UNDERSTANDING RANK CALCULATIONS

Rank as the name points out is used to provide a rank to any numeric related field e.g.: Sales, Profit etc.

Ranks can be created typically by 2 methods

Method-I: Using Quick Table Calculations
Method-II: Using Calculated Fields

UNDERSTANDING RANK CALCULATIONS

Rank by Quick Table Calculations:

We will be going through the below mentioned Scope and Direction options i.e.,

Compute Using options

Table(across)

Table(down)

Table (across then down)

Pane(down)

Rank by Calculated Fields:

We will be going through the below mentioned Rank functions

RANK

RANK_DENSE

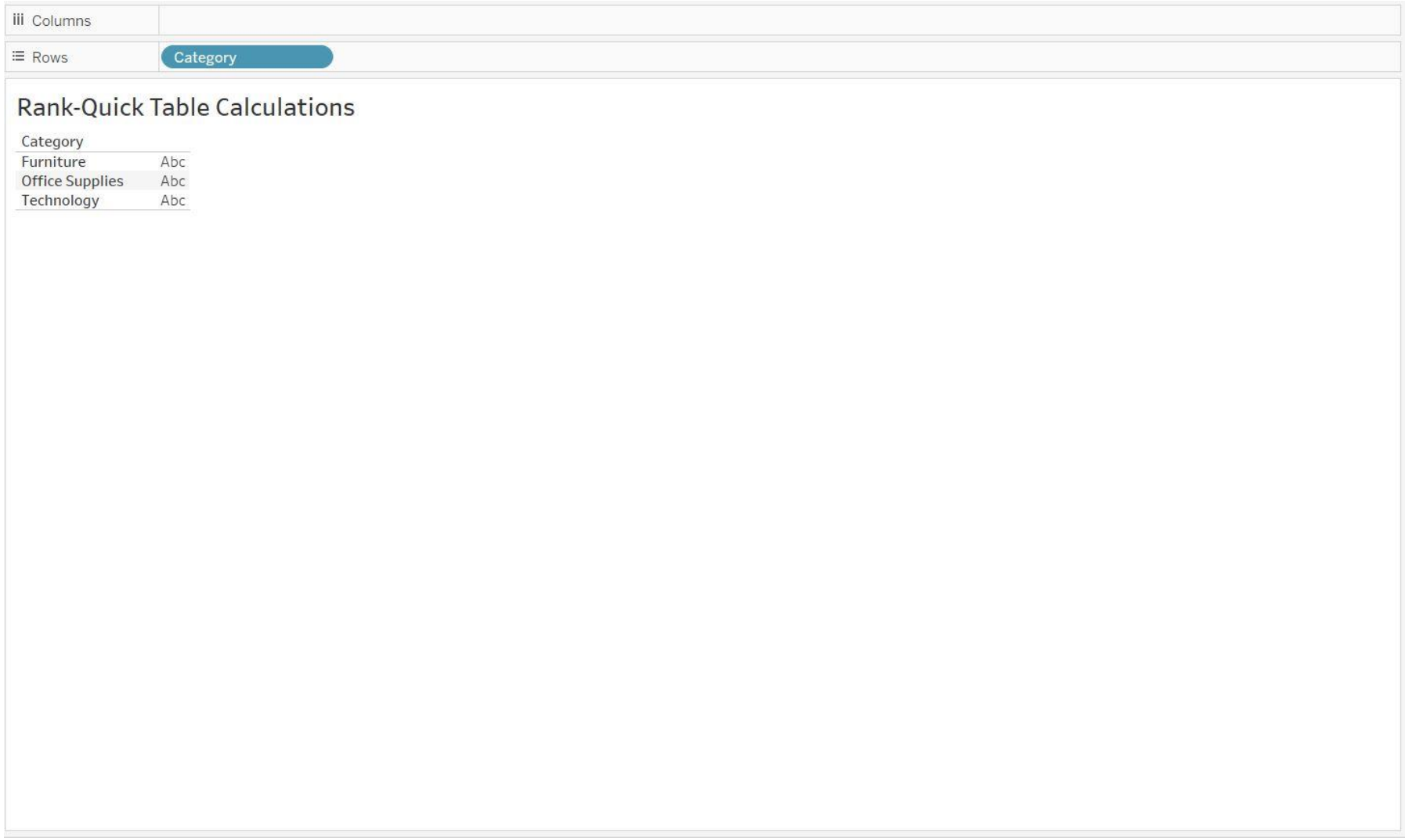
RANK_MODIFIED

RANK_UNIQUE

RANK_PERCENTILE

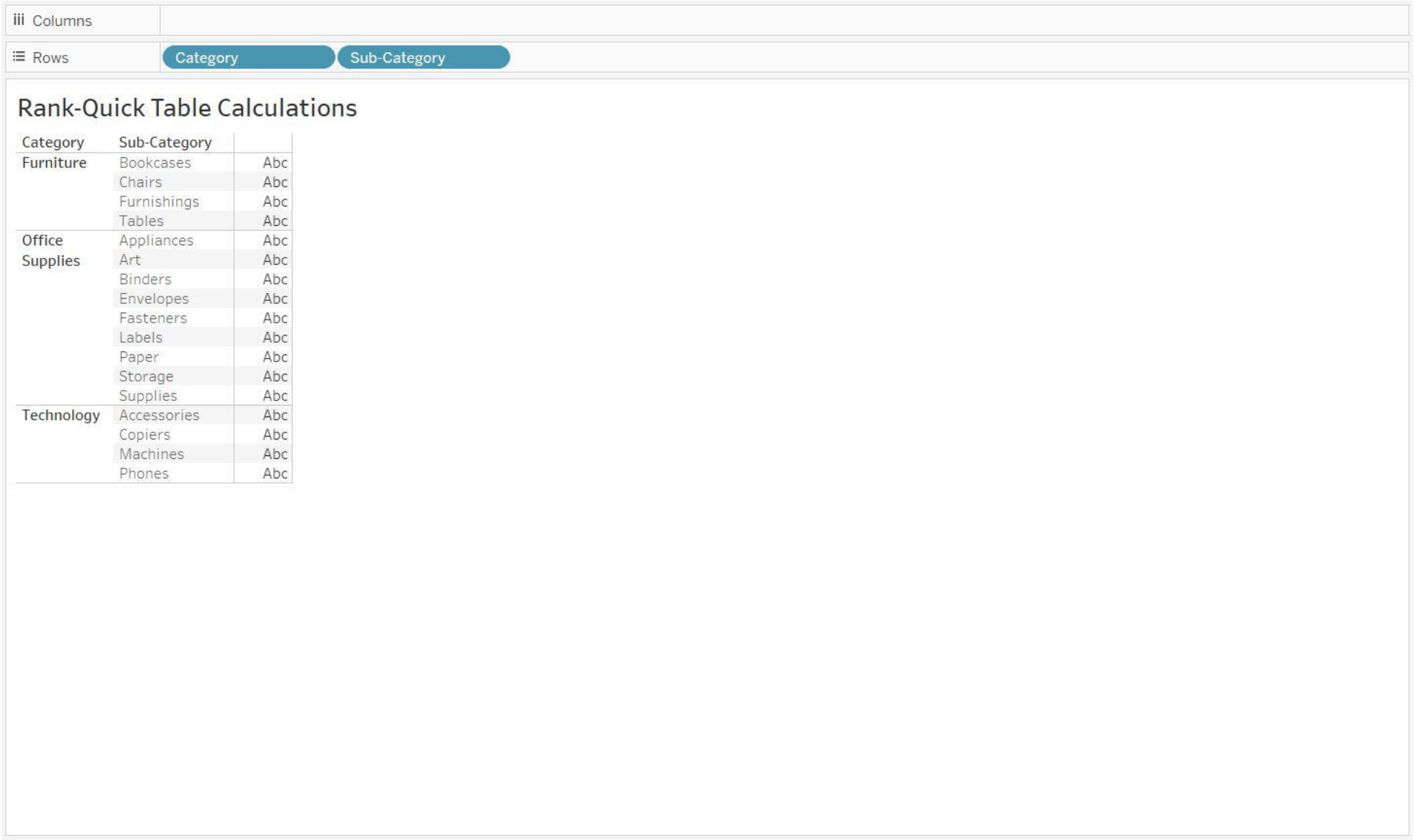
METHOD-I RANK BY QUICK TABLE CALCULATIONS

Step 1: Drop **Category** to the **Rows** shelf



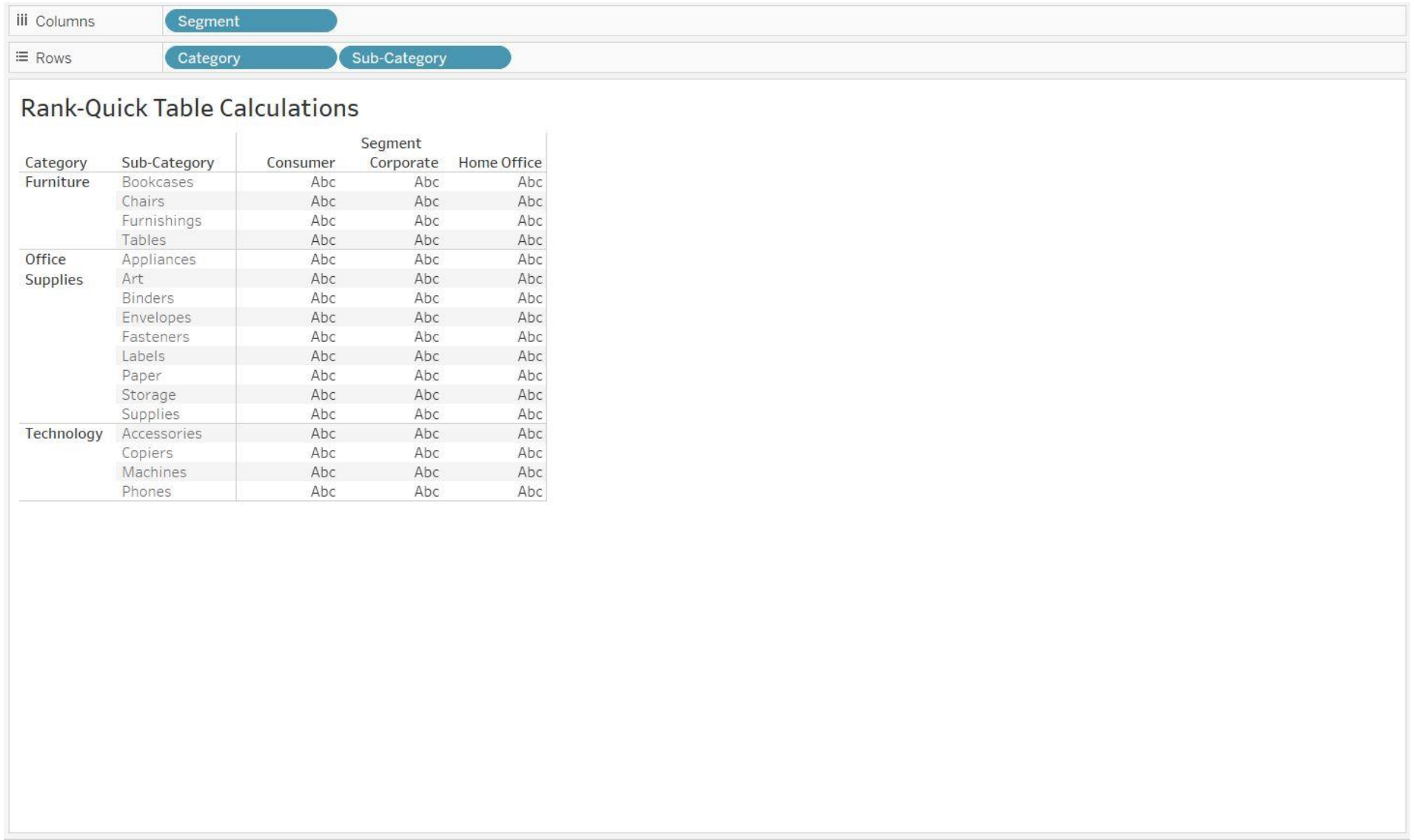
METHOD-I RANK BY QUICK TABLE CALCULATIONS

Step 2: Drop **Sub-Category** to the **Rows** shelf



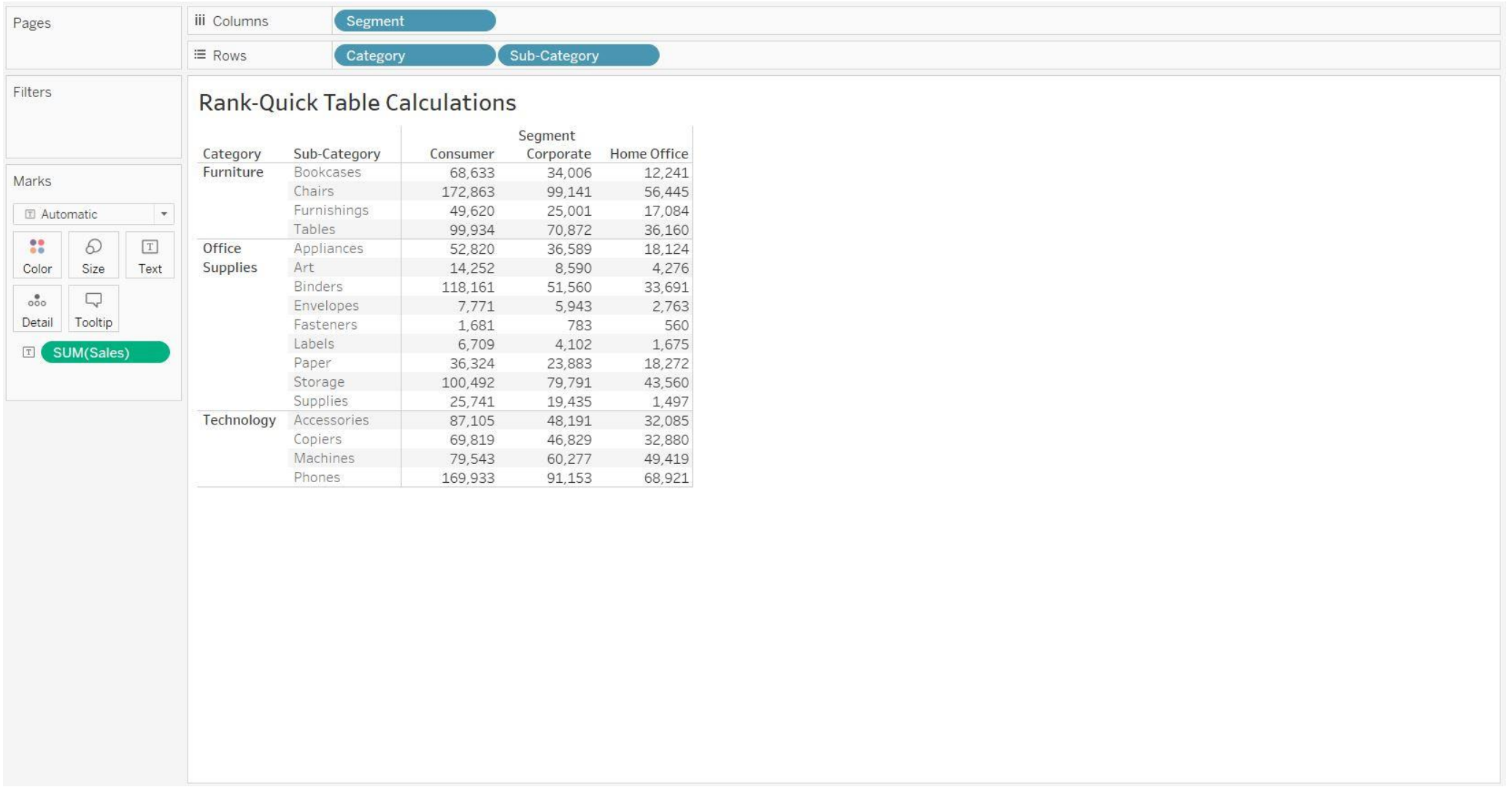
METHOD-I RANK BY QUICK TABLE CALCULATIONS

