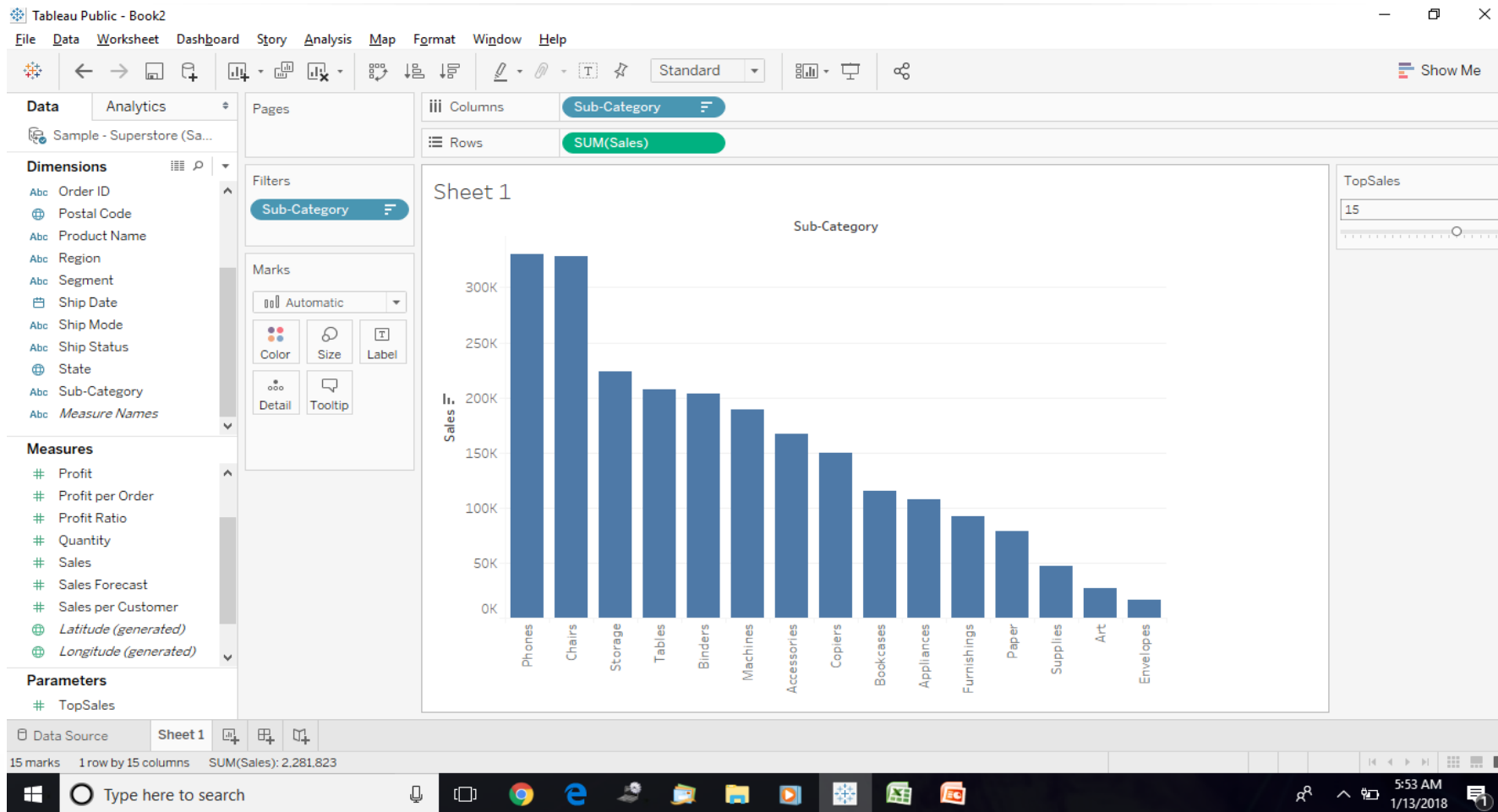


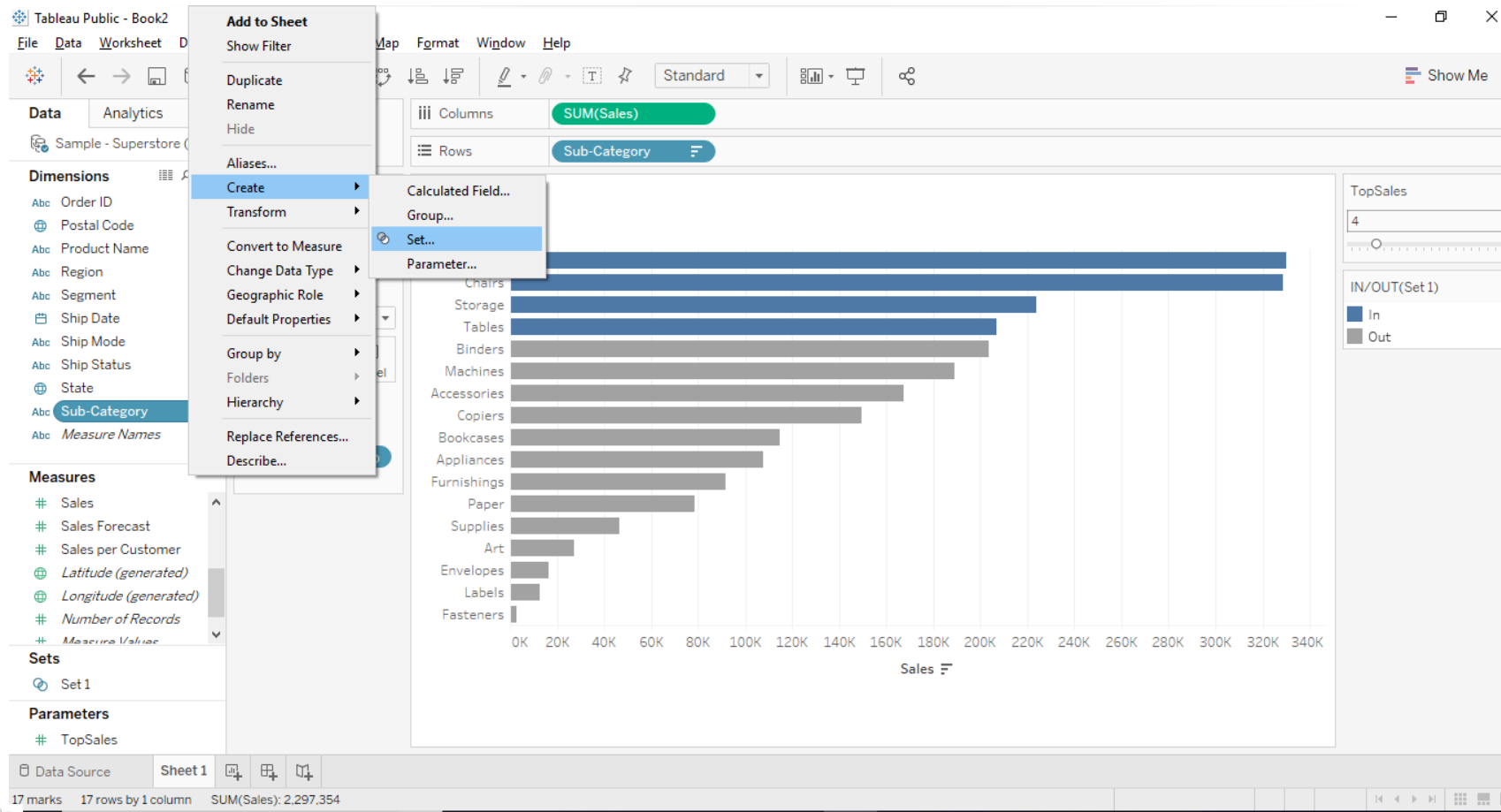
# Adding Parameters

Parameters are the dynamic values that can replace the constant values in calculations or filters. We can make our chart dynamic by adding parameter to it. This will allow the user to manipulate the chart at runtime.



