

WORKING WITH AGGREGATE FUNCTIONS

Aggregate functions allow us to summarize or change the granularity of the data.

For example, you might want to know exactly how many products were sold in a region etc.

For this we can use the COUNTD function to summarize the exact number of products sold , and then break the visualization down by region.

The calculation might look something like this:

COUNTD(Product ID)

There are many Aggregate functions available in Tableau, but we will be going through only 2 functions

CORR

COUNTD

WORKING WITH AGGREGATE FUNCTIONS

Syntax for CORR function:

CORR(expression 1, expression2)

Description of CORR function:

Returns the Pearson correlation coefficient of two expressions.

The Pearson correlation measures the linear relationship between two variables. Results range from -1 to +1 inclusive, where 1 denotes an exact positive linear relationship, as when a positive change in one variable implies a positive change of corresponding magnitude in the other, 0 denotes no linear relationship between the variance, and -1 is an exact negative relationship.

WORKING WITH AGGREGATE FUNCTIONS

Syntax for COUNTD function:

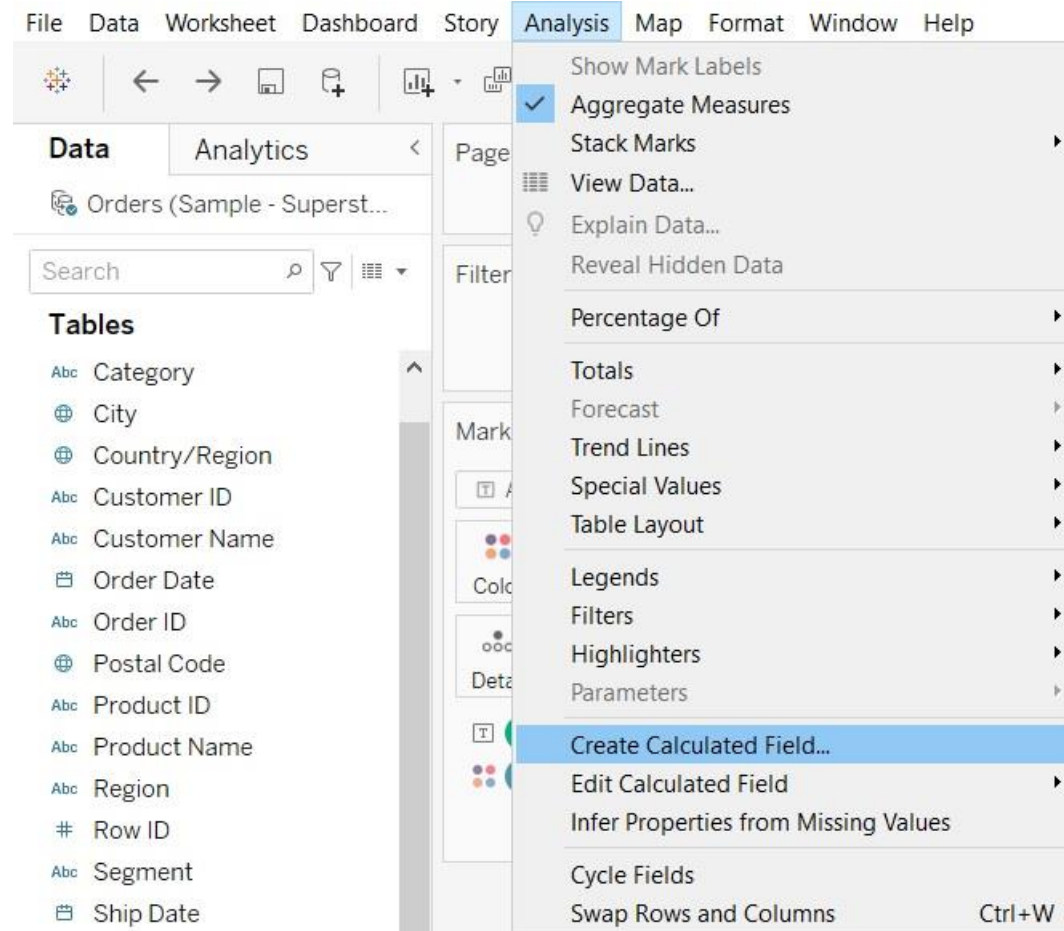
COUNTD(expression)

Description of COUNTD function:

Returns the number of distinct items in a group.
Null values are not counted.