Step 3: Drop **Segment** to the **Columns** shelf



METHOD-I RANK BY QUICK TABLE CALCULATIONS

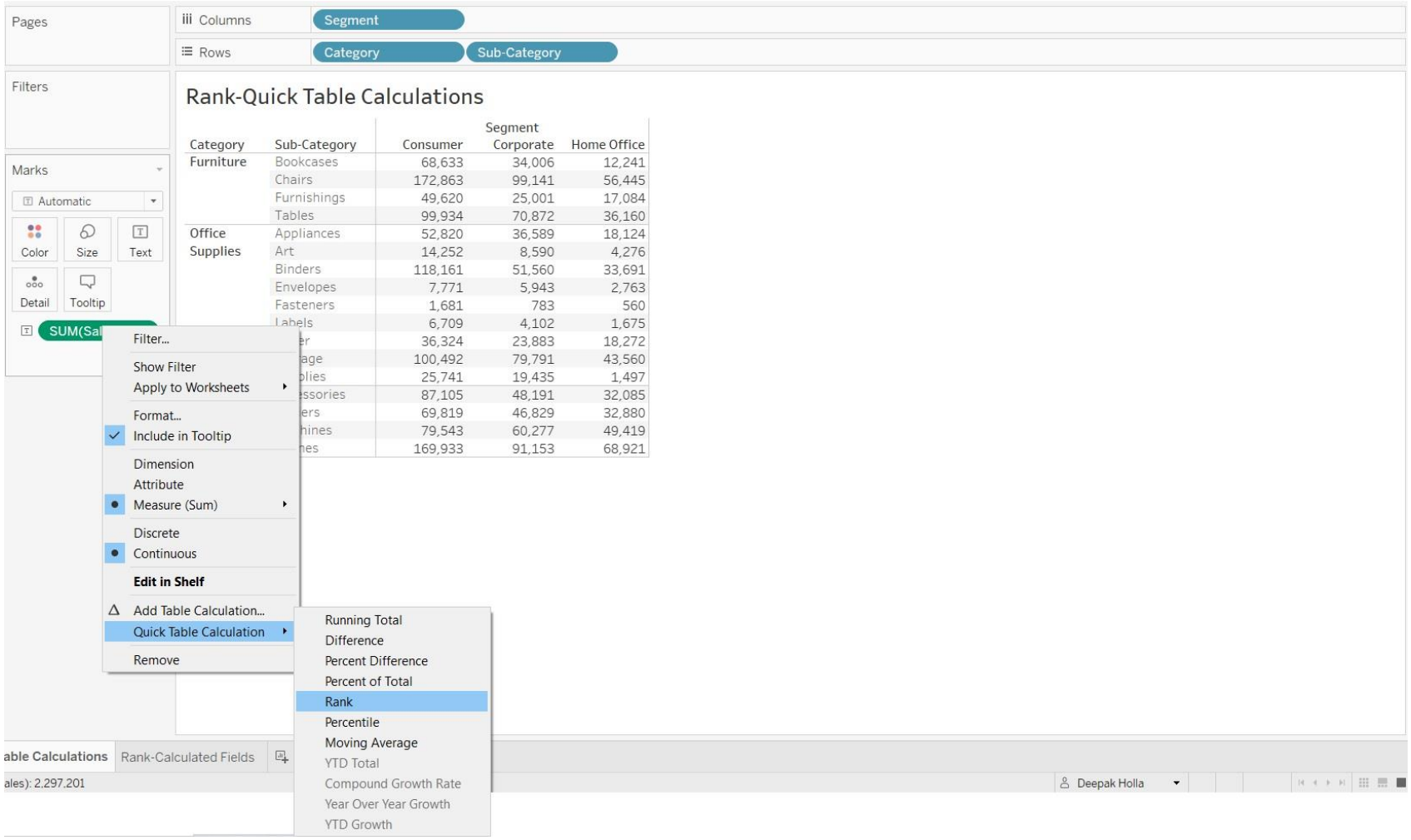
Step 4: Drop **Sales** to the **view**



Category	Sub-Category	Segment Consumer	Segment Corporate	Segment Home Office
Furniture	Bookcases	68,633	34,006	12,241
	Chairs	172,863	99,141	56,445
	Furnishings	49,620	25,001	17,084
	Tables	99,934	70,872	36,160
Office Supplies	Appliances	52,820	36,589	18,124
	Art	14,252	8,590	4,276
	Binders	118,161	51,560	33,691
	Envelopes	7,771	5,943	2,763
	Fasteners	1,681	783	560
	Labels	6,709	4,102	1,675
	Paper	36,324	23,883	18,272
	Storage	100,492	79,791	43,560
	Supplies	25,741	19,435	1,497
Technology	Accessories	87,105	48,191	32,085
	Copiers	69,819	46,829	32,880
	Machines	79,543	60,277	49,419
	Phones	169,933	91,153	68,921

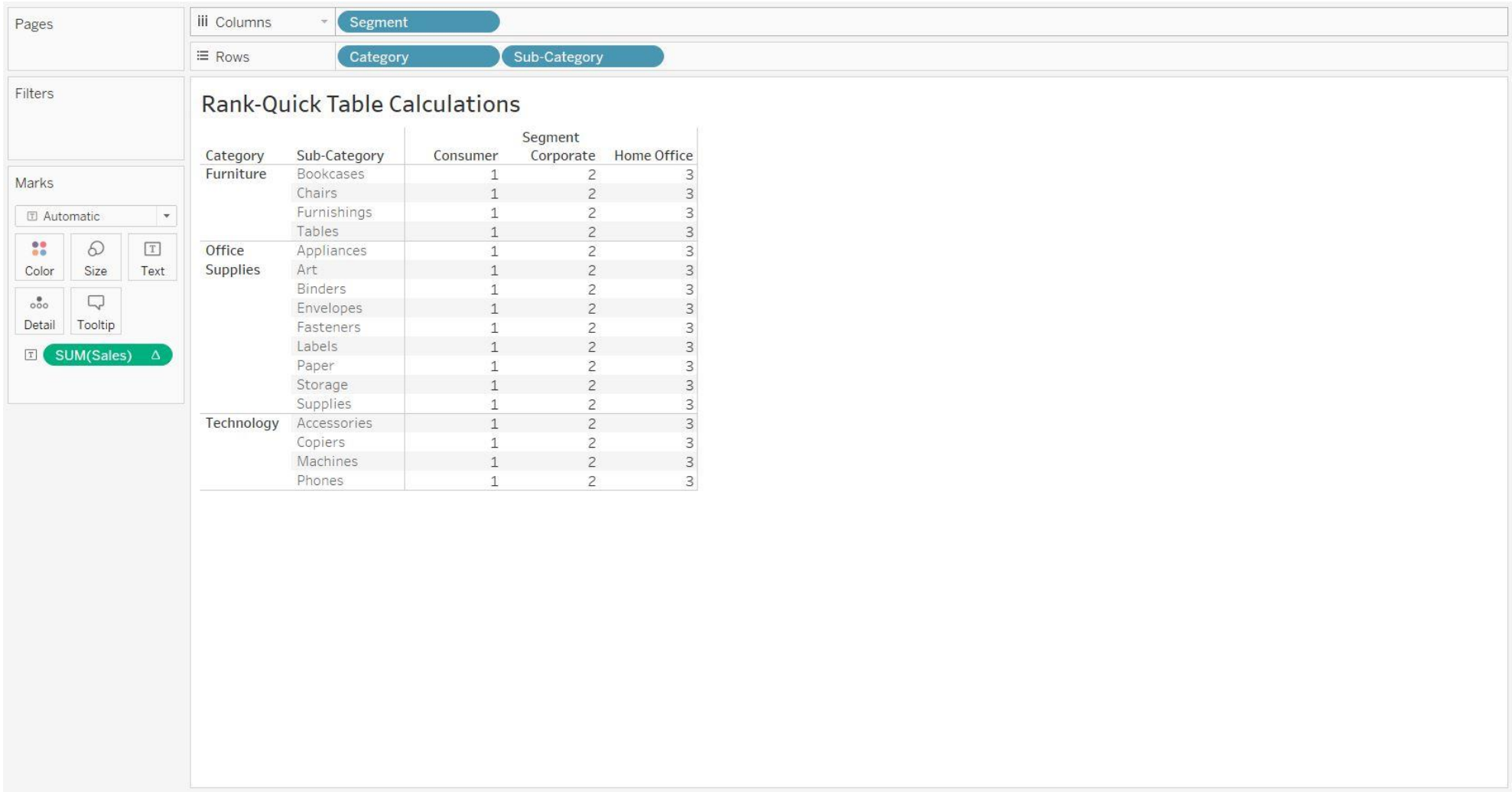
METHOD-I RANK BY QUICK TABLE CALCULATIONS

Step 5: On the Marks card, right-click **SUM(Sales)** and select **Quick Table Calculation** > **Rank**



METHOD-I RANK BY QUICK TABLE CALCULATIONS

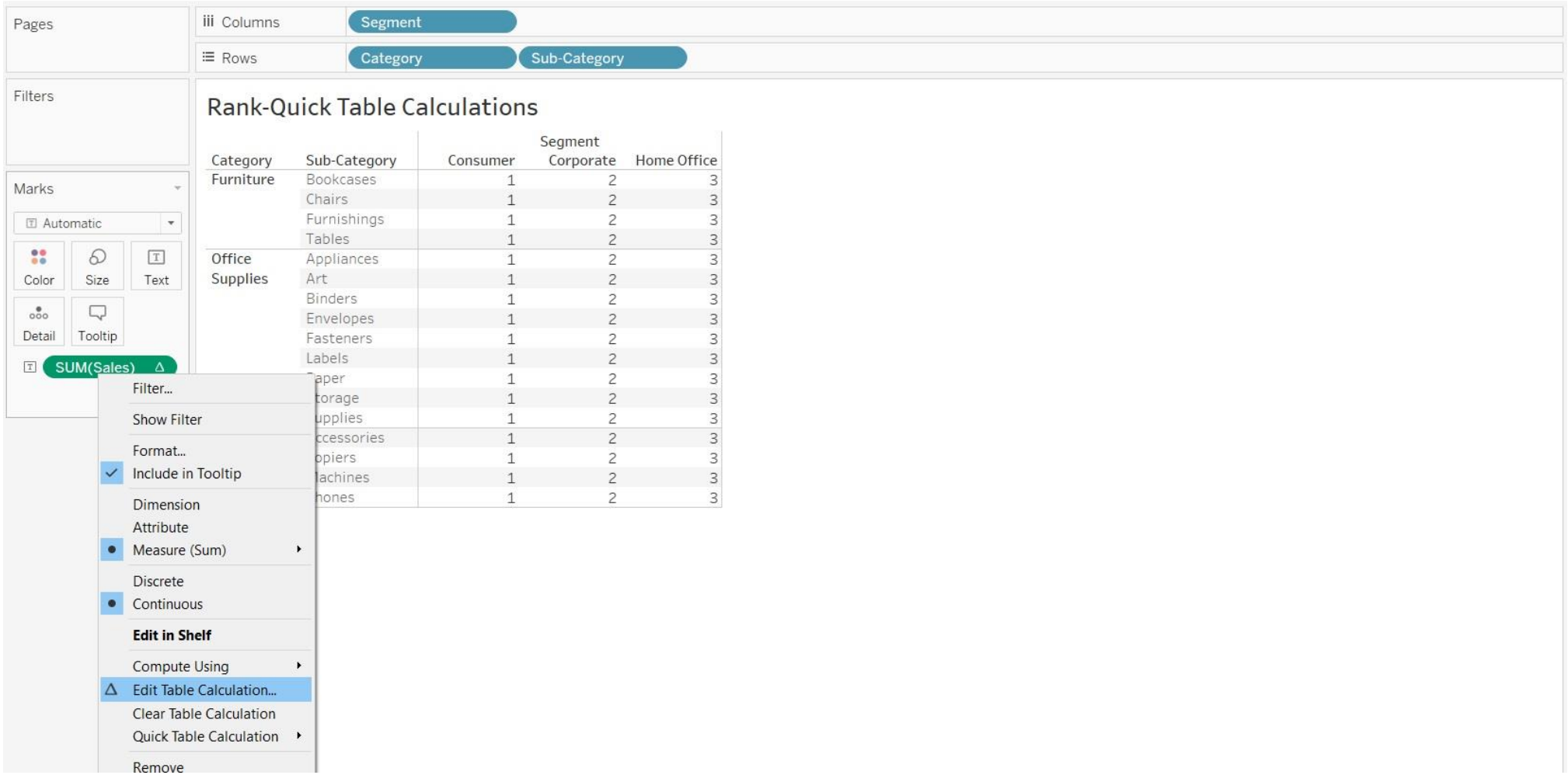
Step 6: View with Rank



Category	Sub-Category	Segment: Consumer	Segment: Corporate	Segment: Home Office
Furniture	Bookcases	1	2	3
	Chairs	1	2	3
	Furnishings	1	2	3
	Tables	1	2	3
Office Supplies	Appliances	1	2	3
	Art	1	2	3
	Binders	1	2	3
	Envelopes	1	2	3
	Fasteners	1	2	3
	Labels	1	2	3
	Paper	1	2	3
	Storage	1	2	3
	Supplies	1	2	3
Technology	Accessories	1	2	3
	Copiers	1	2	3
	Machines	1	2	3
	Phones	1	2	3

METHOD-I RANK BY QUICK TABLE CALCULATIONS

Step 7: On the Marks card, right-click **SUM(Sales)** and select **Edit Table Calculation**

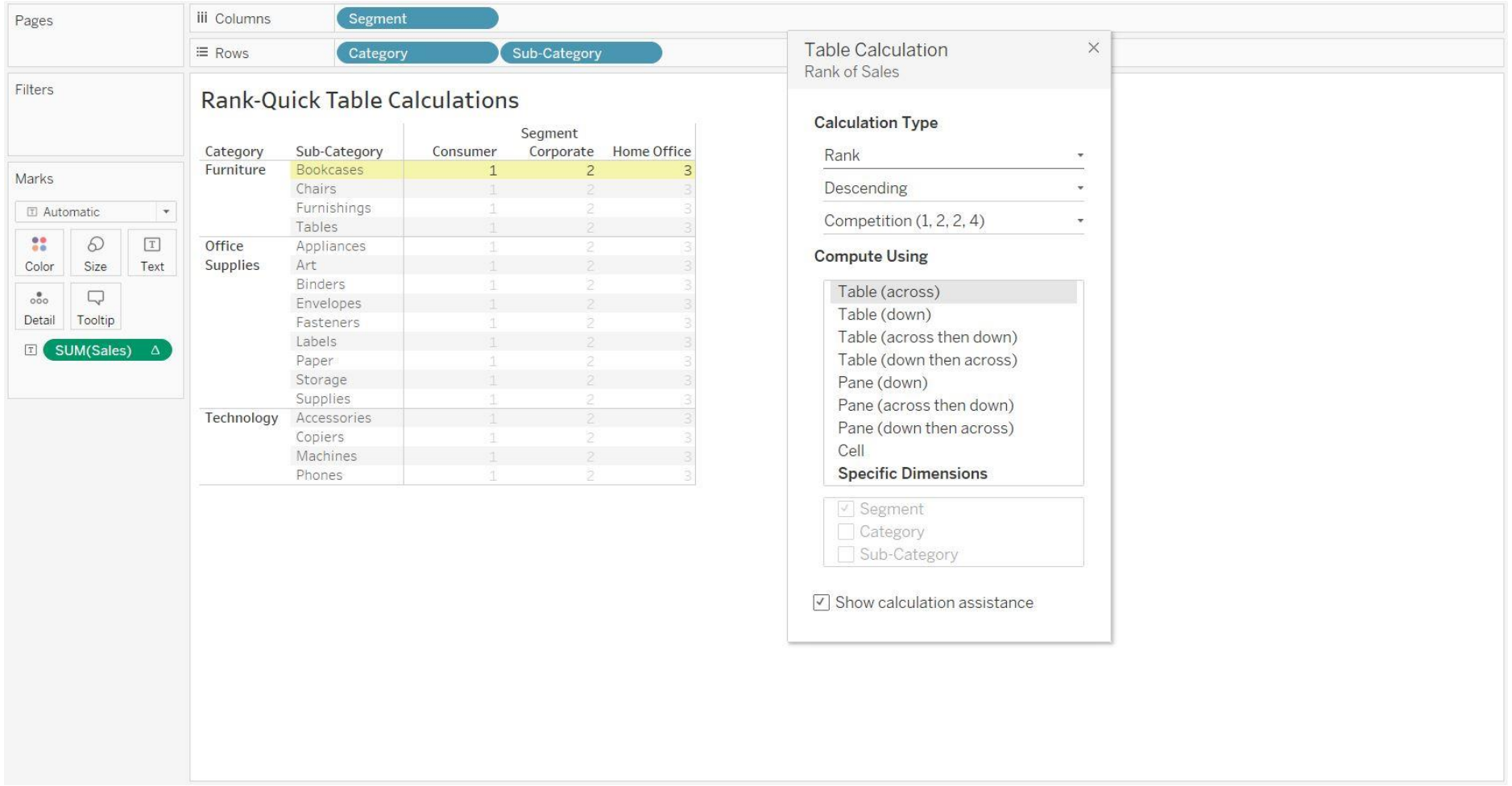


Rank-Quick Table Calculations

Category	Sub-Category	Segment: Consumer	Segment: Corporate	Segment: Home Office
Furniture	Bookcases	1	2	3
	Chairs	1	2	3
	Furnishings	1	2	3
	Tables	1	2	3
Office Supplies	Appliances	1	2	3
	Art	1	2	3
	Binders	1	2	3
	Envelopes	1	2	3
	Fasteners	1	2	3
	Labels	1	2	3
	aper	1	2	3
	torage	1	2	3
	upplies	1	2	3
	ccessories	1	2	3
	opiers	1	2	3
	lachines	1	2	3
	hones	1	2	3