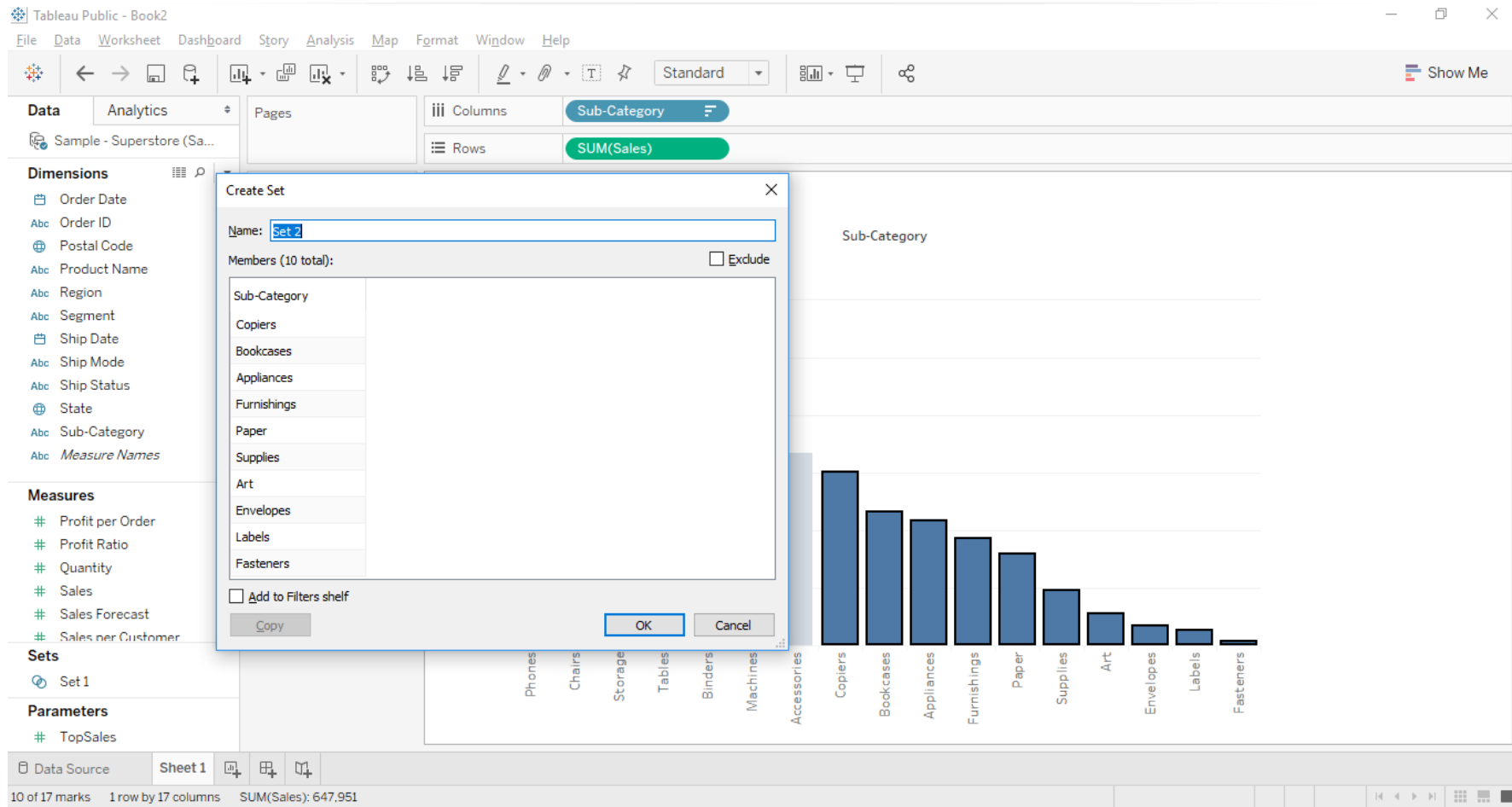
# Creating Sets

Set can be used to highlight the specific number of values in the chart.



# Creating Sets

The short cut method.



