

How do I use the FREQUENCY function in Excel to calculate the distribution of values in a data set?

Authored by
stats writer

June 29, 2024

RECOMMENDED CITATION

stats writer (2024). *How do I use the FREQUENCY function in Excel to calculate the distribution of values in a data set?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=160087>

The FREQUENCY function in Excel is a useful tool for calculating the distribution of values in a data set. It allows users to easily determine the frequency at which specific values occur within a range of data. To use this function, one must first select the data set and create a separate range of values to serve as bins or categories. The FREQUENCY function will then count the number of values that fall within each bin and return the results in a new array. This provides a visual representation of the distribution of values within the data set, making it easier to analyze and interpret the data. Overall, the FREQUENCY function is a valuable feature in Excel for understanding the distribution of values in a data set.

The FREQUENCY function calculates how often values occur within a range of values, and then returns a vertical array of numbers. For example, use FREQUENCY to count the number of test scores that fall within ranges of scores. Because FREQUENCY returns an array, it must be entered as an array formula.

FREQUENCY(data_array, bins_array)

The FREQUENCY function syntax has the following arguments:

data_array Required. An array of or reference to a set of values for which you want to count frequencies. If data_array contains no values, FREQUENCY returns an array of zeros.

bins_array Required. An array of or reference to intervals into which you want to group the values in data_array. If bins_array contains no values, FREQUENCY returns the number of elements in data_array.

Note: If you have a current version of [Microsoft 365](#), then you can simply enter the formula in the top-left-cell of the output range, then press **ENTER** to confirm the formula as a dynamic array formula. Otherwise, the formula must be entered as a legacy array formula by first selecting the output range, entering the formula in the top-left-cell of the output range, and then pressing **CTRL+SHIFT+ENTER** to confirm it. Excel inserts curly brackets at the beginning and end of the formula for you. For more information on array formulas, see [Guidelines and examples of array formulas](#).

The number of elements in the returned array is one more than the number of elements in bins_array. The extra element in the returned array returns the count of any values above the highest interval. For example, when counting three ranges of values (intervals) that are entered into three cells, be sure to enter FREQUENCY into four cells for the results. The extra cell returns the number of values in data_array that are greater than the third interval value.

FREQUENCY ignores blank cells and text.

Example

	A	B	C
1	Scores	Bins	
2	79	70	
3	85	79	
4	78	89	
5	85		
6	50		
7	81		
8	95		
9	88		
10	97		
11			
12	Formula	=FREQUENCY(A2:A10, B2:B4)	
13			Formula description
14	Output	1	Number of scores less than or equal to 70
15		2	Number of scores in the bin 71-79
16		4	Number of scores in the bin 80-89
17		2	Number of scores greater than or equal to 90
18			