STEPS TO CREATE CORR FUNCTION

Step 1: Select Analysis > Create Calculated Field



STEPS TO CREATE CORR FUNCTION

Step 2: Calculation Editor will open



The image shows a screenshot of a software interface titled "Calculation1" in the top-left corner. The main area of the dialog is empty. In the bottom-right corner, there are two buttons: "Apply" and "OK". The "OK" button is highlighted in green.

STEPS TO CREATE CORR FUNCTION

Step 3: Name the calculated field, **CORR Sales and Profit.**

Enter the below mentioned formula

`CORR([Sales],[Profit])`

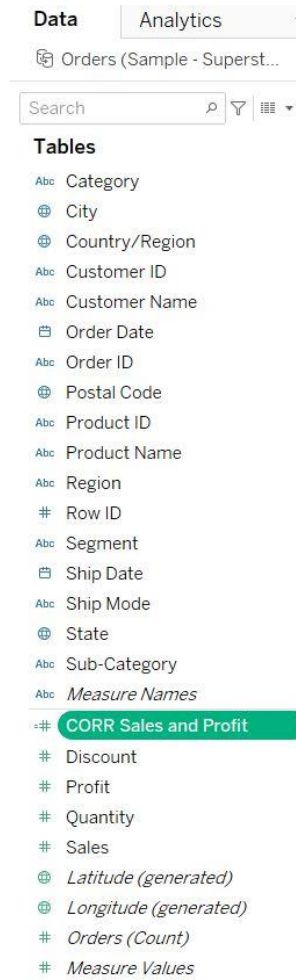
Confirm that a "**The calculation is valid**" message is seen