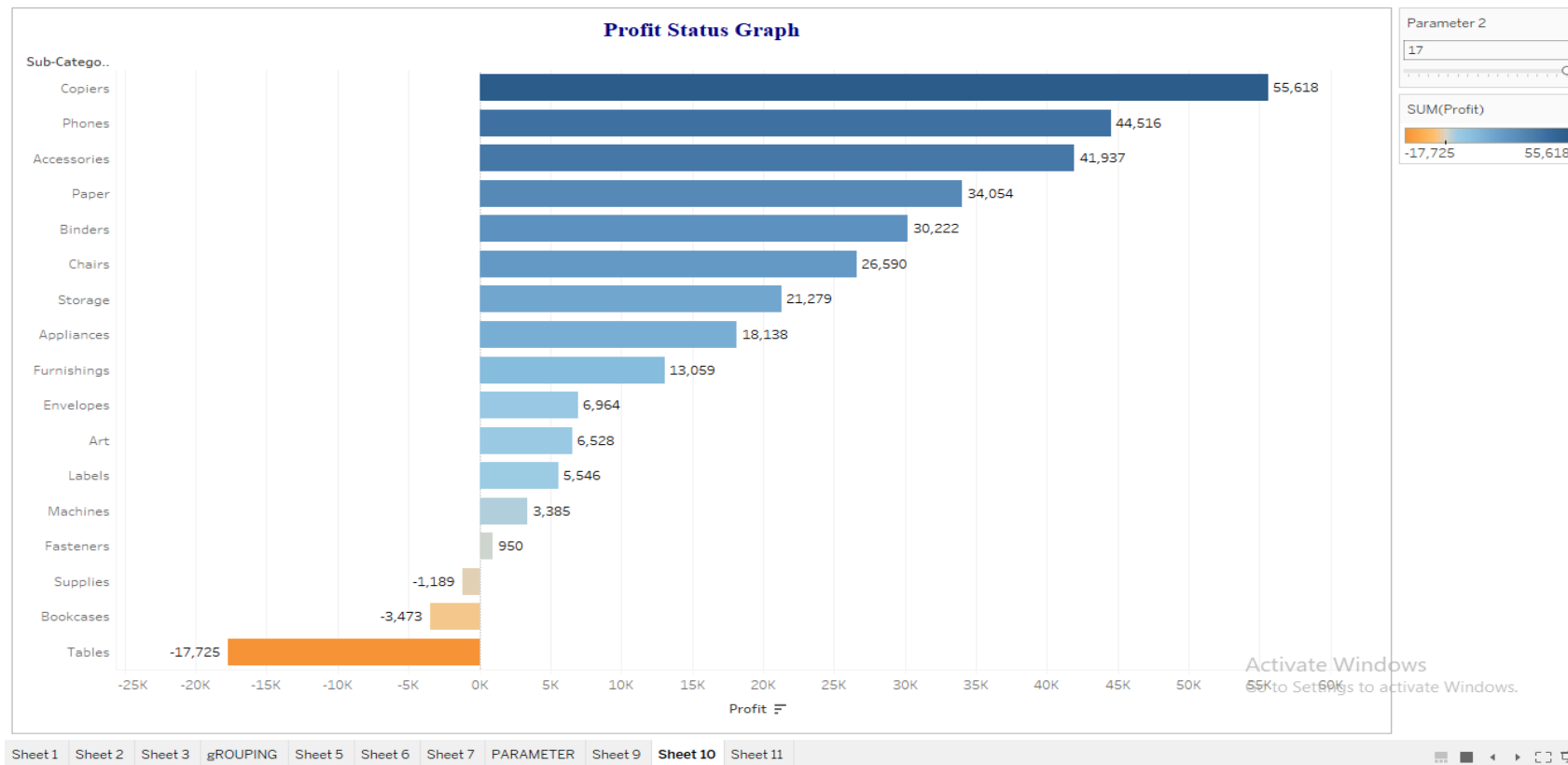
# ASSIGNMENT



A-1 Interactive Graph to highlight top 5 Profit generating categories —(Use Parameter)

A-2 Interactive category & subcategory wise sales - (using sets)

A-3 YEAR wise segment wise sales



# Using Combines

Combine allow us to do the collective analysis on fields.

Eg: Comparing Region wise, Category & Sub Category wise Sales.

Tableau Public - Book2

File Data Worksheet Dashboard Story Analysis Map Format Window Help

Sample - Superstore (...)

**Dimensions**

- Order Date
- Order ID
- Postal Code
- Product Name
- Region
- Segment
- Ship Date
- Ship Mode
- Ship Status
- State
- Sub-Category
- Measure Names

**Measures**

- Sales
- Sales Forecast
- Sales per Customer
- Latitude (generated)
- Longitude (generated)
- Number of Records
- Measure Values

**Sets**

- Set1

**Parameters**

- TopSales

Columns: Category, Sub-Category, Region (Combined)

Rows: Category, Sub-Category, Region (Combined)