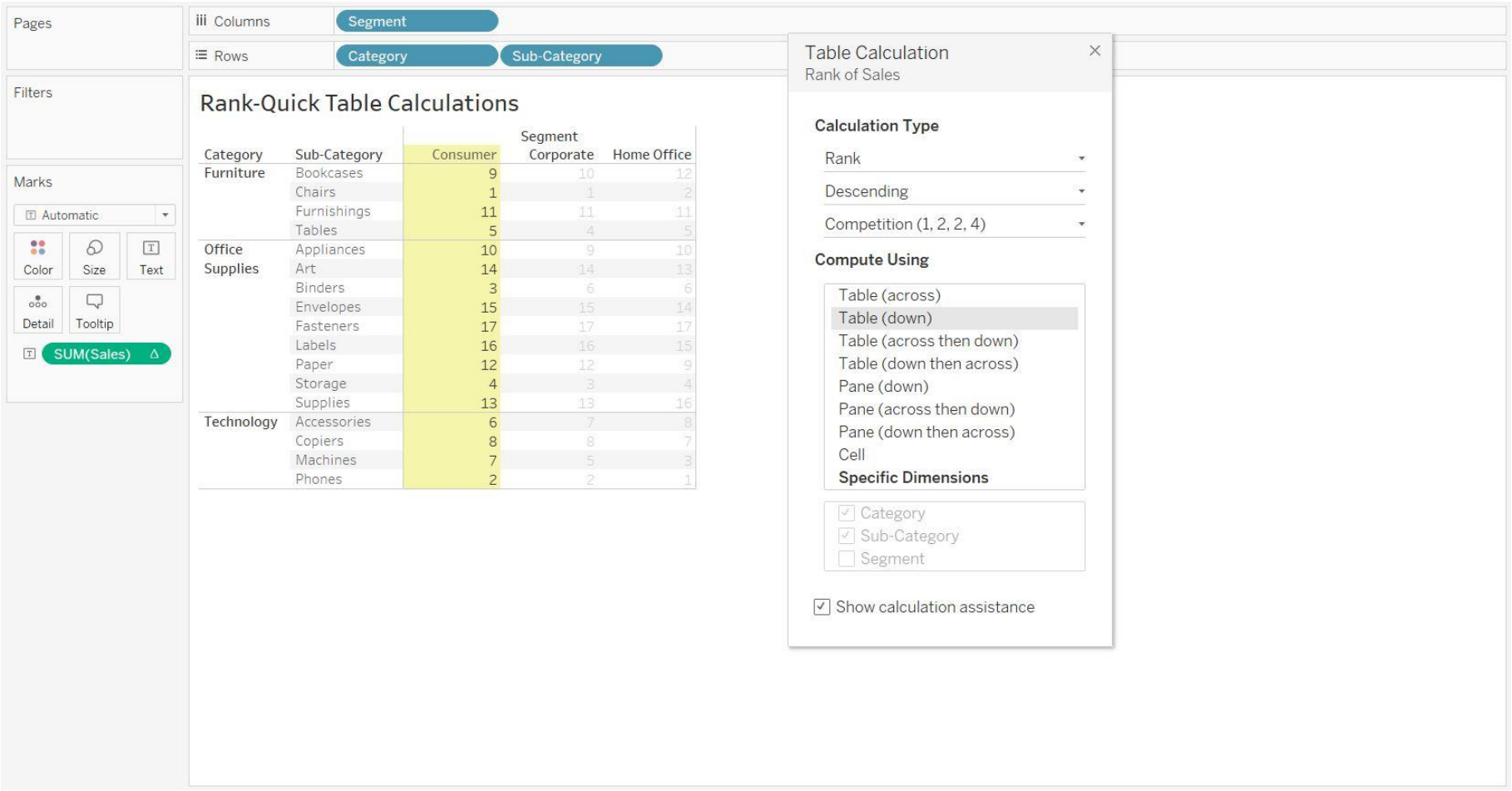
METHOD-I RANK BY QUICK TABLE CALCULATIONS

Step 8: In the **Table Calculation** window select the **Compute Using** as **Table(across)**
Computes across the length of the table i.e., **Segment** and restarts after every partition



METHOD-I RANK BY QUICK TABLE CALCULATIONS

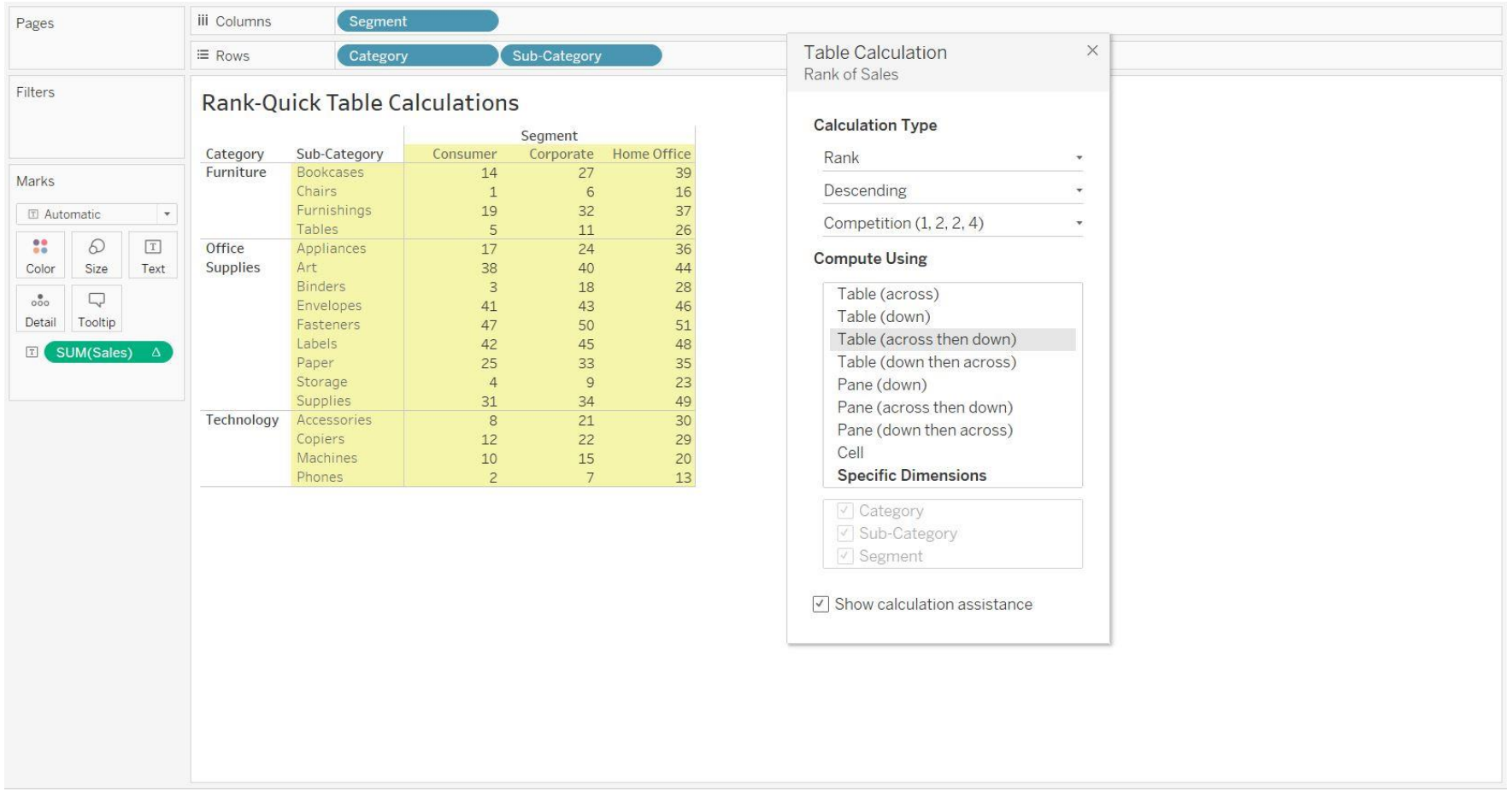
Step 9: In the **Table Calculation** window select the **Compute Using** as **Table(down)** Computes down the length of the table i.e., **Category and Sub-Category** and restarts after every partition



METHOD-I RANK BY QUICK TABLE CALCULATIONS

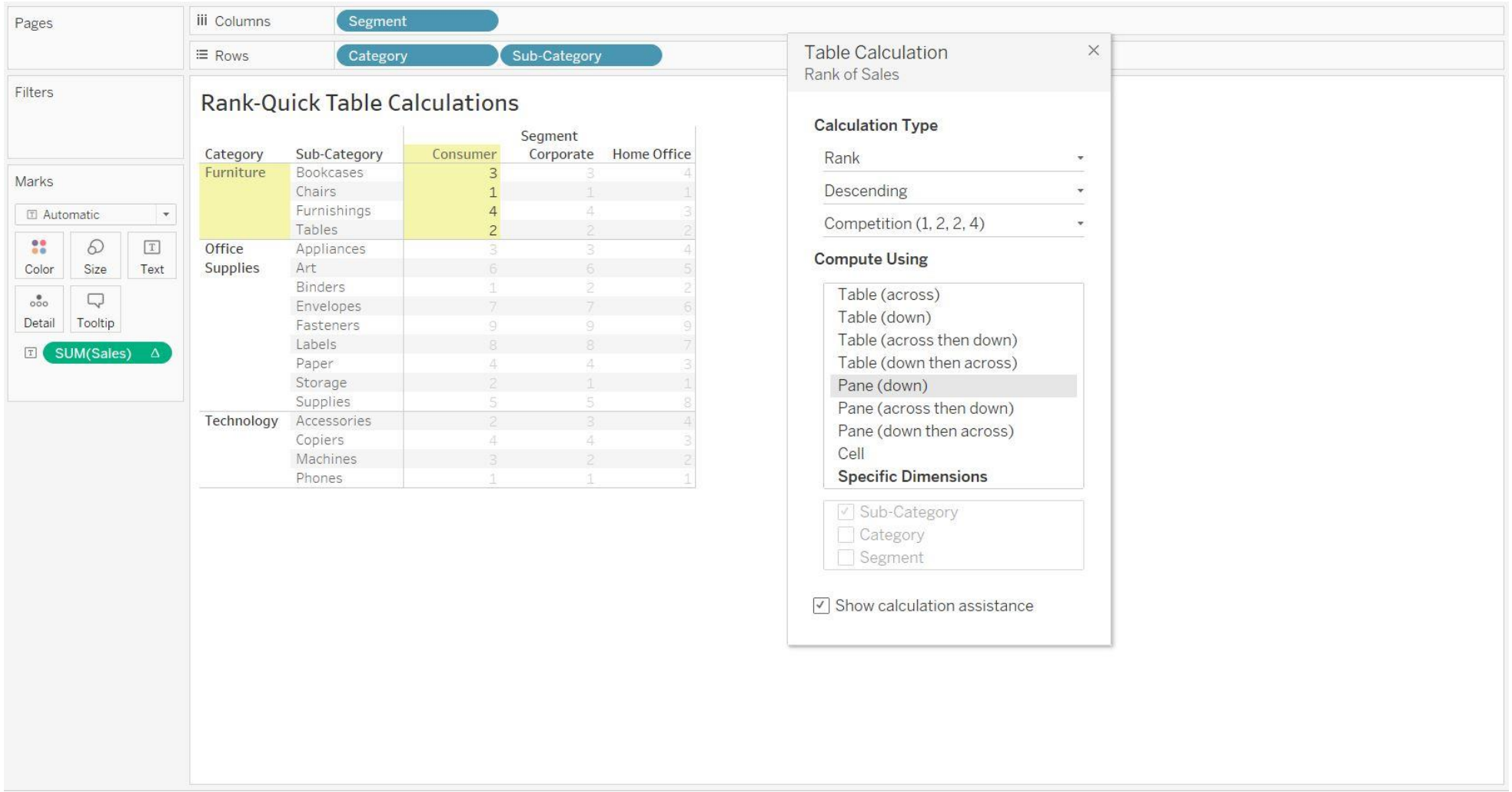
Step 10: In the **Table Calculation** window select the **Compute Using** as **Table (across then down)**

Computes across the length of the table, and then down the length of the table i.e., **all dimensions in the view**



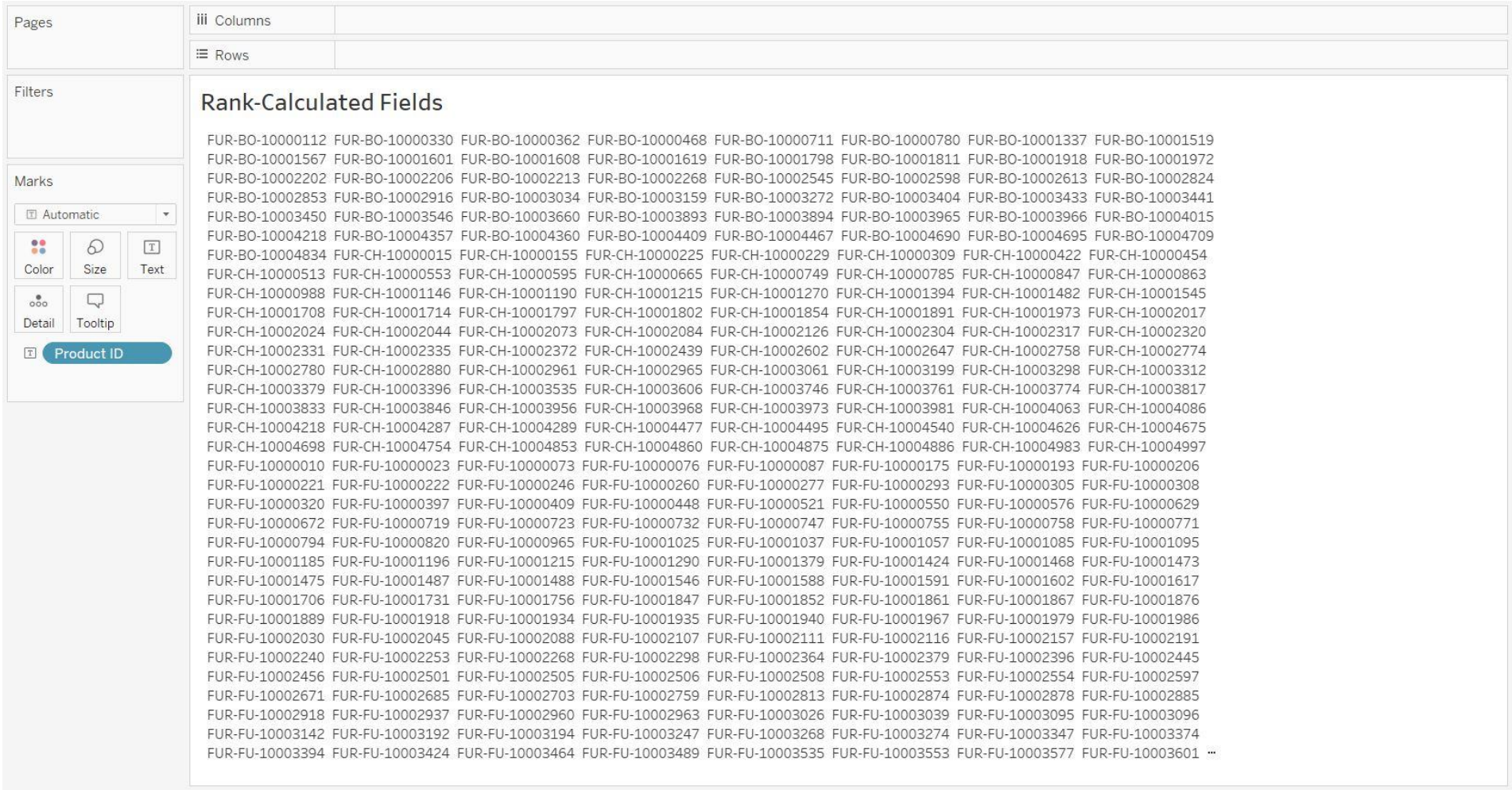
METHOD-I RANK BY QUICK TABLE CALCULATIONS

Step 11: In the **Table Calculation** window select the **Compute Using** as **Pane(down)** Computes down an entire pane. i.e., **Sub-Category**