When finished, Click **OK**



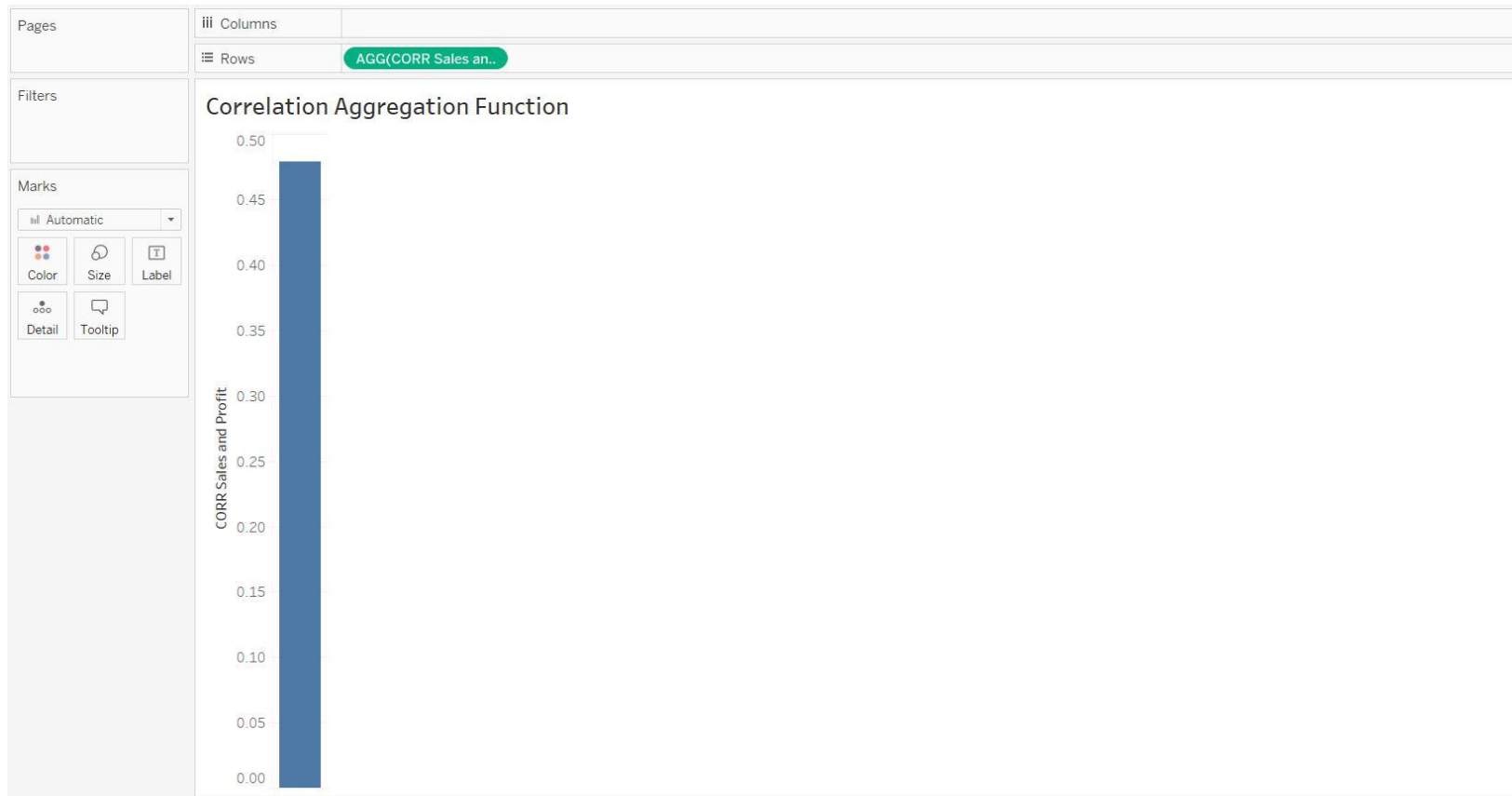
STEPS TO CREATE CORR FUNCTION

Step 4: The new calculated field appears under Measures in the Data pane. Just like other fields, we can use it in one or more visualizations.



STEPS TO CREATE CORR FUNCTION

Step 5: When **CORR Sales and Profit** is placed on a shelf or card in the worksheet, its name is changed to **AGG(CORR Sales and Profit)**, which indicates that it is an aggregate calculation and cannot be aggregated any further.



STEPS TO CREATE CORR FUNCTION

Step 6: Similarly, **CORR Qty and Profit** and **CORR Disc and Profit** calculated fields can be created

CORR Qty and Profit

×

`CORR([Quantity],[Profit])|`

The calculation is valid.