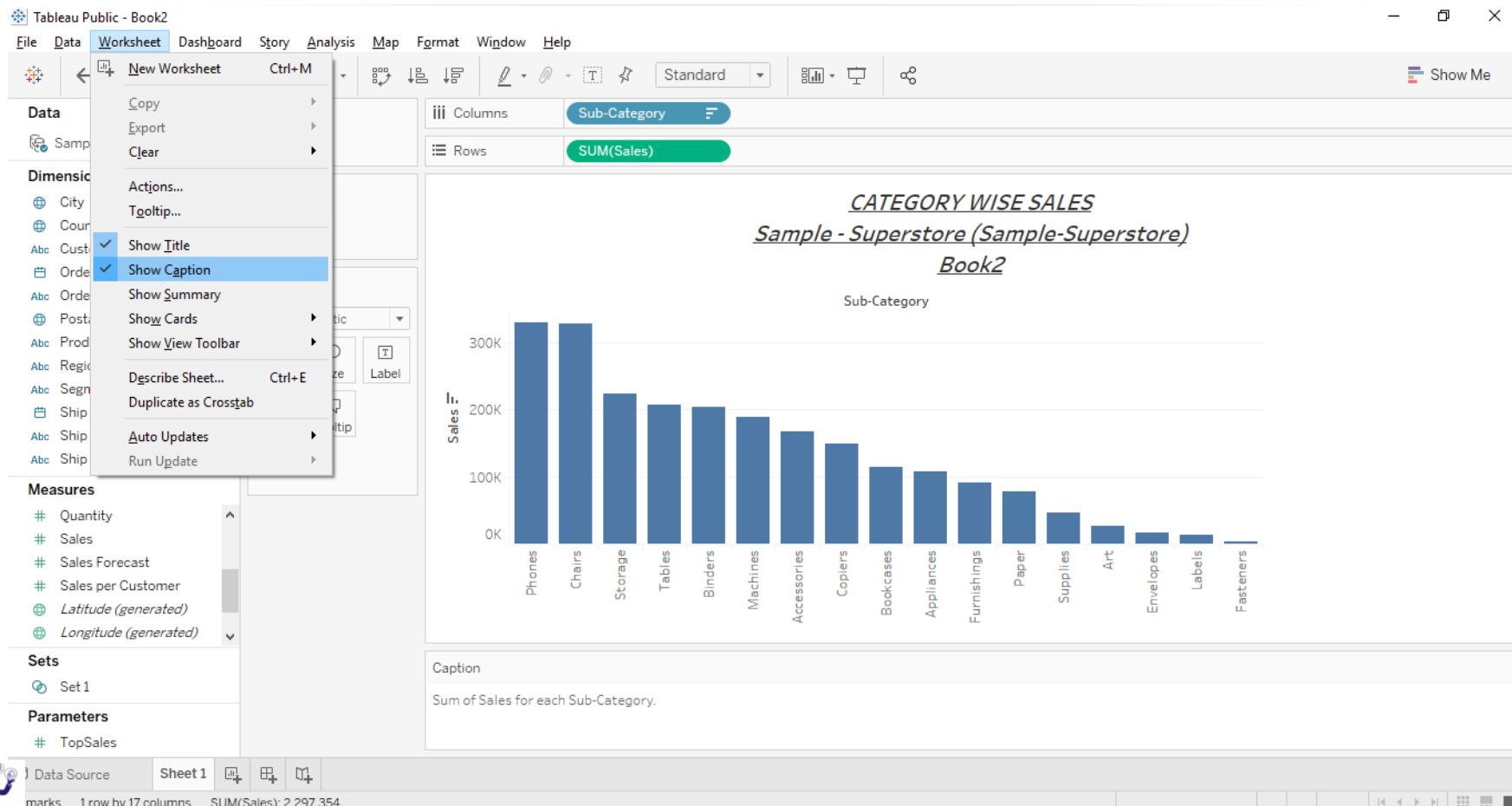
Sheet 1

Category, Sub-Category, Region (Combined)	
Furniture, Bookcases, Central	24,153
Furniture, Bookcases, East	43,819
Furniture, Bookcases, South	10,900
Furniture, Bookcases, West	36,007
Furniture, Chairs, Central	85,228
Furniture, Chairs, East	96,263
Furniture, Chairs, South	45,177
Furniture, Chairs, West	101,786
Furniture, Furnishings, Central	15,256
Furniture, Furnishings, East	29,067
Furniture, Furnishings, South	17,310
Furniture, Furnishings, West	30,072
Furniture, Tables, Central	39,152
Furniture, Tables, East	39,142
