

What is the formula for calculating standard deviation using the STDEV.P function in Google Sheets?

Authored by
stats writer

June 30, 2024

RECOMMENDED CITATION

stats writer (2024). *What is the formula for calculating standard deviation using the STDEV.P function in Google Sheets?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=160554>

The STDEV.P function in Google Sheets is a statistical tool that calculates the standard deviation of a given set of data. Standard deviation is a measure of how spread out the data is from the average value. The formula for calculating standard deviation using the STDEV.P function in Google Sheets is: =STDEV.P (range). This formula takes into account all the values in the specified range and calculates the standard deviation using the population standard deviation method. This function is useful for analyzing and comparing data sets in various fields such as finance, science, and business. By using the STDEV.P function, users can easily determine the amount of variability in their data and make informed decisions based on the results.

Google Sheets STDEV.P Function

STDEV.P Function

The **STDEV.P** function is a premade function in Google Sheets, which calculates the **Standard Deviation (Stdev)** for the entire population.

It is typed =STDEV.P and gets a list of cells:

=STDEV.P(**value1**,)

You can select cells one by one, but also ranges, or even multiple ranges.

The STDEV.P function ignores cells that do not contain numbers.

Note: Standard deviation (σ) measures how far a 'typical' observation is from the average of the data (μ). You can read more about standard deviation in the Statistics - Standard Deviation Chapter.

Tip: There is another function called =STDEV.S that can be used if you have the data for a **sample**.

Let's have a look at an example!

Stdev.p Function Example

Find the standard deviation of the total stats for all of the Pokemon in the population:

	A	B	C	D	E
1	Name	Total			
2	Bulbasaur	318			
3	Ivysaur	405		STDEV.P	
4	Venusaur	525			
5	Charmander	309			
6	Charmeleon	405			
7	Charizard	534			
8	Squirtle	314			
9	Wartortle	405			
10	Blastoise	530			
11	Caterpie	195			
12	Metapod	205			
13	Butterfree	395			
14	Weedle	195			

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

The **STDEV.P** function, step by step:

Select the cell E3Type =STDEV.PClick the **STDEV.P** command

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

STDEV . P
Standard deviation of an entire population.

Specify the range B2:B759 for the Total stats for all the PokemonHit enter

	A	B	C	D	E	F	G	H
1	Name	Total						
2	Bulbasaur	318			113.9159026 x			
3	Ivysaur	405		STDEV.P	=STDEV.P(B2:B759)			
4	Venusaur	525						
5	Charmander	309						
6	Charmeleon	405						
7	Charizard	534						
8	Squirtle	314						
9	Wartortle	405						
10	Blastoise	530						
11	Caterpie	195						
12	Metapod	205						
13	Butterfree	395						
14	Weedle	195						
15	Kakuna	205						
16	Beedrill	395						

STDEV.P(**value1**, [value2, ...])

EXAMPLE
STDEV.P(1, 2)

ABOUT
Calculates the standard deviation based on an entire population.

value1
The first value or range of the population.

value2... - [optional] repeatable
Additional values or ranges to include in the population.

[Learn more](#)

Now, the function returns the standard deviation of all the Total stat values:

	A	B	C	D	E	F
1	Name	Total				
2	Bulbasaur	318				
3	Ivysaur	405		STDEV.P	113.9159026	
4	Venusaur	525				
5	Charmander	309				
6	Charmeleon	405				
7	Charizard	534				
8	Squirtle	314				
9	Wartortle	405				
10	Blastoise	530				
11	Caterpie	195				
12	Metapod	205				
13	Butterfree	395				
14	Weedle	195				

The **STDEV.P** function has successfully returned the **Standard Deviation** for the whole population as 113,9159026.

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

Log in

Sign Up