Apply

OK

CORR Disc and Profit

×

`CORR([Discount],[Profit])|`

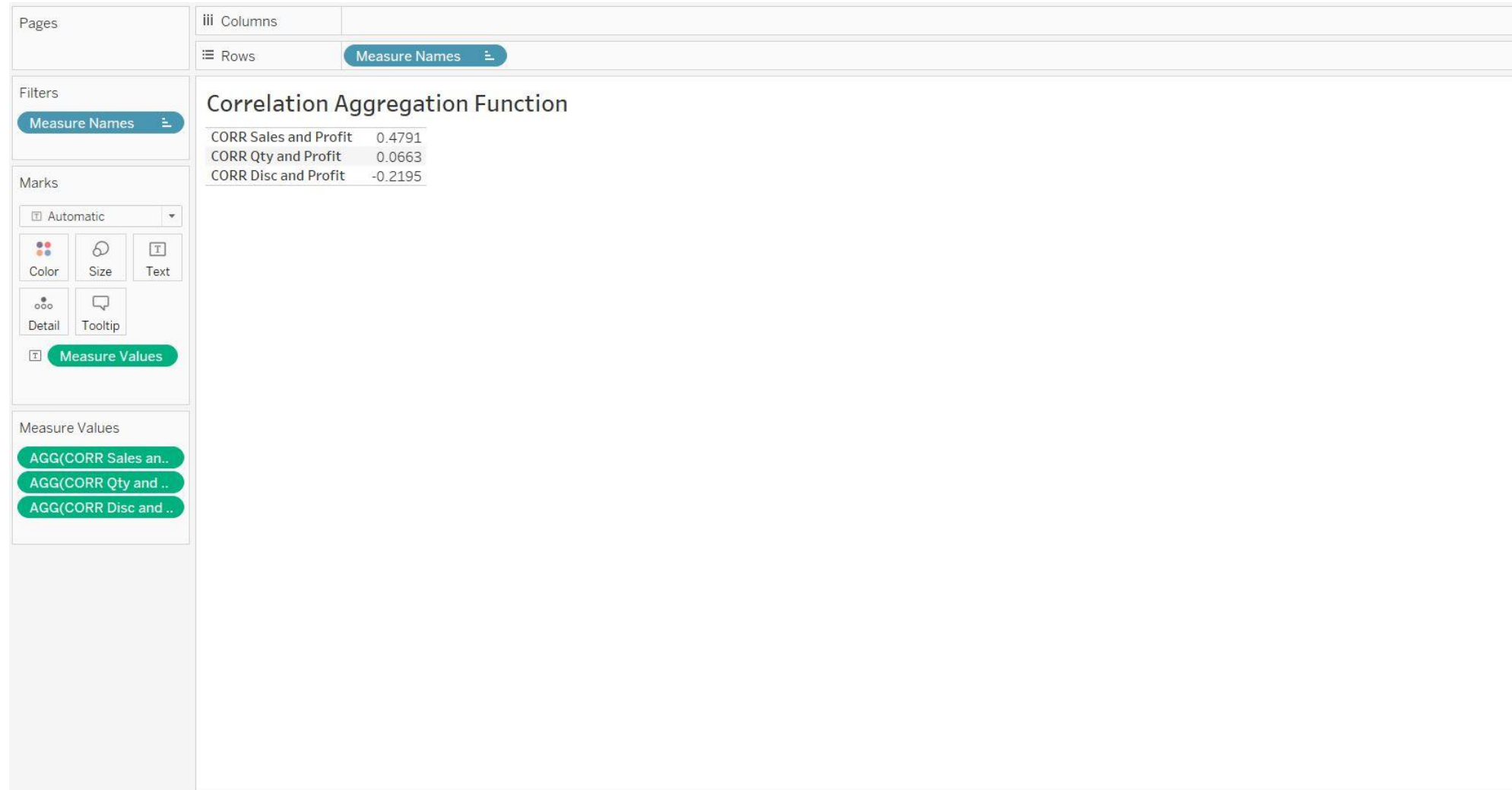
The calculation is valid.