Furniture, Tables, South	43,919
Furniture, Tables, West	84,755
Office Supplies, Appliances, Central	23,582
Office Supplies, Appliances, East	34,191
Office Supplies, Appliances, South	19,525
Office Supplies, Appliances, West	30,240
Office Supplies, Art, Central	5,763
Office Supplies, Art, East	7,498



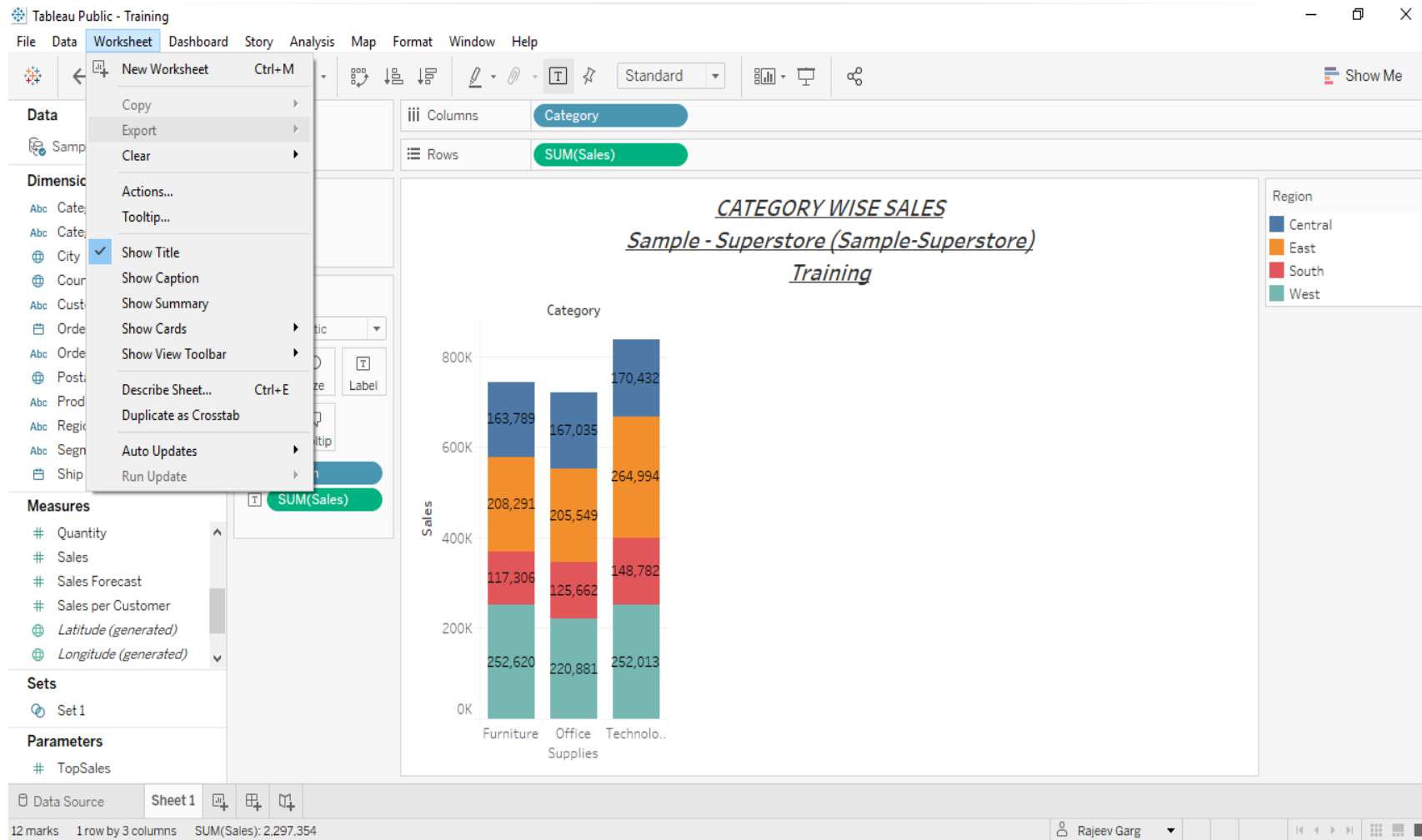
# Titles & Captions

By Default Tableau displays the sheet name as the chart title. We can edit this and provide more appropriate title. Also Tableau allows us the format these titles by using simple formatting options.



