“How can I calculate the covariance between two datasets in Google Sheets?”

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The process of determining the covariance between two datasets in Google Sheets involves using the COVARIANCE function, which calculates the measure of how two variables change together. This function takes in two arrays of data and returns the covariance value. It is useful in analyzing the relationship between two sets of data and determining if they have a positive, negative, or no correlation. By following a few simple steps, the covariance between two datasets can be easily calculated in Google Sheets, providing valuable insights for data analysis and decision making.

COVARIANCE.S function

The COVARIANCE.S function calculates the covariance of a dataset, where the dataset is a sample of the total population.

Parts of a COVARIANCE.S function

```
COVARIANCE.S(data_y, data_x)
```

Part	Description
`data_y`	The range representing the array or matrix of dependent data.
`data_x`	The range representing the array or matrix of independent data.

Sample formulas

```
COVARIANCE.S(A1:A10)
```

```
COVARIANCE.S(1, 2, 3, 4)
```

```
COVARIANCE.S(B1:B5, 10)
```

Notes

Any text encountered in the `value` arguments will be ignored.Positive covariance indicates that the independent data and dependent data tend to change together in the same direction.Negative covariance indicates that they tend to change together in the opposite direction. An increase in one leads to a decrease in the other. The magnitude of covariance is difficult to interpret.

Examples

	A	B
1	**data_1**	**data_2**

2	2	4
3	5	3
4	7	6
5	1	1
6	8	5
7		
8		
9	**Covariance**	**Formula**
10	4.65	`=COVARIANCE.S(A2:A6, B2:B6)`
11	7	`=COVARIANCE.S({1,3}, {-1,6})`

Related functions

COVAR: Calculates the covariance of a dataset.