Aggregate Functions

Tableau Desktop Reference Guide

The aggregate functions allow you to summarize data, for example by calculating the average of numbers in a measure. Aggregate functions perform a calculation on a set of values, at the level of granularity of the view, and return a single value. An aggregated calculation appears with the letters **AGG** in front of it when placed on a shelf or on the **Marks** card.

To calculate a population and sample standard deviation and variance, use the **STDEV**, **STDEVP**, **VAR**, and **VARP** functions.

To calculate the measure or extent of joint variability of two expressions, use the **CORR**, **COVAR**, and **COVARP** functions.

NOTE The expressions used in any function must either all be aggregated or all disaggregated. The **MAX**, **MIN**, and **ATTR** functions allow you to have all expressions in a function use a similar aggregation level.

Examples

These are examples of the aggregate functions:

Function Syntax	Purpose	Example
AVG(expression) **SUM**, **MEDIAN**, **PERCENTILE**, **STDEV**, **STDEVP**, **VAR**, **VARP** are similar	Returns the average of all the values in the expression.	**AVG**(**[Sales]**) returns $500 if the average of the **[Sales]** values is $500.
COUNT(expression)	Returns the number of items in a group. Nulls are not counted.	**COUNT**(**[Vendor ID]**) will return 123, if there are 123 records that have non-null **[Vendor ID]** field values.
COUNTD(expression)	Returns the number of unique items in a group.	**COUNTD**(**[Vendor ID]**)will return 50 if there are only 50 records that have unique **[Vendor ID]** field values.
MAX(expression) **MIN** is similar	Returns the maximum of an expression across all records.	**MAX**(**[Sales]**) returns $1,000 if $1,000 is the largest number in **[Sales]**.
ATTR(expression)	Returns the value of the expression if it has a single value for all rows, otherwise it returns an asterisk (*). This allows you to check if values are the same.	**ATTR**(**[Segment]**) returns 'Corporate' if the value of **[Segment]** is 'Corporate' at the level of granularity in the view, otherwise it returns '*'.

CORR(expression1, expression2)	Returns the Pearson correlation coefficient of the two expressions.	**CORR**(**[Sales]**, **[Profit]**) returns a value from –1 to 1. The result is equal to 1 for an exact positive linear relationship, 0 for no linear relationship, and –1 for an exact negative linear relationship.
COVAR(expression1, expression2) **COVARP** is similar, but for a population, instead of a sample	Returns the sample covariance of two expressions. If the two expressions are the same, a value is returned that indicates how widely the variables are distributed.	**COVAR**(**[Sales]**, **[Profit]**) returns a positive number if the expressions tend to vary together, on average.