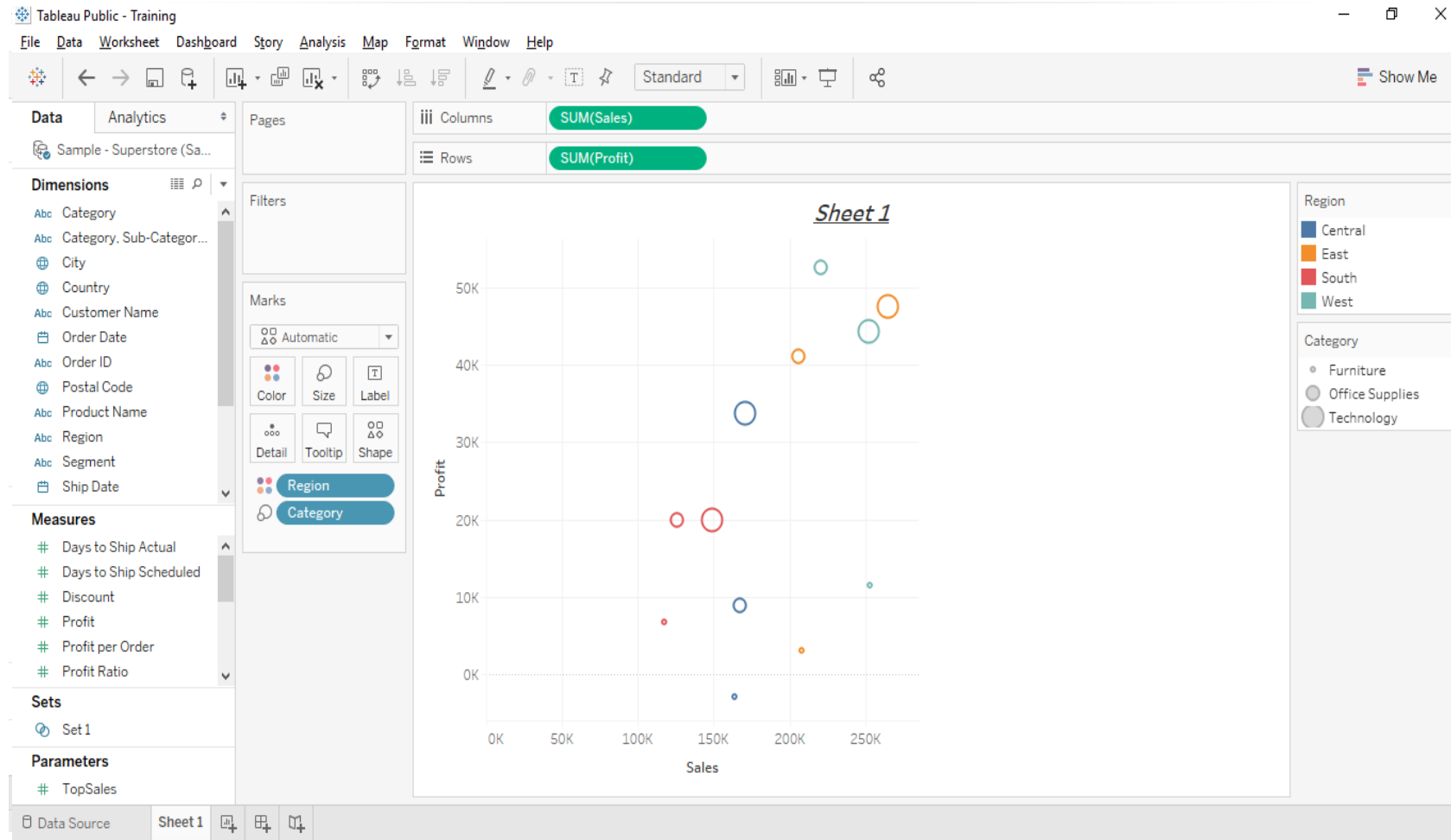
# Exporting Data

Tableau data can be exported to various destinations like PDF, Excel, PowerPoint, Access, word, etc.



# Granularity

Granularity means breaking down the data.