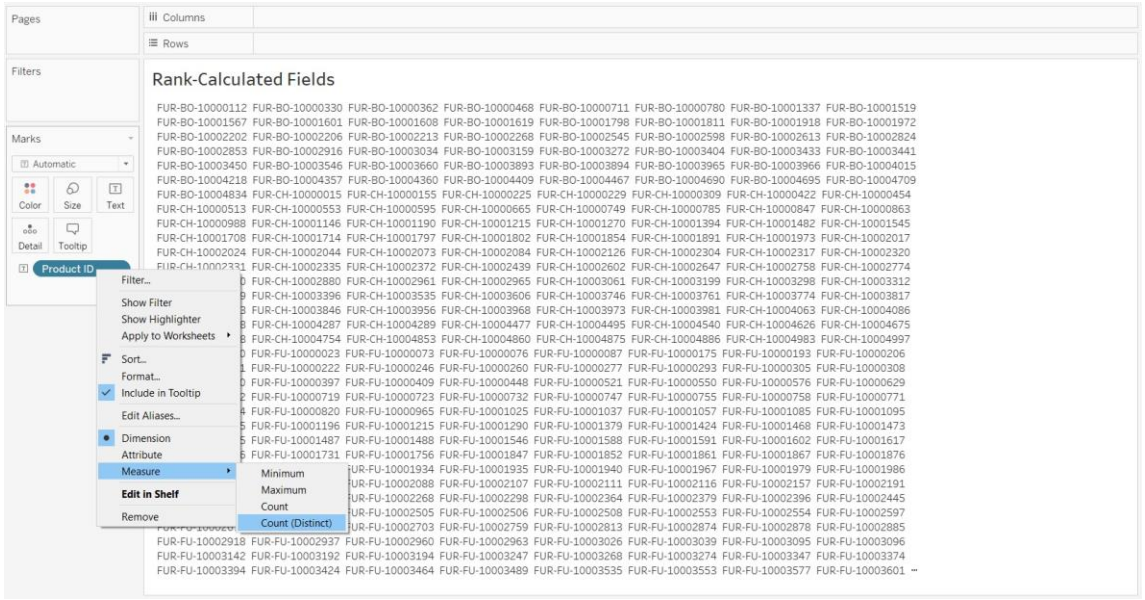
METHOD-II RANK BY CALCULATED FIELDS

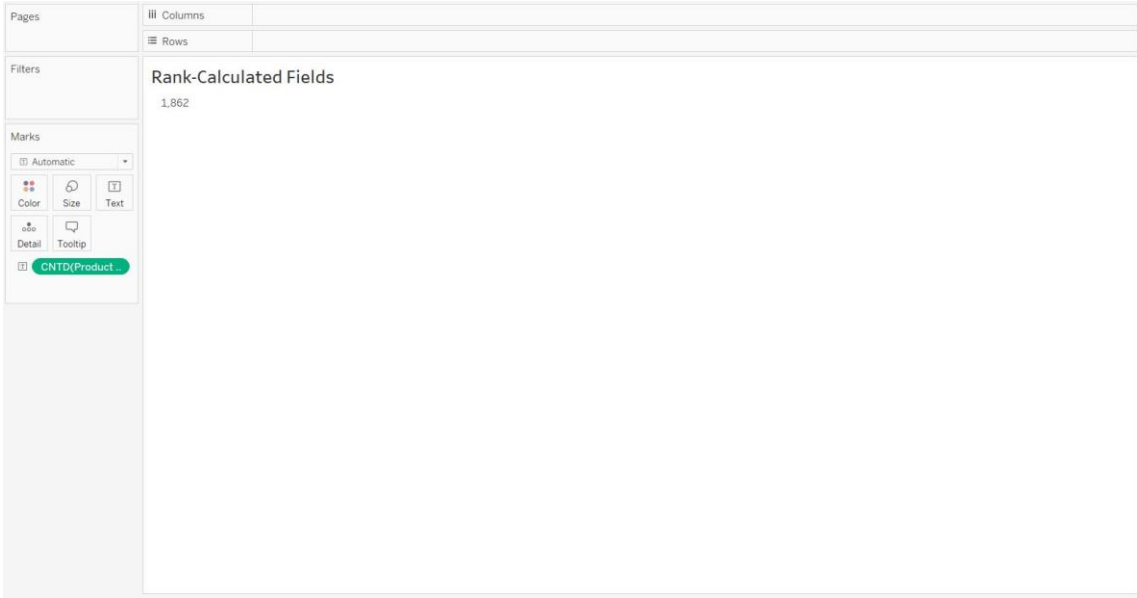
Step 1: Drop **Product ID** to the **Text** of **Marks** card



METHOD-II RANK BY CALCULATED FIELDS

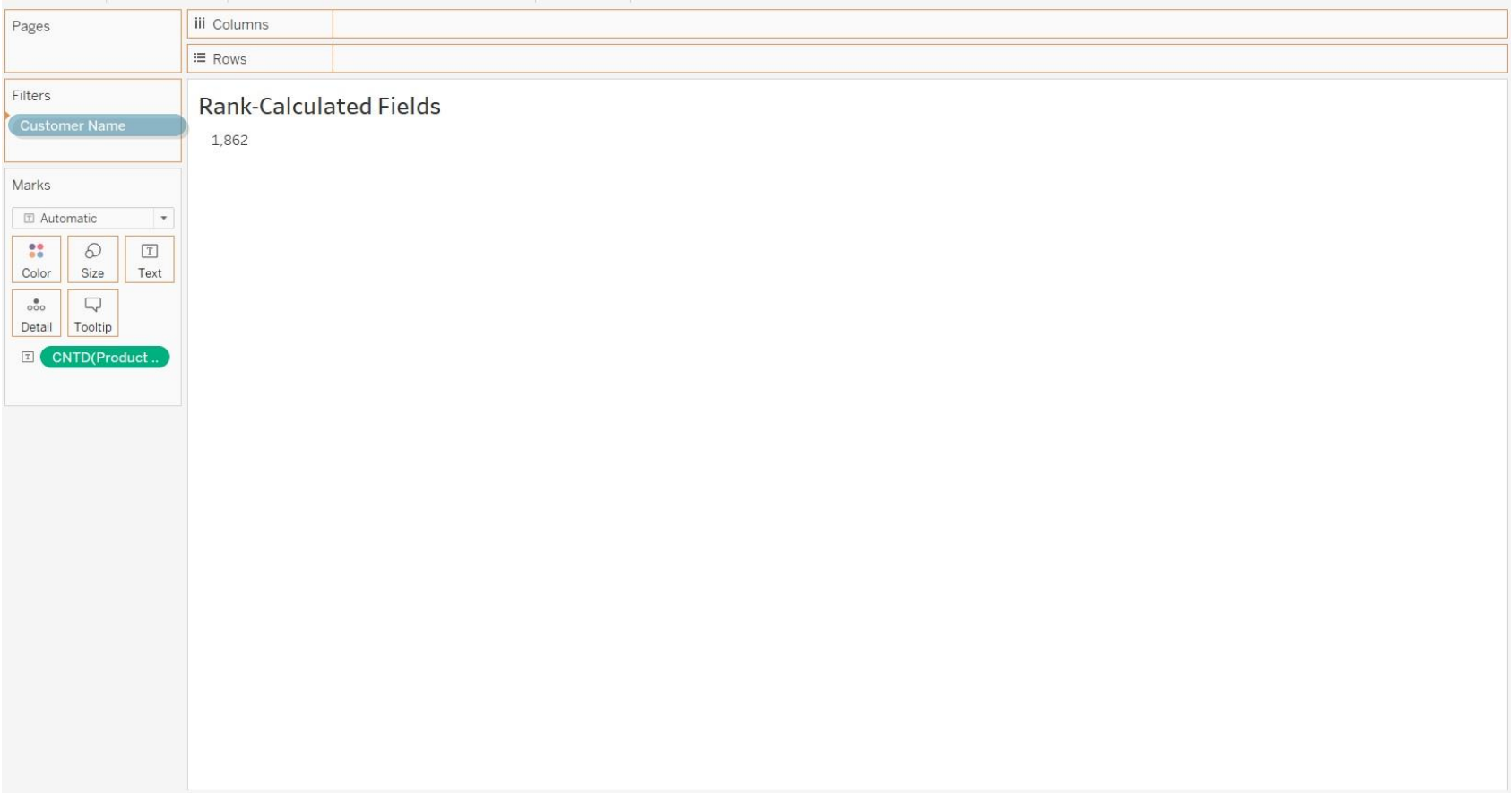
Step 2: On the Marks card, right-click **Product ID** and select **Measure** > **Count(Distinct)**