Apply

OK

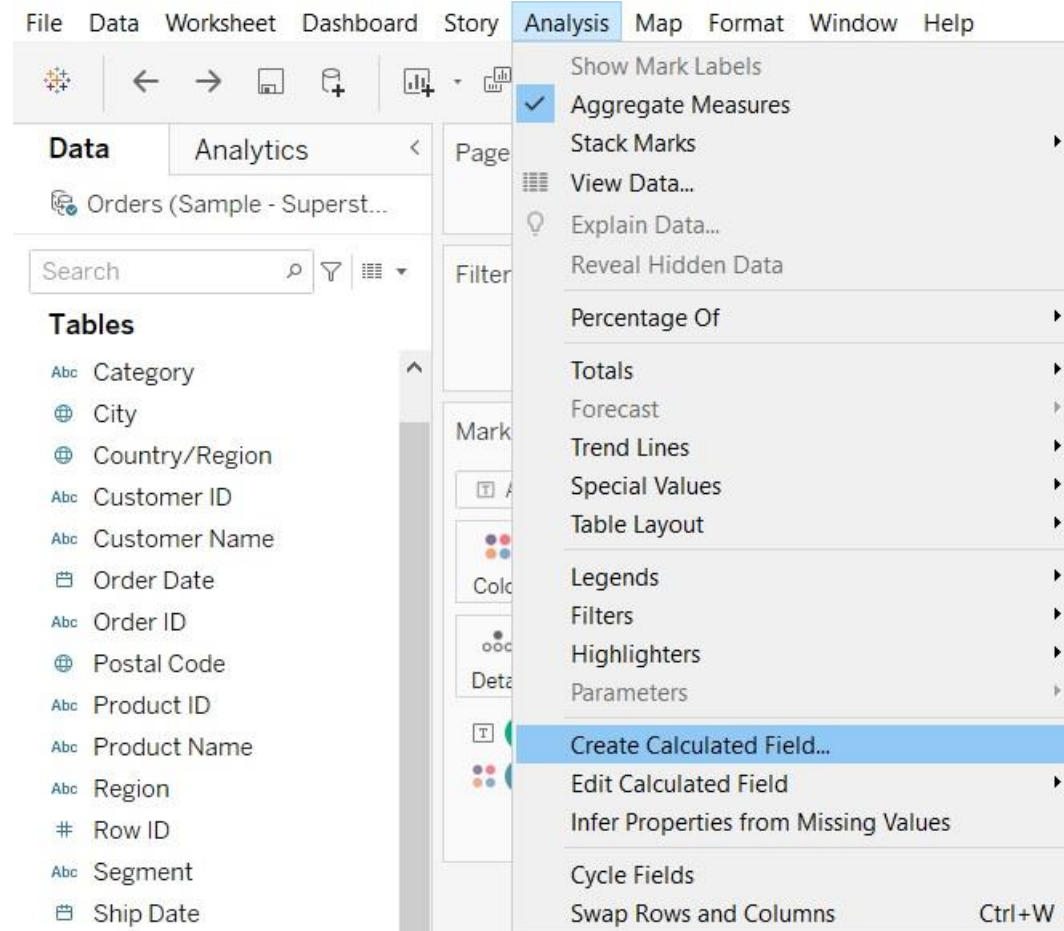
STEPS TO CREATE CORR FUNCTION

Step 7: All the calculated fields can be used in a Viz



STEPS TO CREATE COUNTD FUNTION

Step 1: Select **Analysis** > **Create Calculated Field**



STEPS TO CREATE COUNTD FUNTION

Step 2: Calculation Editor will open



STEPS TO CREATE COUNTD FUNTION

Step 3: Name the calculated field, **Distinct Products**.

Enter the below mentioned formula

COUNTD([Product ID])

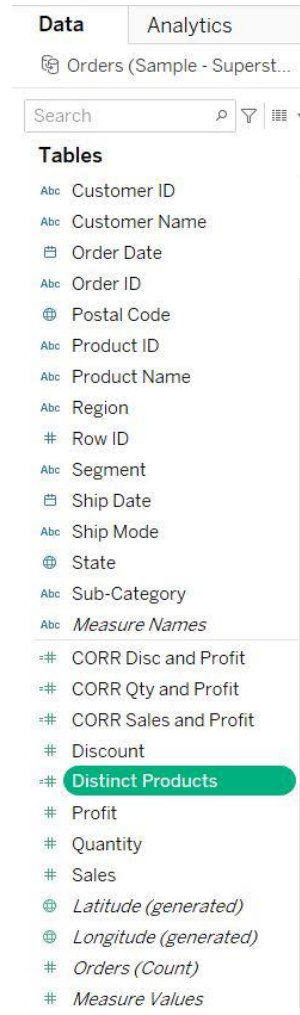
Confirm that a "**The calculation is valid**" message is seen