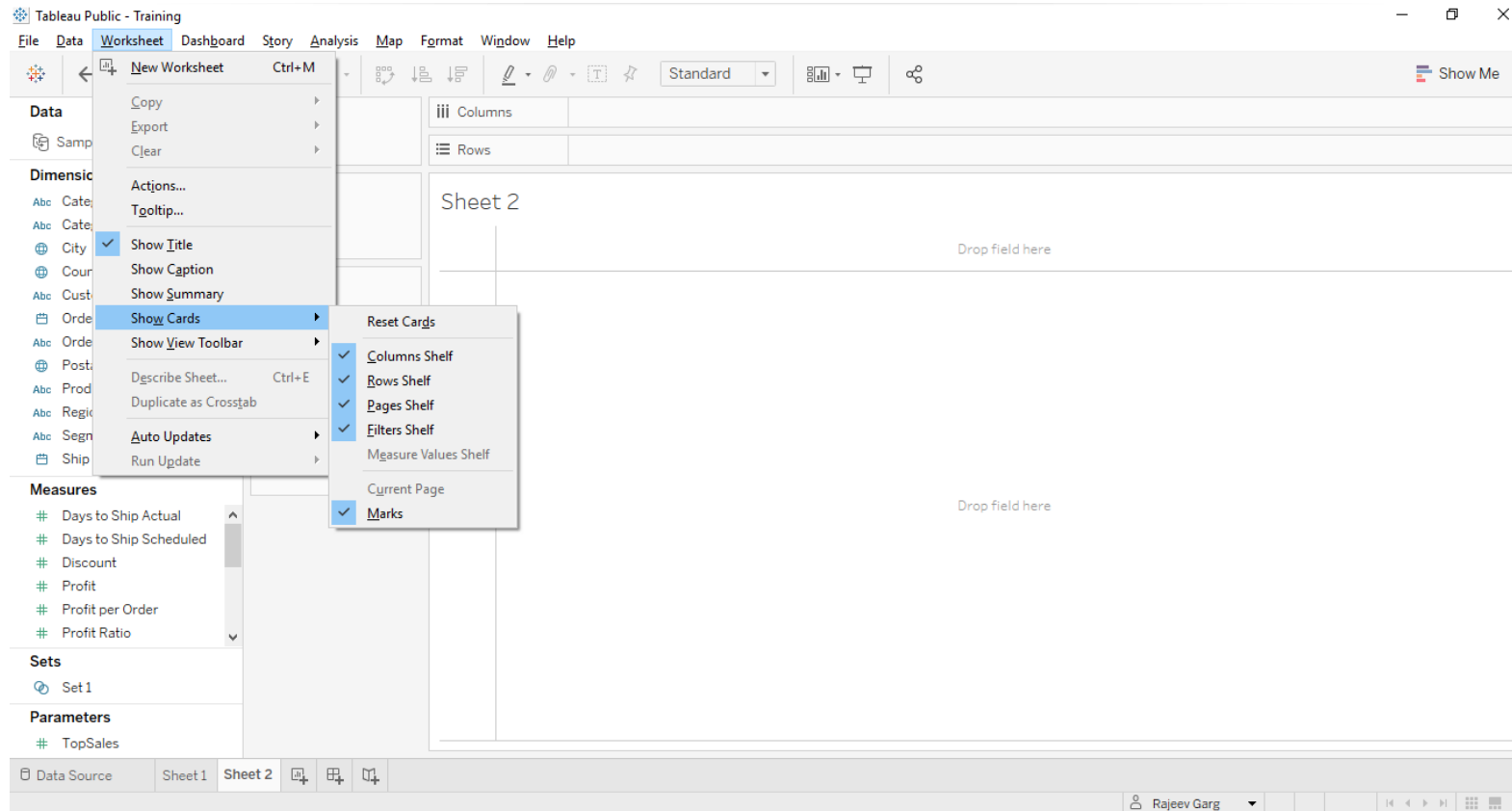
# Cards & Shelf

The various sections of Tableau worksheet are known as cards.

Marks Card, Page Card, Filter Card, Row Card, Column Card.

The place in front of column & row card is known as Shelf.

These cards can be manipulated through Worksheet menu.



# Managing Metadata

Managing metadata means :

1. Hiding a Field
2. Renaming a Field
3. Creating Hierarchies / Auto Hierarchies
4. Create folder – easier navigation through fields.
5. Creating a Calculated field



# ASSIGNMENT



Display Sales on the Basis of Region, Category, Subcategory.  
Should be Interactive on Region with Dynamic Title & Caption.

All the fields related to customer should be in the Customer folder & product related fields in Products folder

Segment wise monthly cost on the basis of shipping date

Display sales value using a combined field for Region, Segment Category



# Joins

Joins allows us to analyze the data from more than one source.