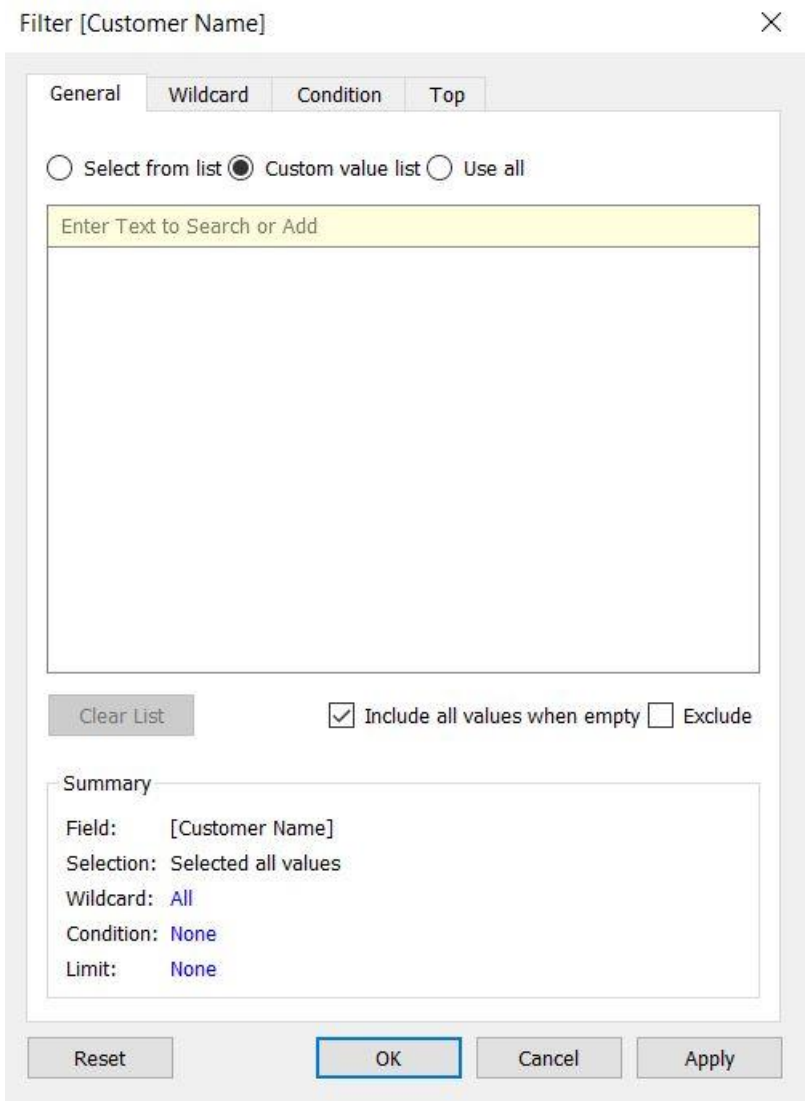
METHOD-II RANK BY CALCULATED FIELDS

Step 3: Drop **Customer Name** to **Filters** shelf



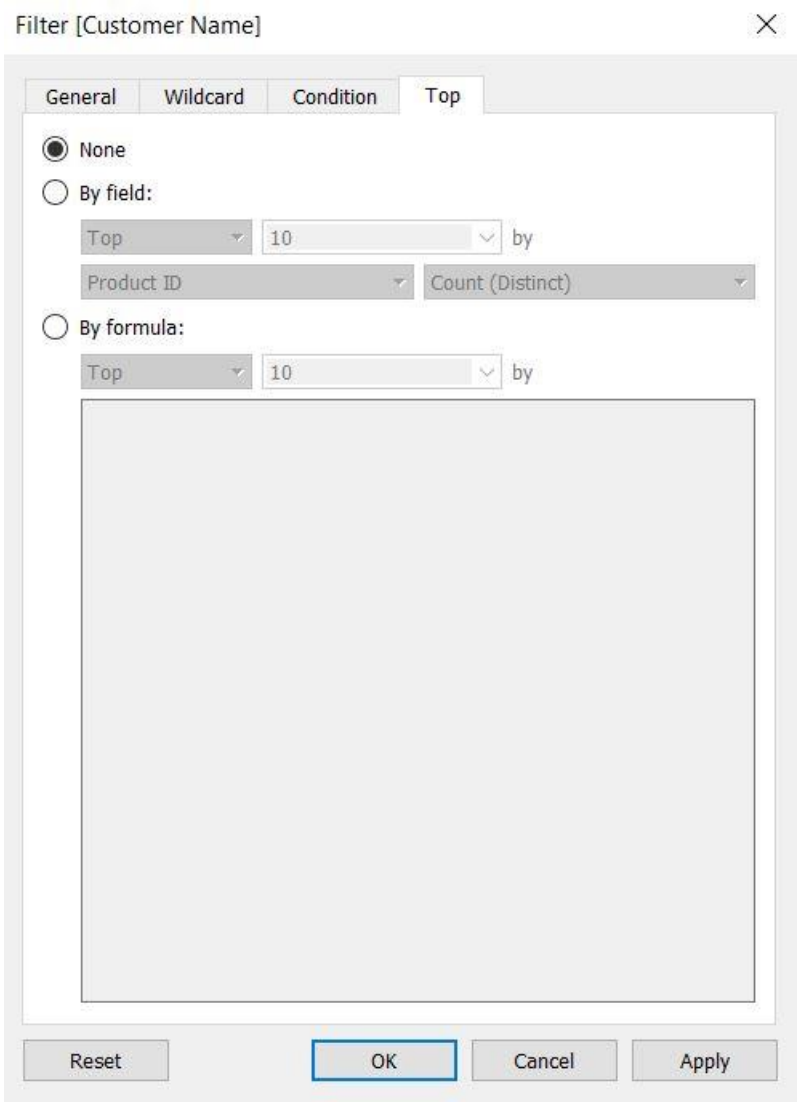
METHOD-II RANK BY CALCULATED FIELDS

Step 4: Filter[Customer Name] box appears



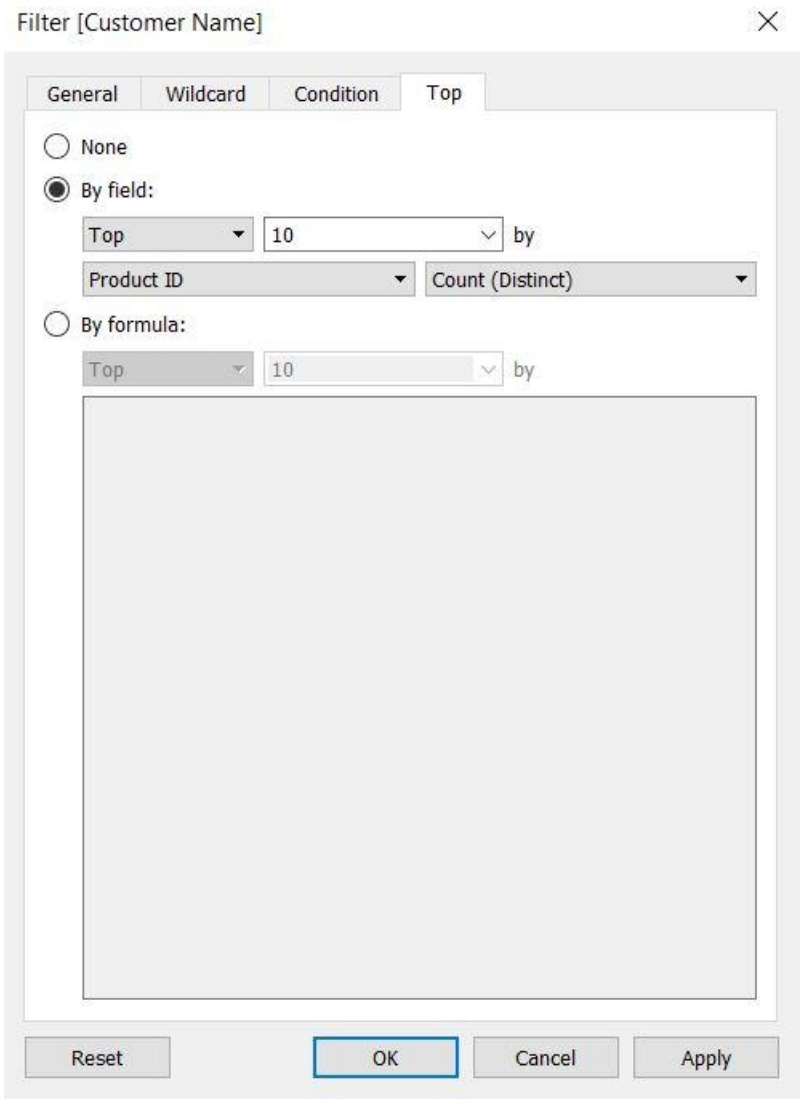
METHOD-II RANK BY CALCULATED FIELDS

Step 5: Select **Top** option



METHOD-II RANK BY CALCULATED FIELDS

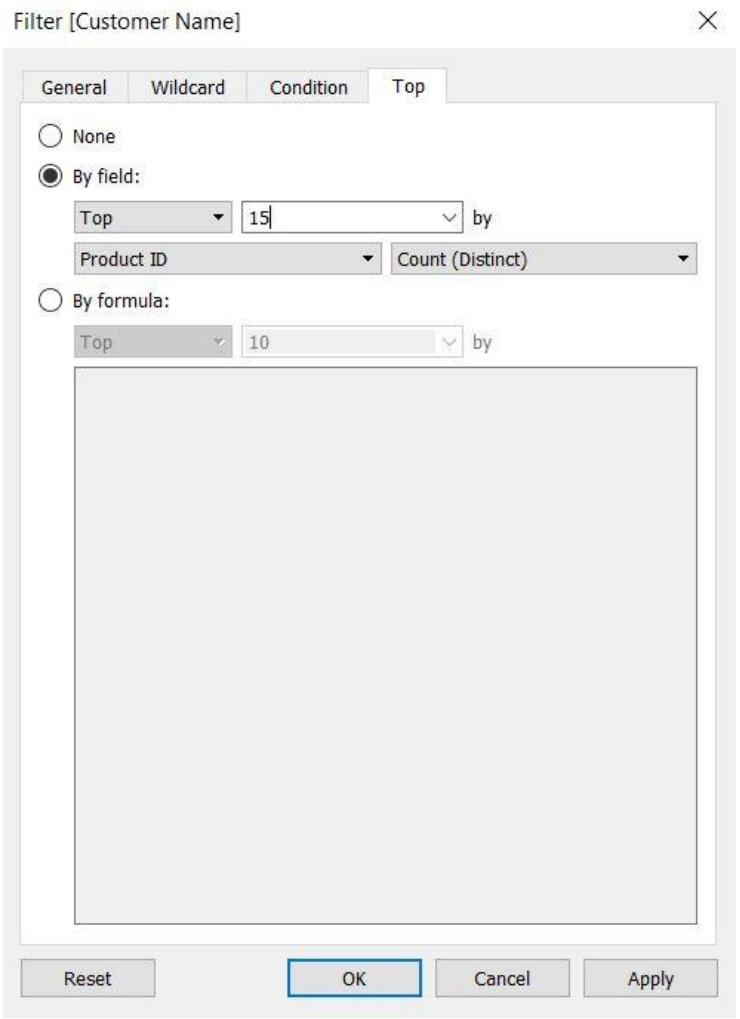
Step 6: Select **By field** option



METHOD-II RANK BY CALCULATED FIELDS

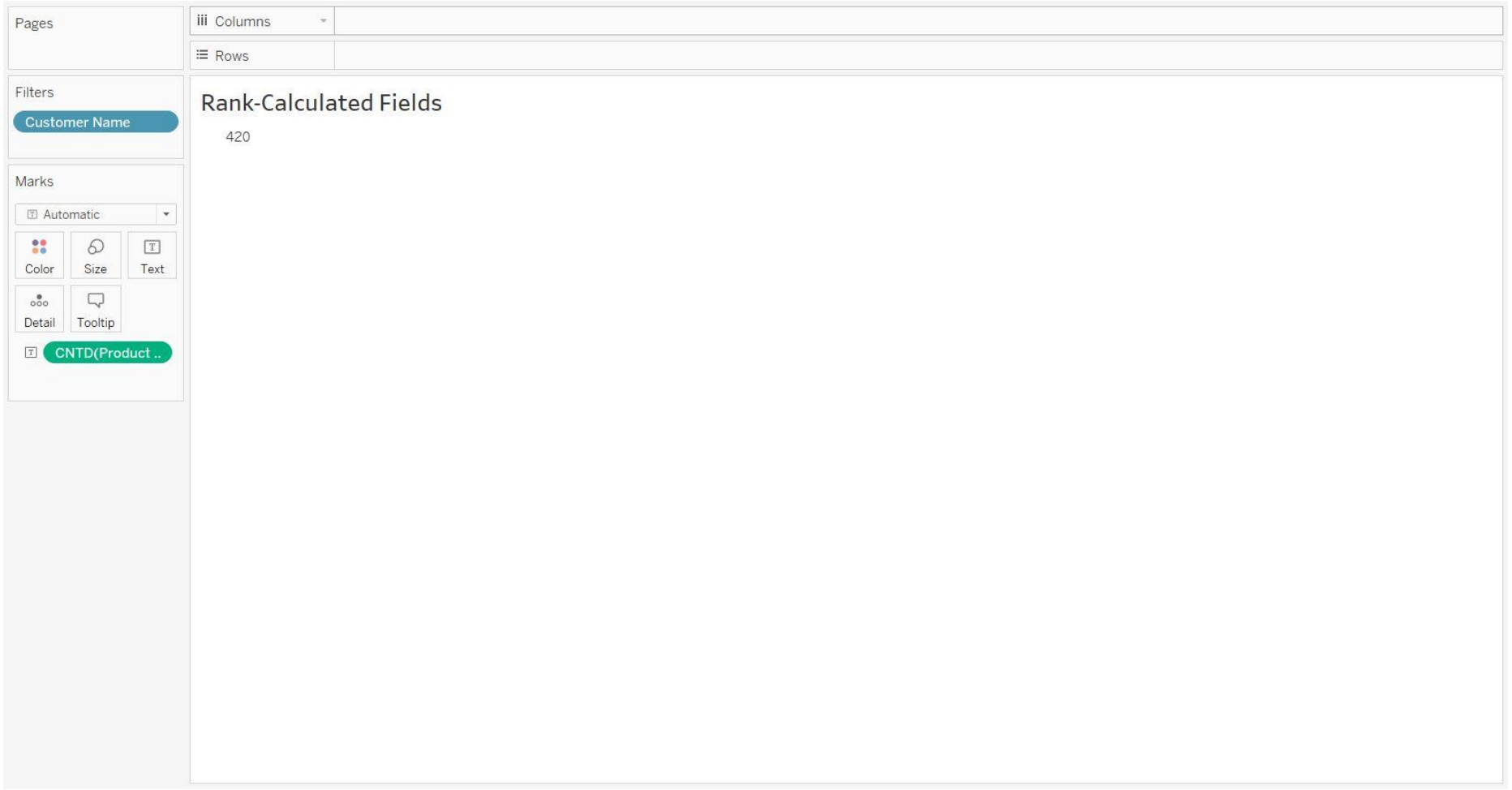
Step 7: Enter **15**

Click **OK**



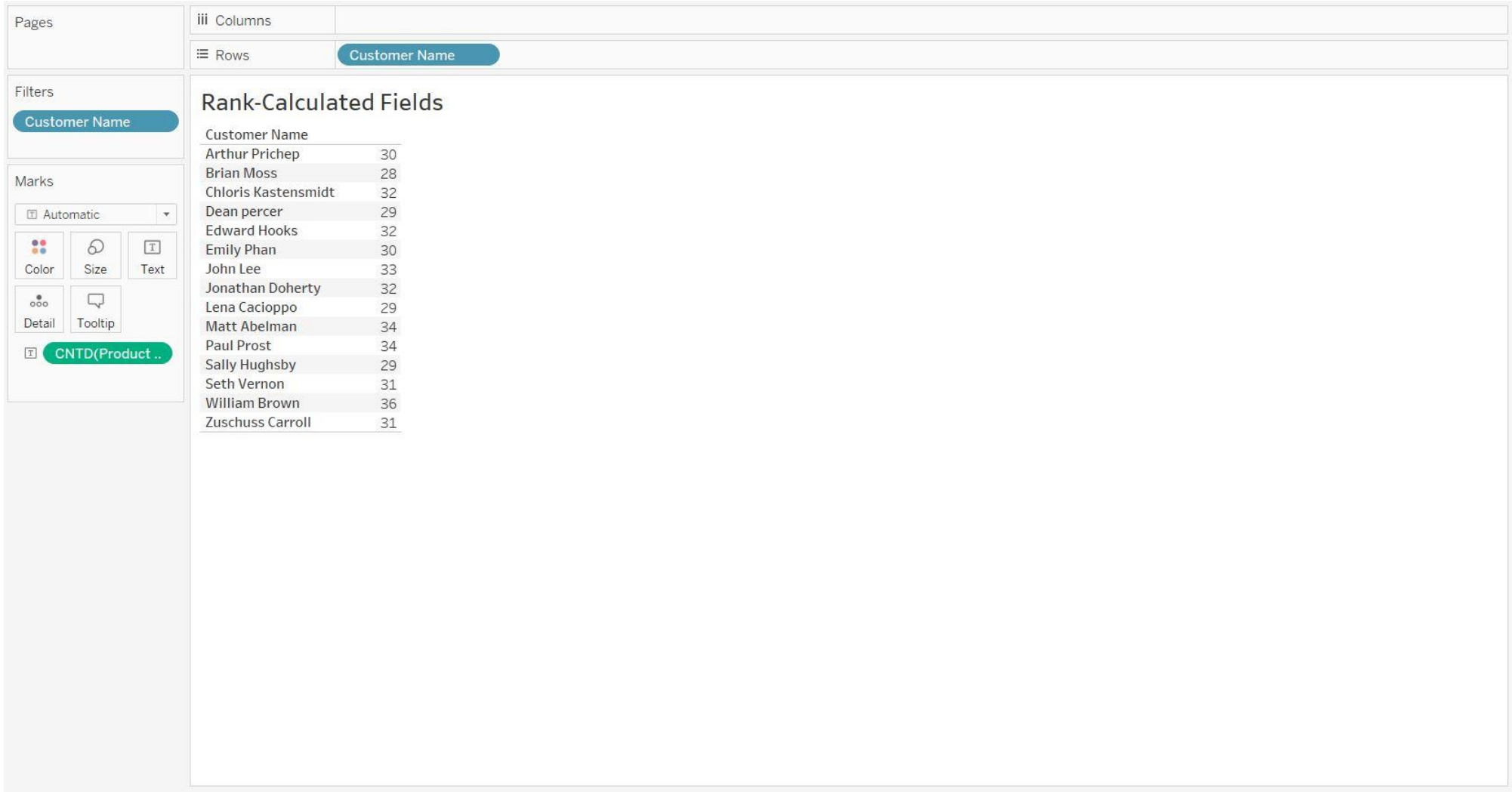
METHOD-II RANK BY CALCULATED FIELDS

Step 8: Customer Name is now present in **Filters** shelf



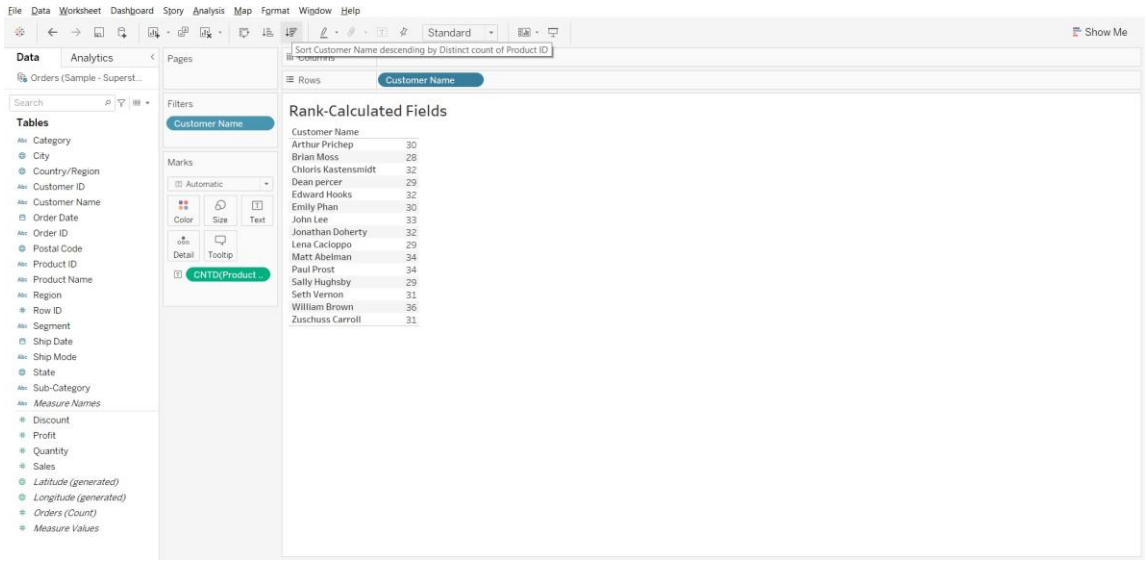
METHOD-II RANK BY CALCULATED FIELDS

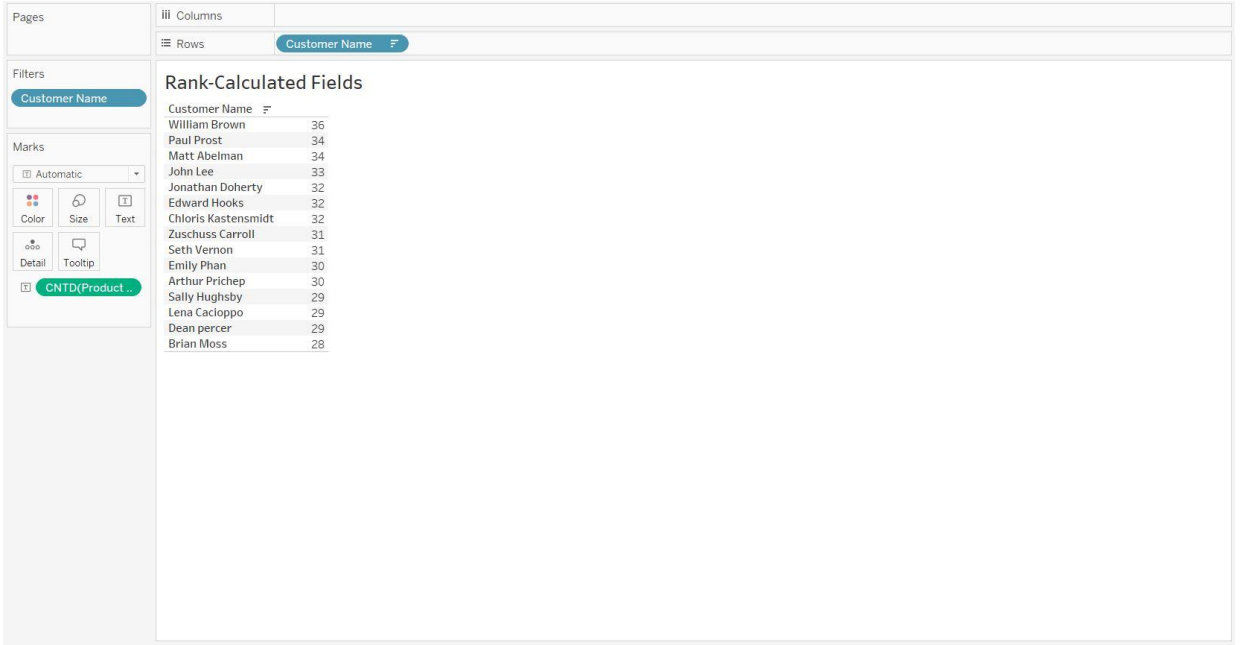
Step 9: Drop **Customer Name** to the **Rows** shelf



METHOD-II RANK BY CALCULATED FIELDS

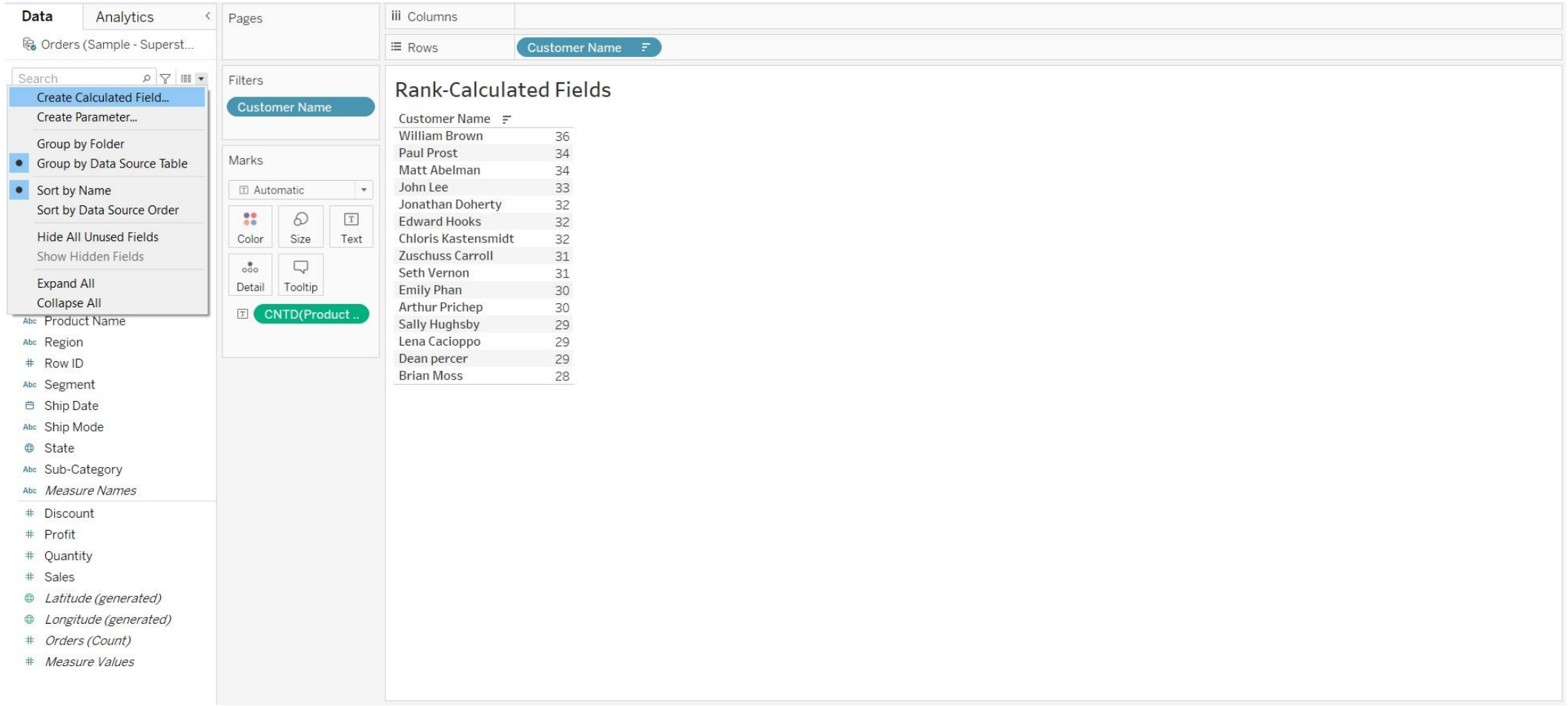
Step 10: Sort **Customer Name descending** by **Distinct count** of **Product ID**





