

# ? How can I calculate the variability of a dataset in Google Sheets?

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July 1, 2024

## RECOMMENDED CITATION

stats writer (2024). ? How can I calculate the variability of a dataset in Google Sheets?.  
PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=163300>

The method of calculating the variability of a dataset in Google Sheets involves using the built-in statistical functions to calculate the measures of dispersion, such as range, variance, and standard deviation. These functions can be found under the "Statistical" category in the "Insert Function" menu. By inputting the dataset into the appropriate function, Google Sheets will automatically calculate and display the variability measures, providing a comprehensive understanding of the spread of the data. This method allows for quick and efficient analysis of data variability within a Google Sheets document.

## VARP

Calculates the variance based on an entire population.

VARP for BigQuery

Calculates the population variance of a data column.

## Sample Usage

```
=VARP(table_name!price)
```

## Syntax

```
VARP(column)
```

**column**: The data column of the population. **Tip**: Returning population variance across multiple columns is not supported.

## Sample Usage

```
VARP(1,2,3,4,5,6,7,8,9,10)
```

```
VARP(A2:A100)
```

## Syntax

```
VARP(value1, )
```

**value1** - The first value or range of the population.

**value2, ...** - Additional values or ranges to include in the population.

## Notes

Although `VARP` is specified as taking a maximum of 30 arguments, Google Sheets supports an arbitrary number of arguments for this function.

If the total number of values supplied as `value` arguments is not at least two, `VARP` will return the `#DIV/0!` error.

`VARP` will ignore any of the `value` arguments that include text. To calculate variance while interpreting text values as 0, use `VARPA`.

`VARP` calculates variance for an entire population. To calculate variance across a sample, use `VAR`.

`VARP` takes the sum of the squares of each value's deviation from the mean and divides by the number of such values. This differs from the calculation of variance across a sample in that the latter divides by the size of the dataset minus one.

## See Also

`VARPA`: Calculates the variance based on an entire population, setting text to the value ``0``.

`VARA`: Calculates the variance based on a sample, setting text to the value ``0``.

`VAR`: Calculates the variance based on a sample.

`STDEVPA`: Calculates the standard deviation based on an entire population, setting text to the value ``0``.

`STDEVP`: Calculates the standard deviation based on an entire population.

`STDEVA`: Calculates the standard deviation based on a sample, setting text to the value ``0``.

`STDEV`: The `STDEV` function calculates the standard deviation based on a sample.

`SKEW`: Calculates the skewness of a dataset, which describes the symmetry of that dataset about the mean.

`KURT`: Calculates the kurtosis of a dataset, which describes the shape, and in particular the "peakedness" of that dataset.

`DVARP`: Returns the variance of an entire population selected from a database table-like array or range using a SQL-like query.

`DVAR`: Returns the variance of a population sample selected from a database table-like array or

range using a SQL-like query.

**DSTDEVP**: Returns the standard deviation of an entire population selected from a database table-like array or range using a SQL-like query.

**DSTDEV**: Returns the standard deviation of a population sample selected from a database table-like array or range using a SQL-like query.

**DEVSQ**: Calculates the sum of squares of deviations based on a sample.

**AVEDEV**: Calculates the average of the magnitudes of deviations of data from a dataset's mean.

## Examples

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