

The AVERAGEIFS function in Google Sheets is a useful tool for calculating the average of a range of data that meets specific criteria. It allows users to define multiple criteria and only calculates the average for data points that satisfy all of those criteria. This function is particularly helpful when working with large data sets that require precise filtering. By using the AVERAGEIFS function, users can easily calculate the average of a range based on specific conditions, such as a specific date range, product category, or customer segment. This not only saves time but also ensures accuracy in the calculations. Overall, the AVERAGEIFS function in Google Sheets provides a convenient and efficient way to calculate averages based on multiple criteria.

Google Sheets AVERAGEIFS Function

AVERAGEIFS Function

The **AVERAGEIFS** function is a premade function in Google Sheets, which calculates the average of a range based on one or more **true** or **false** condition.

It is typed `=AVERAGEIFS`:

`=AVERAGEIFS(average_range, criteria_range1, criterion1, ...)`

The **conditions** are referred to as `criterion1`, `criterion2`, .. 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 `average_range` is the range where the function calculates the average.

Example AVERAGEIFS function

Find the average defense of Grass type 1st Generation Pokemon:

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

	A	B	C	D	E	F	G	H	I
1	Name	Type 1	Defense	Generation					
2	Bulbasaur	Grass	49	1		Type	Gen.	Average Defense	
3	Ivysaur	Grass	63	1		Grass	1		
4	Venusaur	Grass	83	1		Fire	1		
5	Charmander	Fire	43	1		Grass	2		
6	Charmeleon	Fire	58	1		Fire	2		
7	Charizard	Fire	78	1					
8	Chikorita	Grass	65	2					
9	Bayleef	Grass	80	2					
10	Meganium	Grass	100	2					
11	Cyndaquil	Fire	43	2					
12	Quilava	Fire	58	2					
13	Typhlosion	Fire	78	2					
14									

Example **AVERAGEIFS** function, step by step:

Select the cell H3 Type =AVERAGEIFS Click the **AVERAGEIFS** command

	A	B	C	D	E	F	G	H	I	J	K
1	Name	Type 1	Defense	Generation							
2	Bulbasaur	Grass	49	1		Type	Gen.	Average Defense			
3	Ivysaur	Grass	63	1		Grass	1	=AVERAGEIFS			
4	Venusaur	Grass	83	1		Fire	1	AVERAGEIFS			
5	Charmander	Fire	43	1		Grass	2	Average of values depending on multiple criteria.			
6	Charmeleon	Fire	58	1		Fire	2				
7	Charizard	Fire	78	1							
8	Chikorita	Grass	65	2							
9	Bayleef	Grass	80	2							
10	Meganium	Grass	100	2							
11	Cyndaquil	Fire	43	2							
12	Quilava	Fire	58	2							
13	Typhlosion	Fire	78	2							
14											

Specify the range for the average C2:C13 (the Defense values) Type , Specify the range for the first condition B2:B13 (the Type 1 values) Type , Specify the criteria (the cell F3, which has the value "Grass") Type , Specify the range for the second condition D2:D13 (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	Name	Type 1	Defense	Generation							
2	Bulbasaur	Grass	49	1		Type	Gen.	65 ×			
3	Ivysaur	Grass	63	1		Grass	1	=AVERAGEIFS(C2:C13, B2:B13, F3, D2:D13, G3			
4	Venusaur	Grass	83	1		Fire	1	AVERAGEIFS(average_range,			
5	Charmander	Fire	43	1		Grass	2	criteria_range1, criterion1,			
6	Charmeleon	Fire	58	1		Fire	2	[criteria_range2, ...], [criterion2, ...]			
7	Charizard	Fire	78	1)			
8	Chikorita	Grass	65	2				EXAMPLE			
9	Bayleef	Grass	80	2				AVERAGEIFS(A1:A10, B1:B10, ">20", C1:C10,			
10	Meganium	Grass	100	2				"<30")			
11	Cyndaquil	Fire	43	2				ABOUT			
12	Quilava	Fire	58	2				Returns the average of a range depending on multiple criteria.			
13	Typhlosion	Fire	78	2							
14								average_range			
15								The range to average.			
16								criteria_range1			
17								The range to check against criterion1.			
18								criterion1			
19								The pattern or test to apply to criteria_range1.			
20								criteria_range2... - [optional] repeatable			
21								Additional ranges to check.			
22								criteria_range2... - [optional] repeatable			
23								Additional criteria to check.			
24								Learn more			

The function now calculates the average defense value of the 1st Generation Grass type Pokemon: Bulbasaur, Ivysaur and Venusaur.

The function can be repeated for Fire type Pokemon and 2nd Generation to compare them:

	A	B	C	D	E	F	G	H	I
1	Name	Type 1	Defense	Generation					
2	Bulbasaur	Grass	49	1		Type	Gen.	Average Defense	
3	Ivysaur	Grass	63	1		Grass	1	=AVERAGEIFS(C2:C13, B2:B13, F3, D2:D13, G3)	
4	Venusaur	Grass	83	1		Fire	1	=AVERAGEIFS(C2:C13, B2:B13, F4, D2:D13, G4)	
5	Charmander	Fire	43	1		Grass	2	59.67 × AVERAGEIFS(C2:C13, B2:B13, F5, D2:D13, G5)	
6	Charmeleon	Fire	58	1		Fire	2	=AVERAGEIFS(C2:C13, B2:B13, F6, D2:D13, G6)	
7	Charizard	Fire	78	1					
8	Chikorita	Grass	65	2					
9	Bayleef	Grass	80	2					
10	Meganium	Grass	100	2					
11	Cyndaquil	Fire	43	2					
12	Quilava	Fire	58	2					
13	Typhlosion	Fire	78	2					
14									

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 average defense values of each type between generations:

	A	B	C	D	E	F	G	H	I
1	Name	Type 1	Defense	Generation					
2	Bulbasaur	Grass	49	1		Type	Gen.	Average Defense	
3	Ivysaur	Grass	63	1		Grass	1	65.00	
4	Venusaur	Grass	83	1		Fire	1	59.67	
5	Charmander	Fire	43	1		Grass	2	81.67	
6	Charmeleon	Fire	58	1		Fire	2	59.67	
7	Charizard	Fire	78	1					
8	Chikorita	Grass	65	2					
9	Bayleef	Grass	80	2					
10	Meganium	Grass	100	2					
11	Cyndaquil	Fire	43	2					
12	Quilava	Fire	58	2					
13	Typhlosion	Fire	78	2					
14									

Notice how the 2nd Generation Grass type Pokemon got more defense, but the Fire type stayed the same.

★+1 W3schools PathfinderTrack your progress - it's free!

Log in

Sign Up