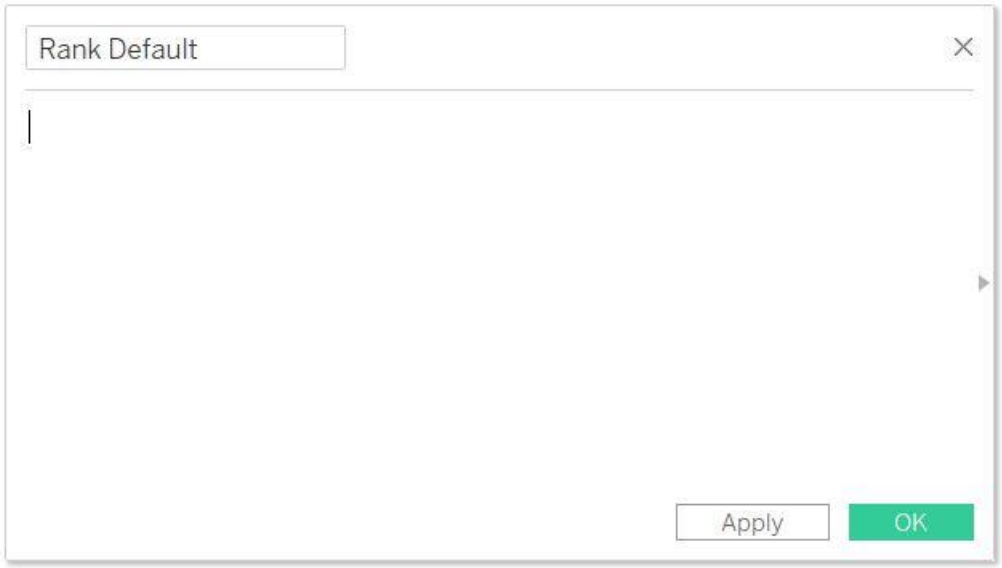
METHOD-II RANK BY CALCULATED FIELDS

Step 11: Create Calculated Field



METHOD-II RANK BY CALCULATED FIELDS

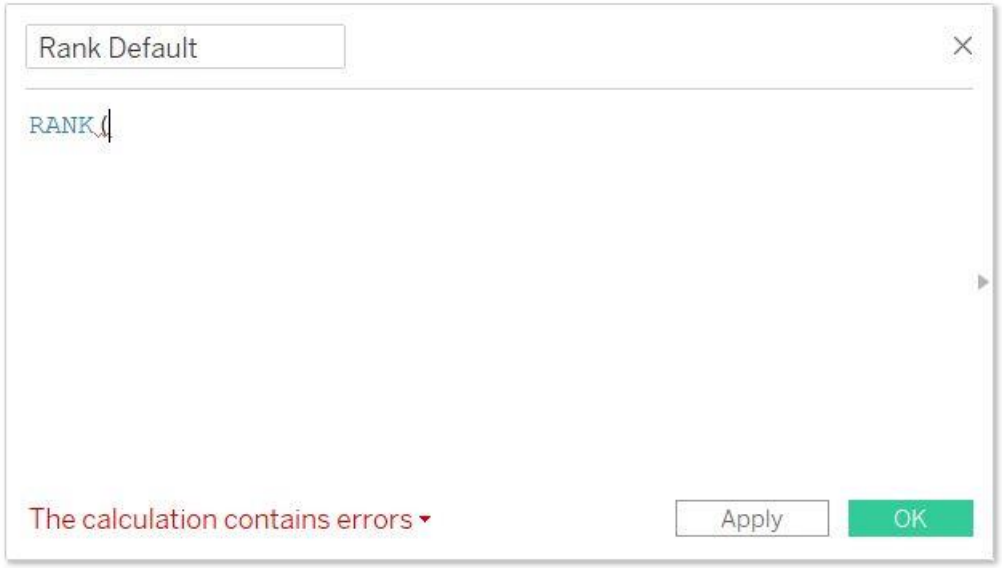
Step 13: Enter the name as **Rank Default**

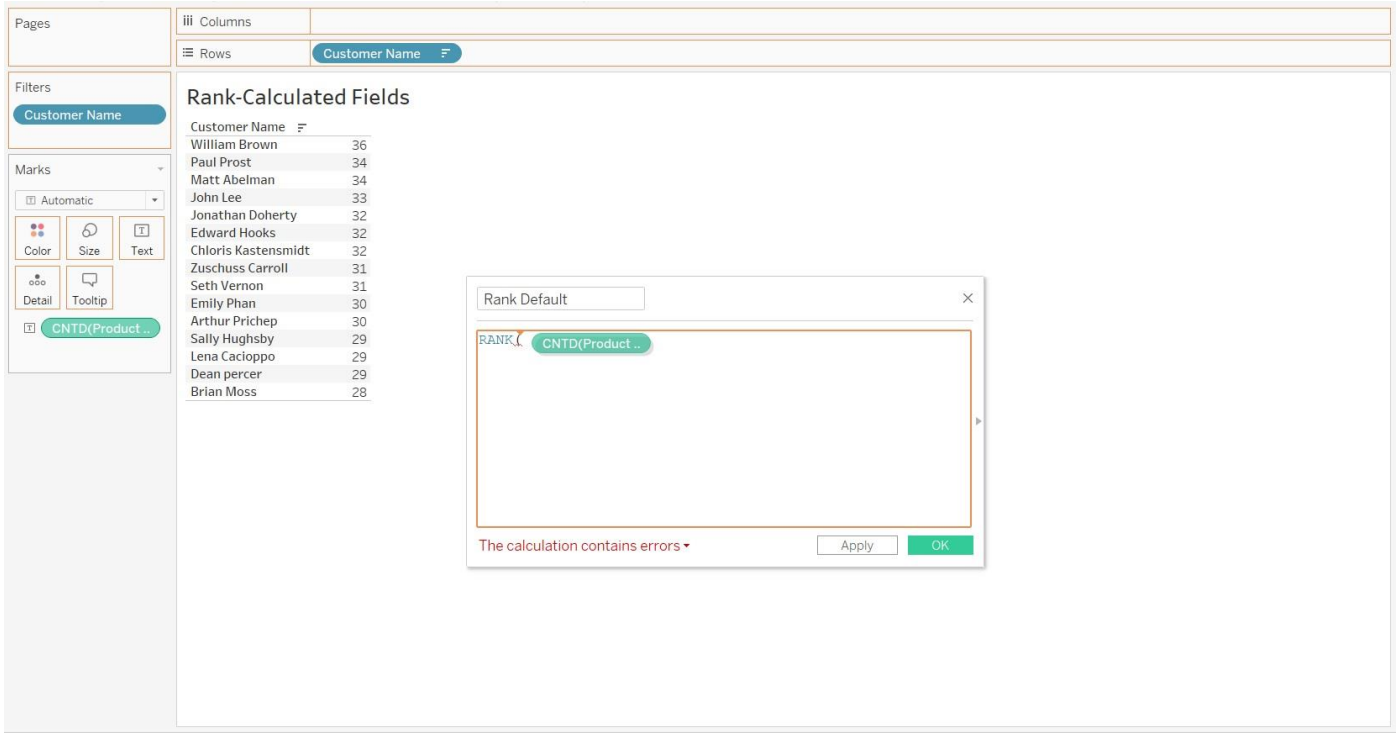


METHOD-II RANK BY CALCULATED FIELDS

Step 14: Start entering the formula

Press Ctrl and drop the **CNTD(Product ID)** to the formula



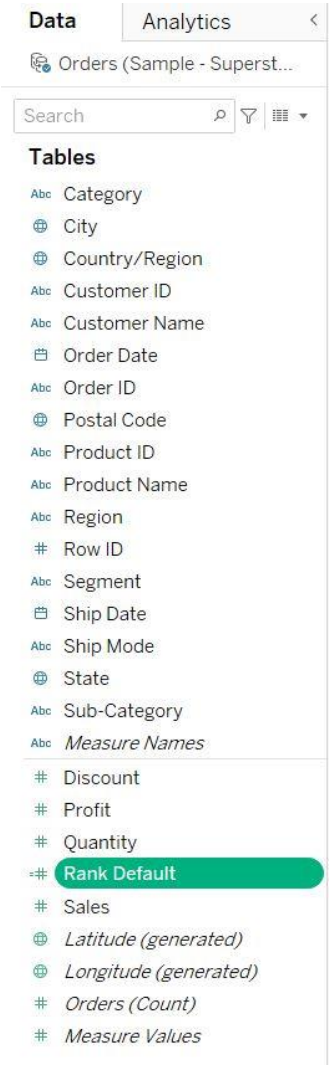


METHOD-II RANK BY CALCULATED FIELDS

Step 15: After finishing click **OK**

METHOD-II RANK BY CALCULATED FIELDS

Step 16: The newly created **Rank Default** will be present in **Measures** section of **Data pane**



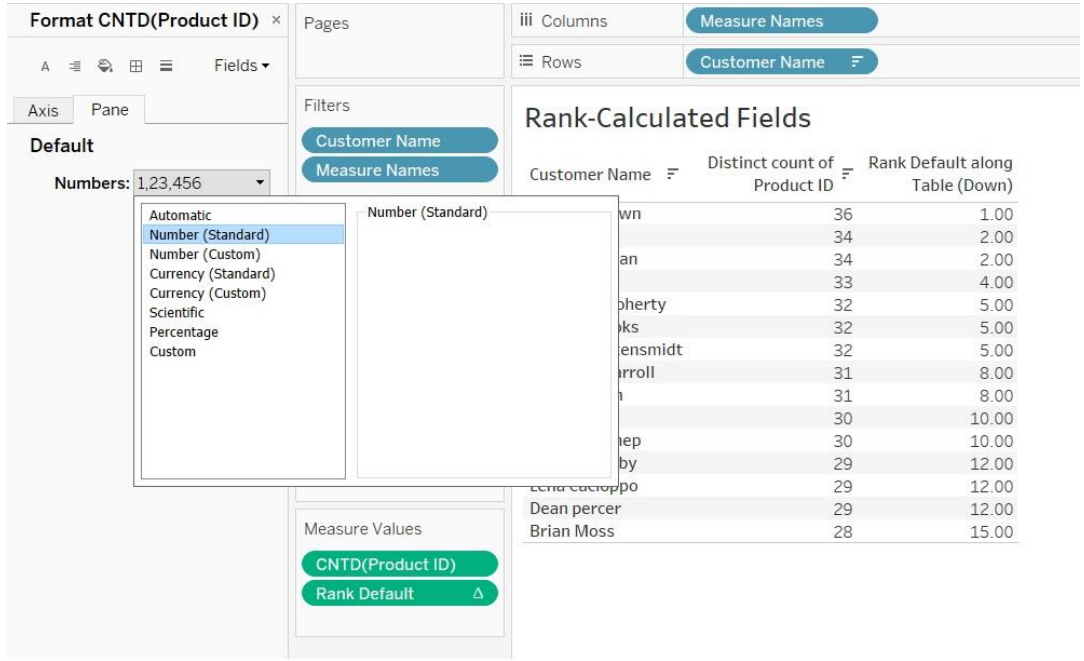
METHOD-II RANK BY CALCULATED FIELDS

Step 17: Drop **Rank Default** to **Measure Values** shelf
Adjust the width of the box to allow for full header to appear

Customer Name	Distinct count of Product ID	Rank Default along Table (Down)
William Brown	36.00	1.00
Paul Prost	34.00	2.00
Matt Abelman	34.00	2.00
John Lee	33.00	4.00
Jonathan Doherty	32.00	5.00
Edward Hooks	32.00	5.00
Chloris Kastensmidt	32.00	5.00
Zuschuss Carroll	31.00	8.00
Seth Vernon	31.00	8.00
Emily Phan	30.00	10.00
Arthur Prichep	30.00	10.00
Sally Hughsby	29.00	12.00
Lena Cacioppo	29.00	12.00
Dean percer	29.00	12.00
Brian Moss	28.00	15.00

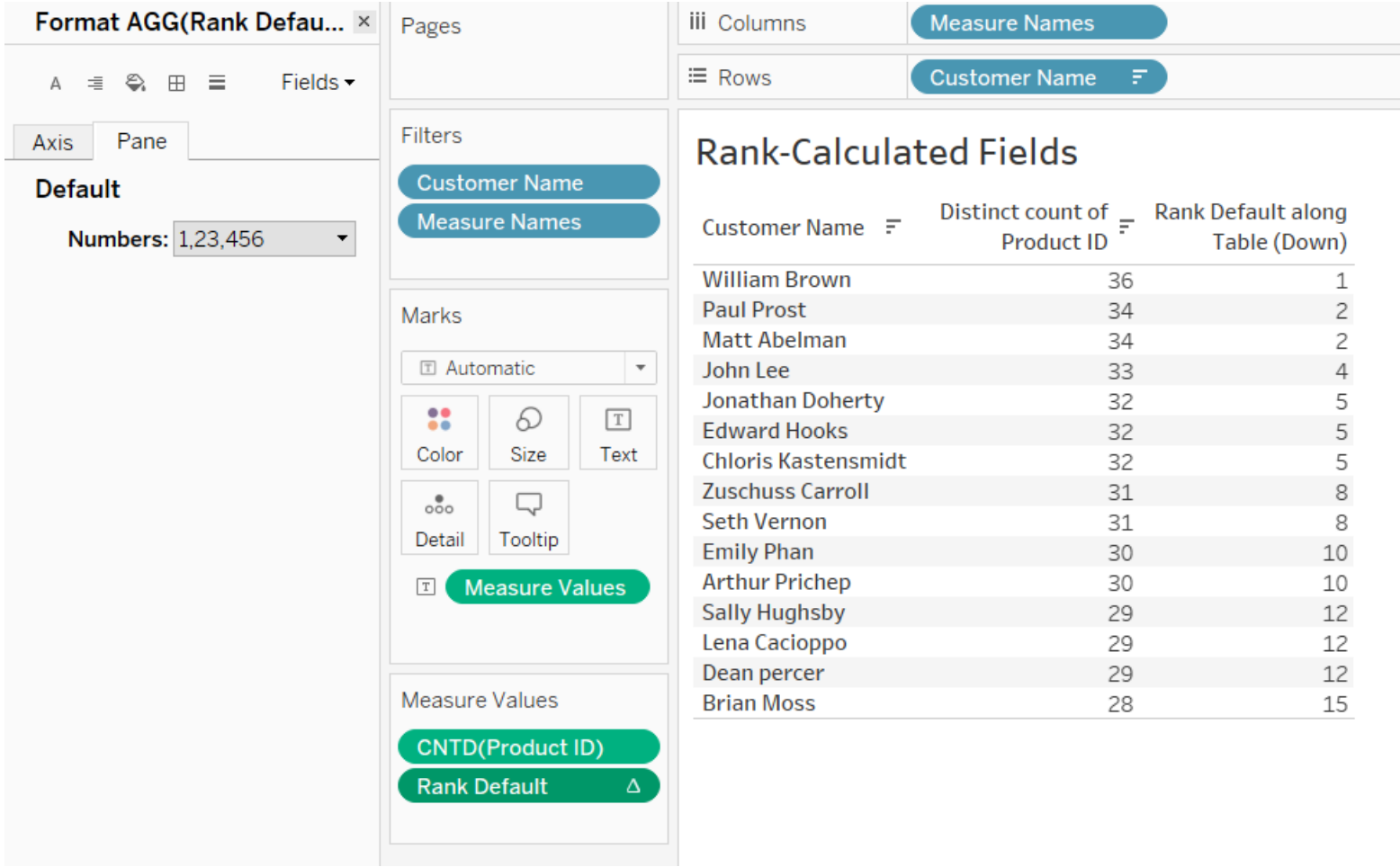
METHOD-II RANK BY CALCULATED FIELDS

Step 18: Format the **CNTD(Product ID)** to remove decimal places as mentioned below