When finished, Click **OK**



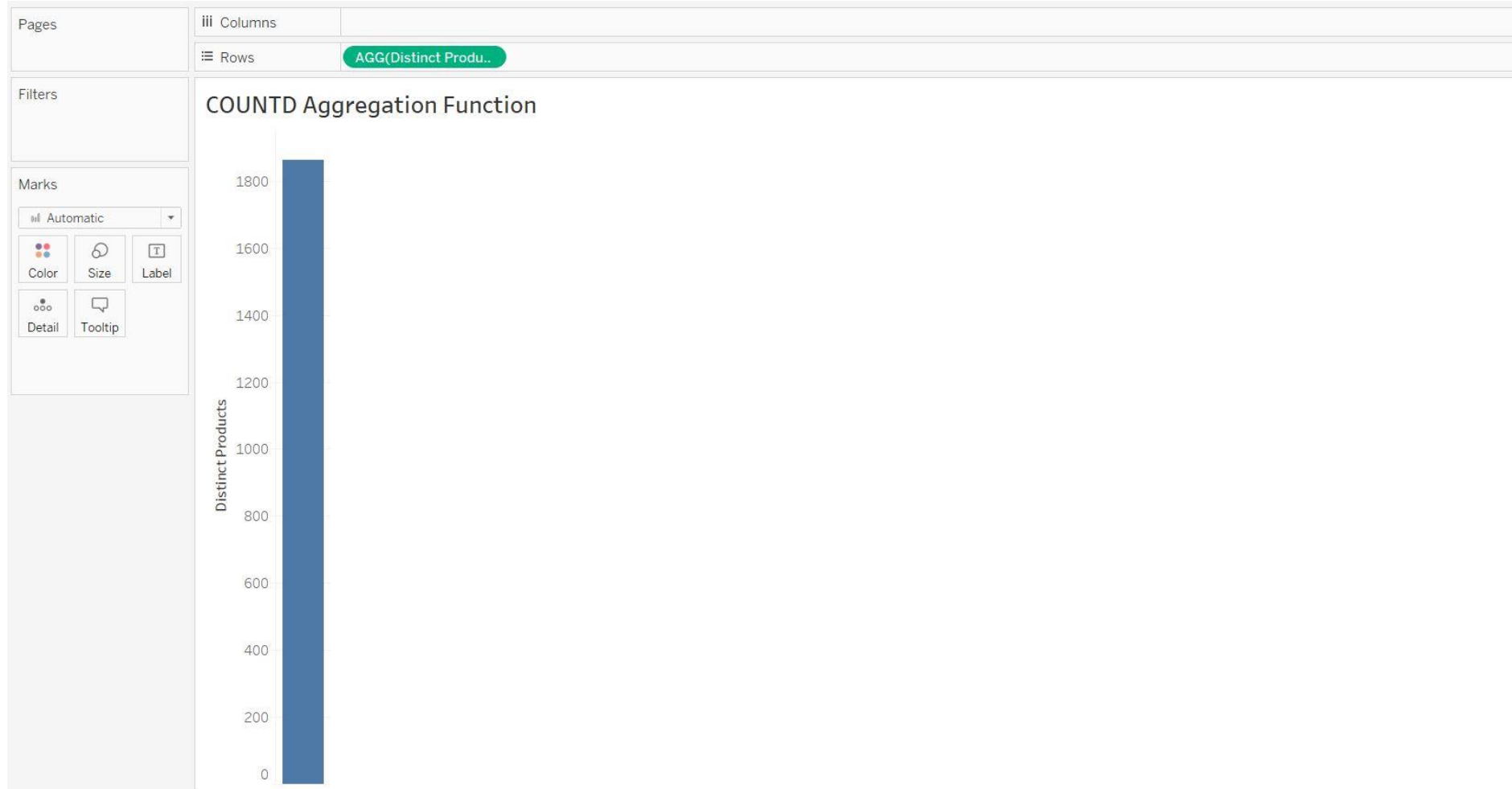
STEPS TO CREATE COUNTD FUNTION

Step 4: The new calculated field appears under Measures in the Data pane. Just like other fields, we can use it in one or more visualizations.



STEPS TO CREATE COUNTD FUNTION

Step 5: When **Distinct Products** is placed on a shelf or card in the worksheet, its name is changed to **AGG(Distinct Products)**, which indicates that it is an aggregate calculation and cannot be aggregated any further.



STEPS TO CREATE COUNTD FUNTION

Step 6: To confirm if the calculated function is working correctly create the below mentioned Viz

Rows Shelf & Label of Marks Card: Distinct Products (**New Calculated Field**)

Columns Shelf: Region