METHOD-II RANK BY CALCULATED FIELDS

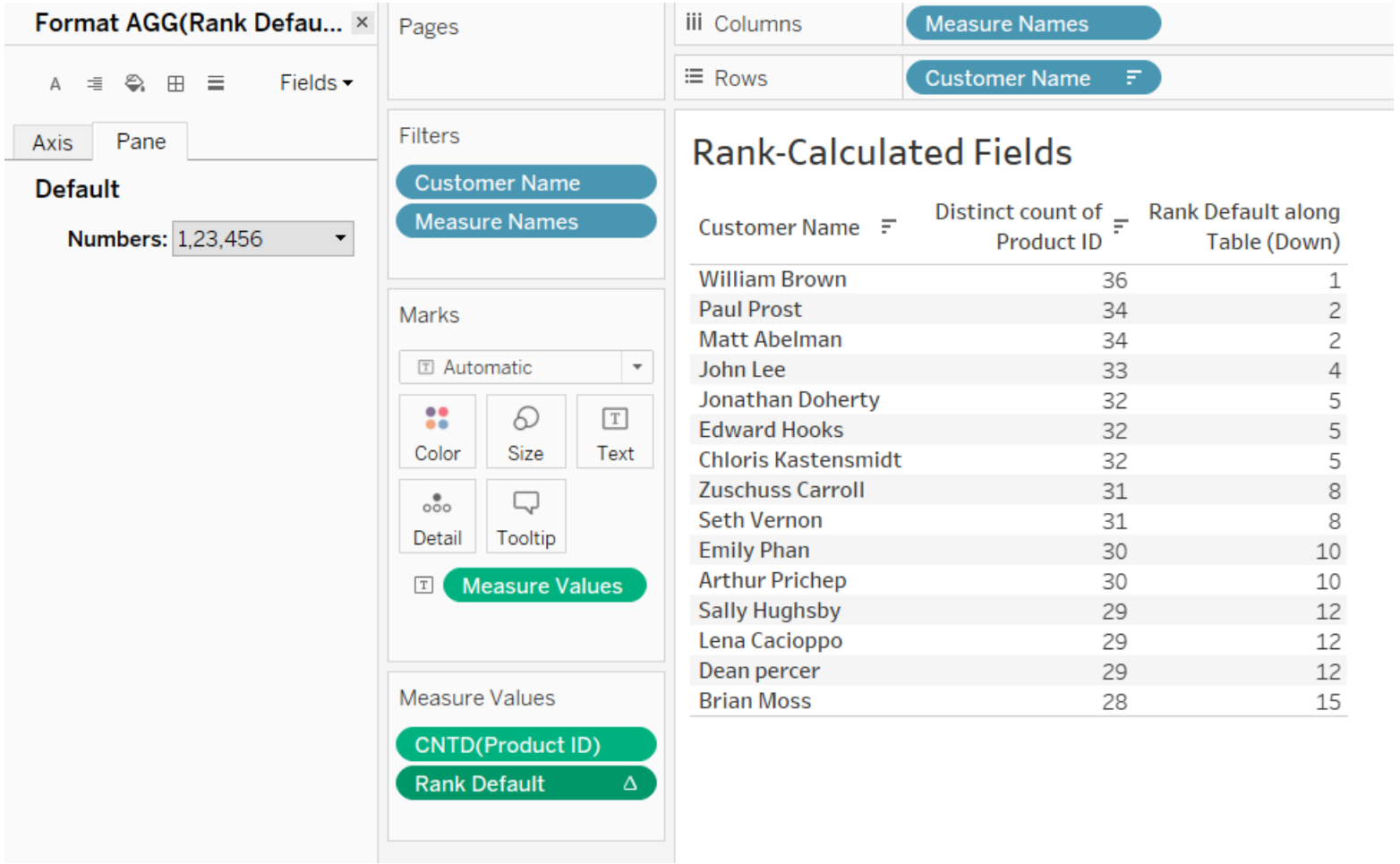
Step 19: Format the **Rank Default** to remove decimal places as mentioned below



Customer Name	Distinct count of Product ID	Rank Default along Table (Down)
William Brown	36	1
Paul Prost	34	2
Matt Abelman	34	2
John Lee	33	4
Jonathan Doherty	32	5
Edward Hooks	32	5
Chloris Kastensmidt	32	5
Zuschuss Carroll	31	8
Seth Vernon	31	8
Emily Phan	30	10
Arthur Prichep	30	10
Sally Hughsby	29	12
Lena Cacioppo	29	12
Dean percer	29	12
Brian Moss	28	15

METHOD-II RANK BY CALCULATED FIELDS

Step 20: Close the Format pane



Rank-Calculated Fields

Customer Name	Distinct count of Product ID	Rank Default along Table (Down)
William Brown	36	1
Paul Prost	34	2
Matt Abelman	34	2
John Lee	33	4
Jonathan Doherty	32	5
Edward Hooks	32	5
Chloris Kastensmidt	32	5
Zuschuss Carroll	31	8
Seth Vernon	31	8
Emily Phan	30	10
Arthur Prichep	30	10
Sally Hughsby	29	12
Lena Cacioppo	29	12
Dean percer	29	12
Brian Moss	28	15

METHOD-II RANK BY CALCULATED FIELDS

Step 21: Create the Calculated Field for **Rank Dense**

METHOD-II RANK BY CALCULATED FIELDS

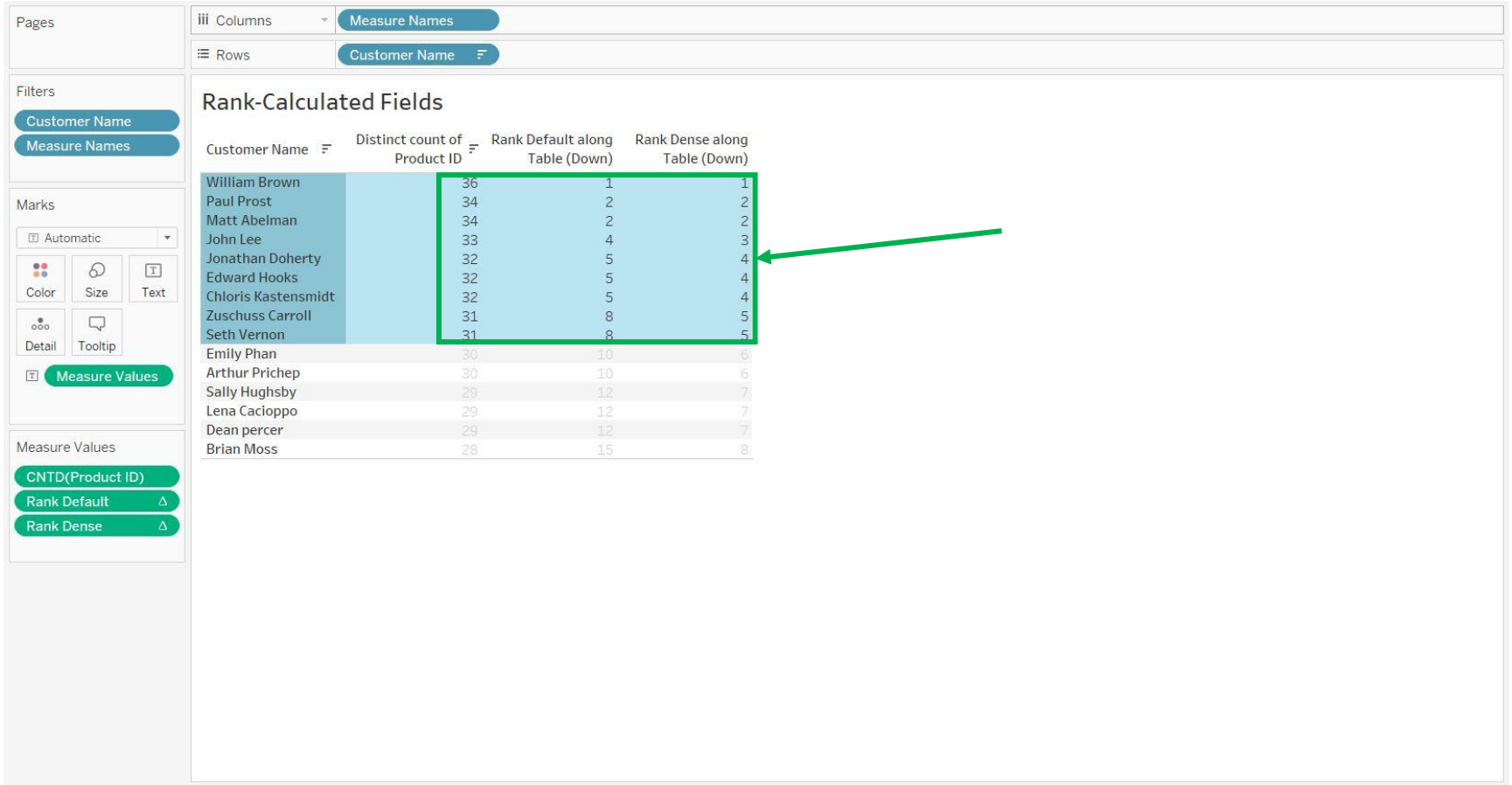
Step 22: Drop **Rank Dense** to the **Measure Value**s shelf

Rank-Calculated Fields

Customer Name	Distinct count of Product ID	Rank Default along Table (Down)	Rank Dense along Table (Down)
William Brown	36	1	1.00
Paul Prost	34	2	2.00
Matt Abelman	34	2	2.00
John Lee	33	4	3.00
Jonathan Doherty	32	5	4.00
Edward Hooks	32	5	4.00
Chloris Kastensmidt	32	5	4.00
Zuschuss Carroll	31	8	5.00
Seth Vernon	31	8	5.00
Emily Phan	30	10	6.00
Arthur Prichep	30	10	6.00
Sally Hughsby	29	12	7.00
Lena Cacioppo	29	12	7.00
Dean percer	29	12	7.00
Brian Moss	28	15	8.00

METHOD-II RANK BY CALCULATED FIELDS

Step 23: Check the differences in values assigned to **Rank** and **Rank Dense** for identical CNTD(Product ID) values and next values



RANK (Default):
Returns the standard competition rank for the current row in the partition. **Identical values are assigned an identical rank**. Use the optional 'asc' | 'desc' argument to specify ascending or descending order. The default is descending.

RANK_DENSE:
Returns the dense rank for the current row in the partition. **Identical values are assigned an identical rank, but no gaps are inserted** into the number sequence. Use the optional 'asc' | 'desc' argument to specify ascending or descending order. The default is descending.

METHOD-II RANK BY CALCULATED FIELDS

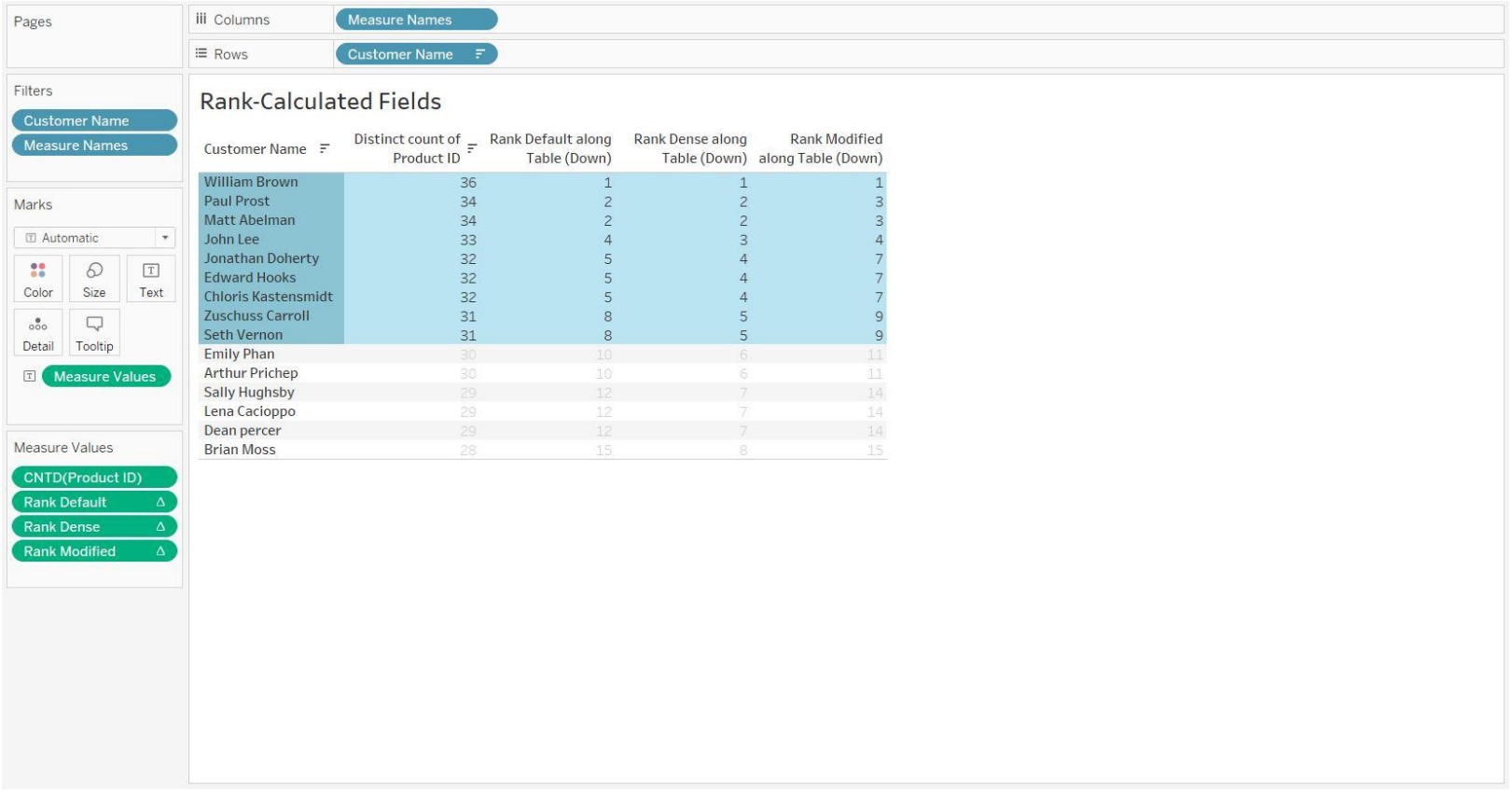
Step 24: Create the Calculated Field for **Rank Modified**
Drop **Rank Modified** to the **Measure Values** shelf

Rank-Calculated Fields

Customer Name	Distinct count of Product ID	Rank Default along Table (Down)	Rank Dense along Table (Down)	Rank Modified along Table (Down)
William Brown	36	1	1	1
Paul Prost	34	2	2	3
Matt Abelman	34	2	2	3
John Lee	33	4	3	4
Jonathan Doherty	32	5	4	7
Edward Hooks	32	5	4	7
Chloris Kastensmidt	32	5	4	7
Zuschuss Carroll	31	8	5	9
Seth Vernon	31	8	5	9
Emily Phan	30	10	6	11
Arthur Prichep	30	10	6	11
Sally Hughsby	29	12	7	14
Lena Cacioppo	29	12	7	14
Dean percer	29	12	7	14
Brian Moss	28	15	8	15

METHOD-II RANK BY CALCULATED FIELDS

Step 25: Check the differences in values assigned to **Rank Modified** for identical CNTD(Product ID) values and next values



Customer Name	Distinct count of Product ID	Rank Default along Table (Down)	Rank Dense along Table (Down)	Rank Modified along Table (Down)
William Brown	36	1	1	1
Paul Prost	34	2	2	3
Matt Abelman	34	2	2	3
John Lee	33	4	3	4
Jonathan Doherty	32	5	4	7
Edward Hooks	32	5	4	7
Chloris Kastensmidt	32	5	4	7
Zuschuss Carroll	31	8	5	9
Seth Vernon	31	8	5	9
Emily Phan	30	10	6	11
Arthur Prichep	30	10	6	11
Sally Hughsby	29	12	7	14
Lena Cacioppo	29	12	7	14
Dean percer	29	12	7	14
Brian Moss	28	15	8	15

RANK_MODIFIED:

Returns the **modified competition rank** (**last value**) for the current row in the partition. **Identical values are assigned an identical rank**. Use the optional 'asc' | 'desc' argument to specify ascending or descending order. The default is descending.

METHOD-II RANK BY CALCULATED FIELDS

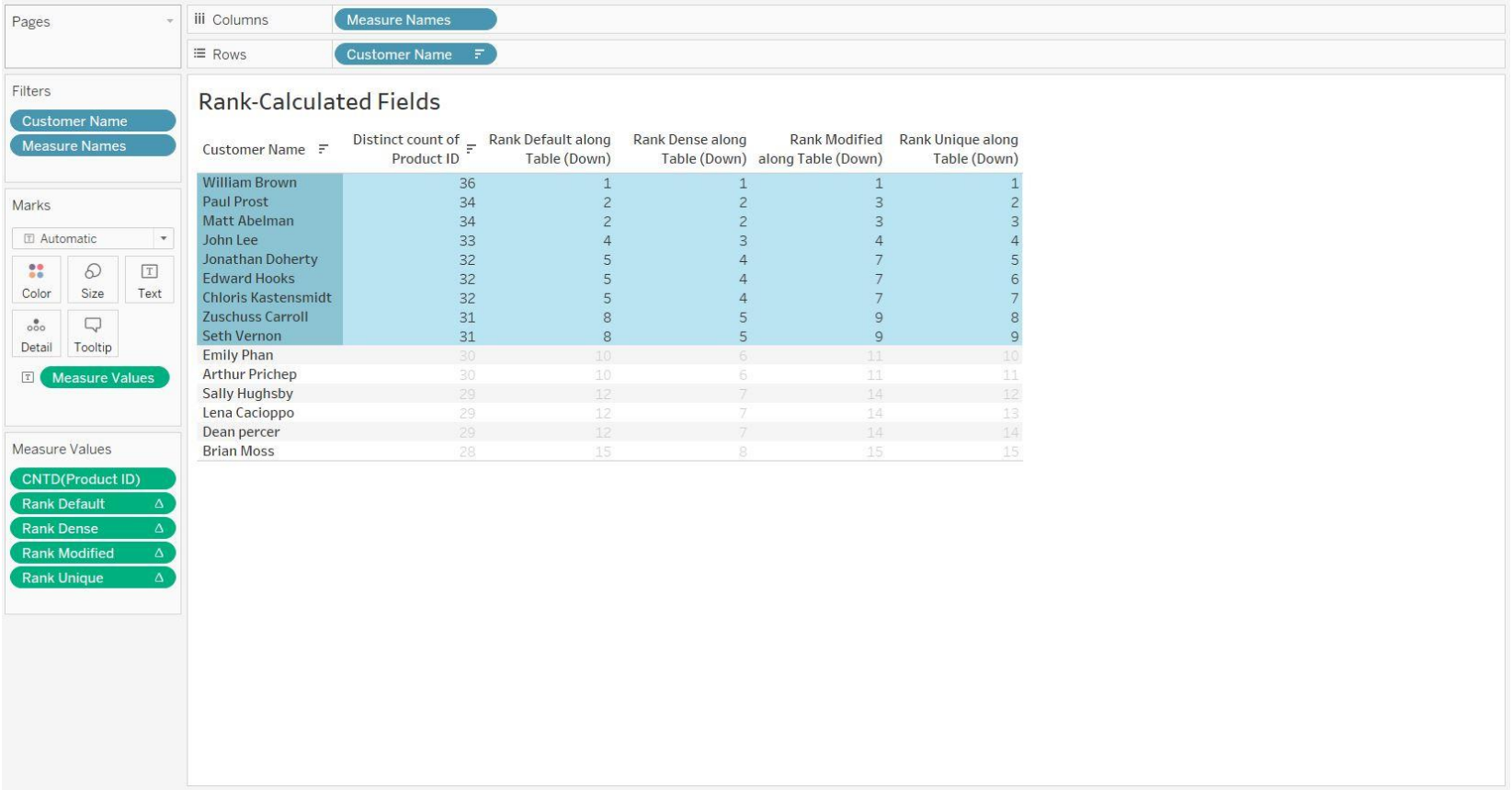
Step 26: Create the Calculated Field for **Rank Unique**
Drop **Rank Unique** to the **Measure Values** shelf

Rank-Calculated Fields

Customer Name	Distinct count of Product ID	Rank Default along Table (Down)	Rank Dense along Table (Down)	Rank Modified along Table (Down)	Rank Unique along Table (Down)
William Brown	36	1	1	1	1
Paul Prost	34	2	2	3	2
Matt Abelman	34	2	2	3	3
John Lee	33	4	3	4	4
Jonathan Doherty	32	5	4	7	5
Edward Hooks	32	5	4	7	6
Chloris Kastensmidt	32	5	4	7	7
Zuschuss Carroll	31	8	5	9	8
Seth Vernon	31	8	5	9	9
Emily Phan	30	10	6	11	10
Arthur Prichep	30	10	6	11	11
Sally Hughsby	29	12	7	14	12
Lena Cacioppo	29	12	7	14	13
Dean percer	29	12	7	14	14
Brian Moss	28	15	8	15	15

METHOD-II RANK BY CALCULATED FIELDS

Step 27: Check the differences in values assigned to **Rank Unique** for identical CNTD(Product ID) values and next values



Rank-Calculated Fields

Customer Name	Distinct count of Product ID	Rank Default along Table (Down)	Rank Dense along Table (Down)	Rank Modified along Table (Down)	Rank Unique along Table (Down)
William Brown	36	1	1	1	1
Paul Prost	34	2	2	3	2
Matt Abelman	34	2	2	3	3
John Lee	33	4	3	4	4
Jonathan Doherty	32	5	4	7	5
Edward Hooks	32	5	4	7	6
Chloris Kastensmidt	32	5	4	7	7
Zuschuss Carroll	31	8	5	9	8
Seth Vernon	31	8	5	9	9
Emily Phan	30	10	6	11	10
Arthur Prichep	30	10	6	11	11
Sally Hughsby	29	12	7	14	12
Lena Cacioppo	29	12	7	14	13
Dean percer	29	12	7	14	14
Brian Moss	28	15	8	15	15

RANK_UNIQUE:

Returns the **unique rank for the current row** in the partition. **Identical values are assigned different ranks.** Use the optional 'asc' | 'desc' argument to specify ascending or descending order. The default is descending.

METHOD-II RANK BY CALCULATED FIELDS

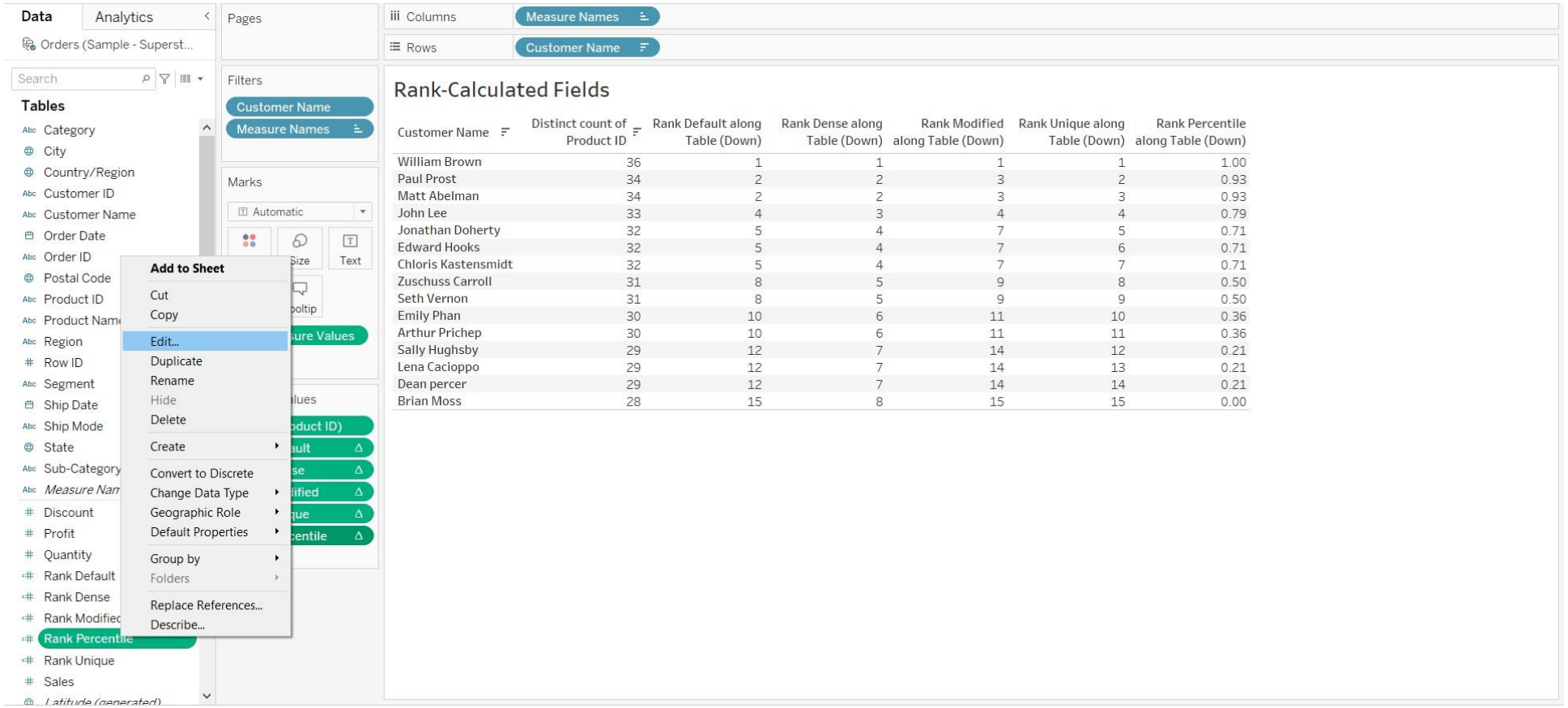
Step 28: Create the Calculated Field for **Rank Percentile**
Drop **Rank Percentile** to the **Measure Values** shelf

Rank-Calculated Fields

Customer Name	Distinct count of Product ID	Rank Default along Table (Down)	Rank Dense along Table (Down)	Rank Modified along Table (Down)	Rank Unique along Table (Down)	Rank Percentile along Table (Down)
William Brown	36	1	1	1	1	1.00
Paul Prost	34	2	2	3	2	0.93
Matt Abelman	34	2	2	3	3	0.93
John Lee	33	4	3	4	4	0.79
Jonathan Doherty	32	5	4	7	5	0.71
Edward Hooks	32	5	4	7	6	0.71
Chloris Kastensmidt	32	5	4	7	7	0.71
Zuschuss Carroll	31	8	5	9	8	0.50
Seth Vernon	31	8	5	9	9	0.50
Emily Phan	30	10	6	11	10	0.36
Arthur Prichep	30	10	6	11	11	0.36
Sally Hughsby	29	12	7	14	12	0.21
Lena Cacioppo	29	12	7	14	13	0.21
Dean percer	29	12	7	14	14	0.21
Brian Moss	28	15	8	15	15	0.00

METHOD-II RANK BY CALCULATED FIELDS

Step 29: On the Marks card, right-click **Rank Percentile** and select **Edit**



Rank-Calculated Fields

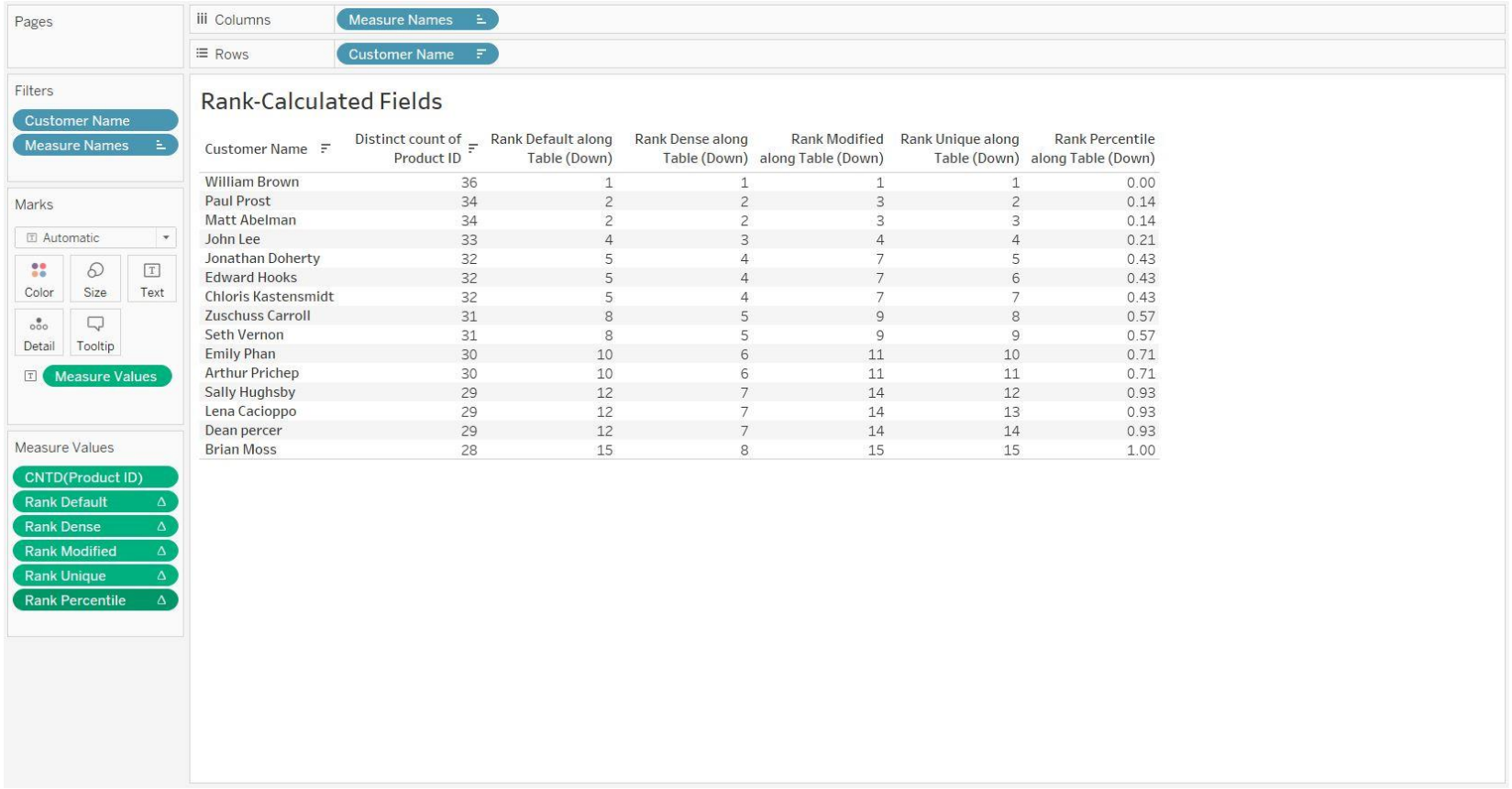
Customer Name	Distinct count of Product ID	Rank Default along Table (Down)	Rank Dense along Table (Down)	Rank Modified along Table (Down)	Rank Unique along Table (Down)	Rank Percentile along Table (Down)
William Brown	36	1	1	1	1	1.00
Paul Prost	34	2	2	3	2	0.93
Matt Abelman	34	2	2	3	3	0.93
John Lee	33	4	3	4	4	0.79
Jonathan Doherty	32	5	4	7	5	0.71
Edward Hooks	32	5	4	7	6	0.71
Chloris Kastensmidt	32	5	4	7	7	0.71
Zuschuss Carroll	31	8	5	9	8	0.50
Seth Vernon	31	8	5	9	9	0.50
Emily Phan	30	10	6	11	10	0.36
Arthur Prichep	30	10	6	11	11	0.36
Sally Hughsby	29	12	7	14	12	0.21
Lena Cacioppo	29	12	7	14	13	0.21
Dean percer	29	12	7	14	14	0.21
Brian Moss	28	15	8	15	15	0.00

METHOD-II RANK BY CALCULATED FIELDS

Step 30: Edit the calculation to include ‘desc’

METHOD-II RANK BY CALCULATED FIELDS

Step 31: Drop **Rank Percentile** to the **Measure Values** shelf



Rank-Calculated Fields

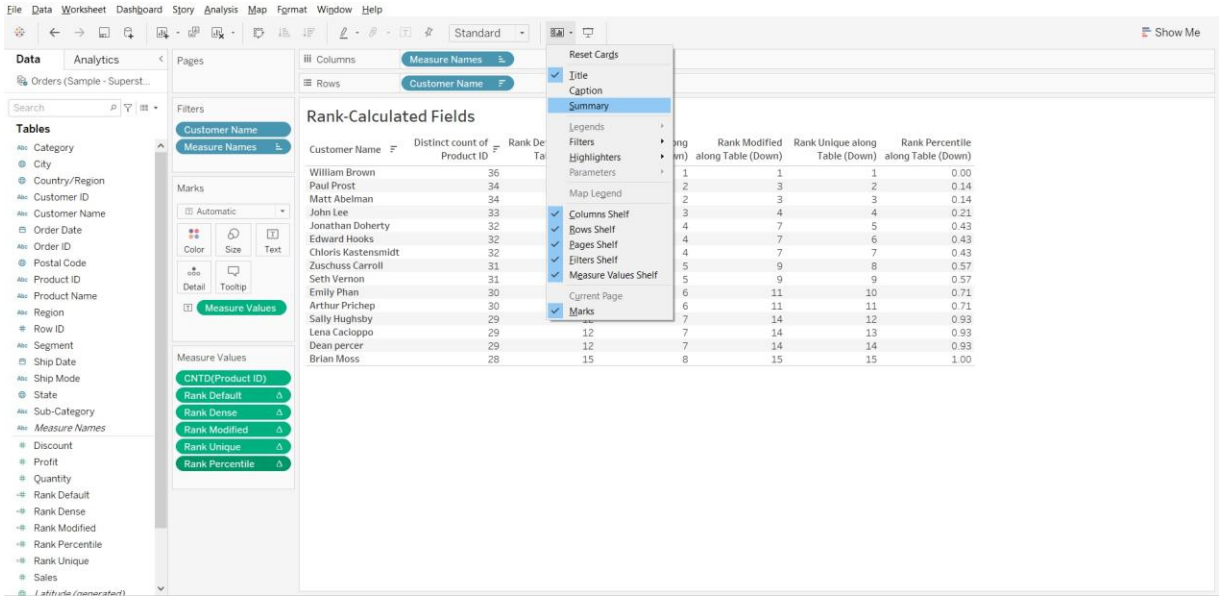
Customer Name	Distinct count of Product ID	Rank Default along Table (Down)	Rank Dense along Table (Down)	Rank Modified along Table (Down)	Rank Unique along Table (Down)	Rank Percentile along Table (Down)
William Brown	36	1	1	1	1	0.00
Paul Prost	34	2	2	3	2	0.14
Matt Abelman	34	2	2	3	3	0.14
John Lee	33	4	3	4	4	0.21
Jonathan Doherty	32	5	4	7	5	0.43
Edward Hooks	32	5	4	7	6	0.43
Chloris Kastensmidt	32	5	4	7	7	0.43
Zuschuss Carroll	31	8	5	9	8	0.57
Seth Vernon	31	8	5	9	9	0.57
Emily Phan	30	10	6	11	10	0.71
Arthur Prichep	30	10	6	11	11	0.71
Sally Hughsby	29	12	7	14	12	0.93
Lena Cacioppo	29	12	7	14	13	0.93
Dean percer	29	12	7	14	14	0.93
Brian Moss	28	15	8	15	15	1.00

RANK_PERCENTILE:
Returns the **percentile rank for the current row** in the partition. Use the optional 'asc' | 'desc' argument to specify ascending or descending order. The default is ascending.
We have changed the order to descending to match the order of the other Rank functions.

METHOD-II RANK BY CALCULATED FIELDS

Step 32: Show/Hide Cards > Summary

Confirm that **Summary card** is now visible in the Right side of the view



METHOD-II RANK BY CALCULATED FIELDS

Step 33: Select the **Rank Percentile** column

As per Summary card **0.57** is the **Median** Value which matches the middle value of the distribution of **Rank Percentile**