Types of joins:

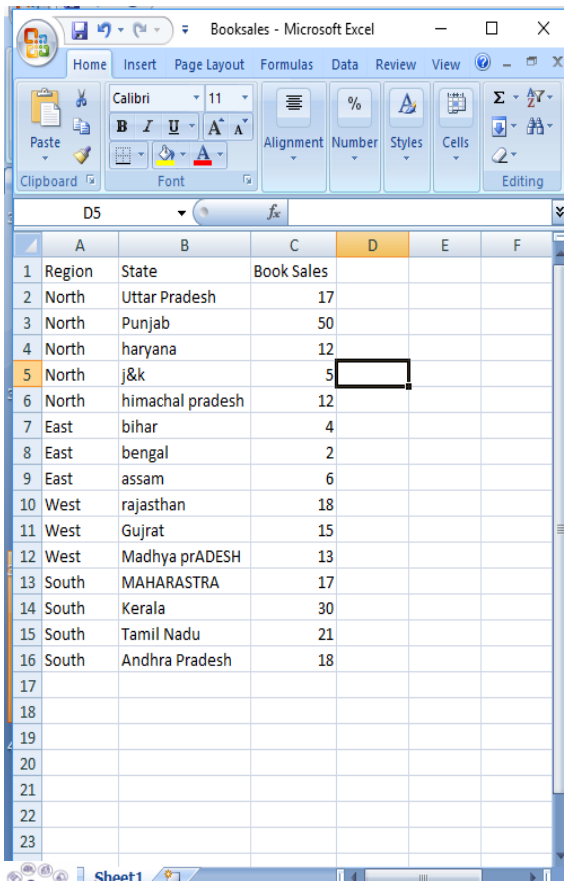
1. Inner Join
2. Left Join
3. Right Join
4. Full Join

Cross Database Join: Getting the data from different data sources.



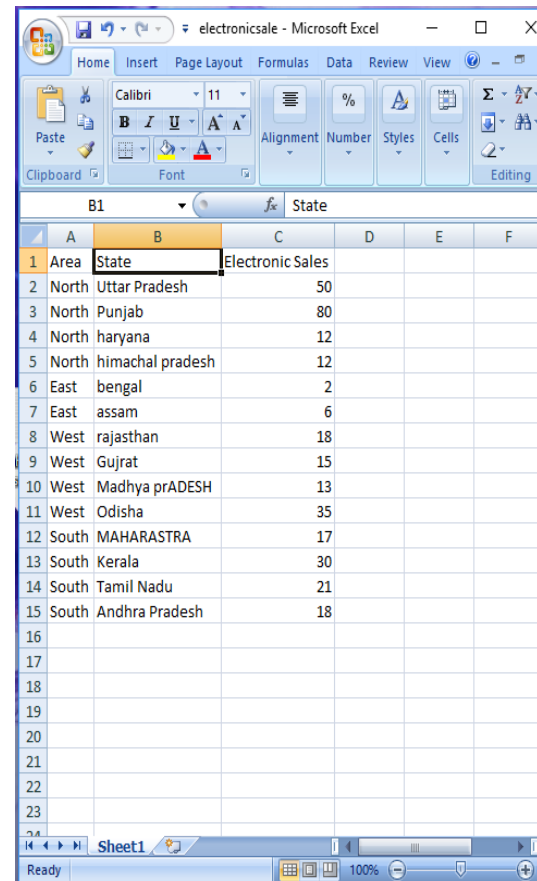
# Data Blending

Like Joins data blending, allows us to analyze the data from more than one source and it gives more advanced options.



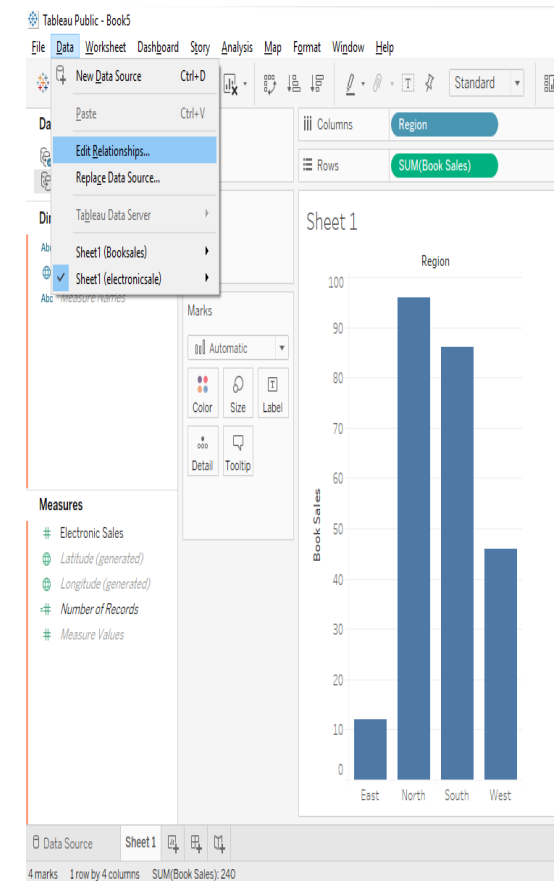
Booksales - Microsoft Excel

	A	B	C	D	E	F
1	Region	State	Book Sales			
2	North	Uttar Pradesh	17			
3	North	Punjab	50			
4	North	haryana	12			
5	North	j&k	5			
6	North	himachal pradesh	12			
7	East	bihar	4			
8	East	bengal	2			
9	East	assam	6			
10	West	rajasthan	18			
11	West	Gujrat	15			
12	West	Madhya prADESH	13			
13	South	MAHARASTRA	17			
14	South	Kerala	30			
15	South	Tamil Nadu	21			
16	South	Andhra Pradesh	18			



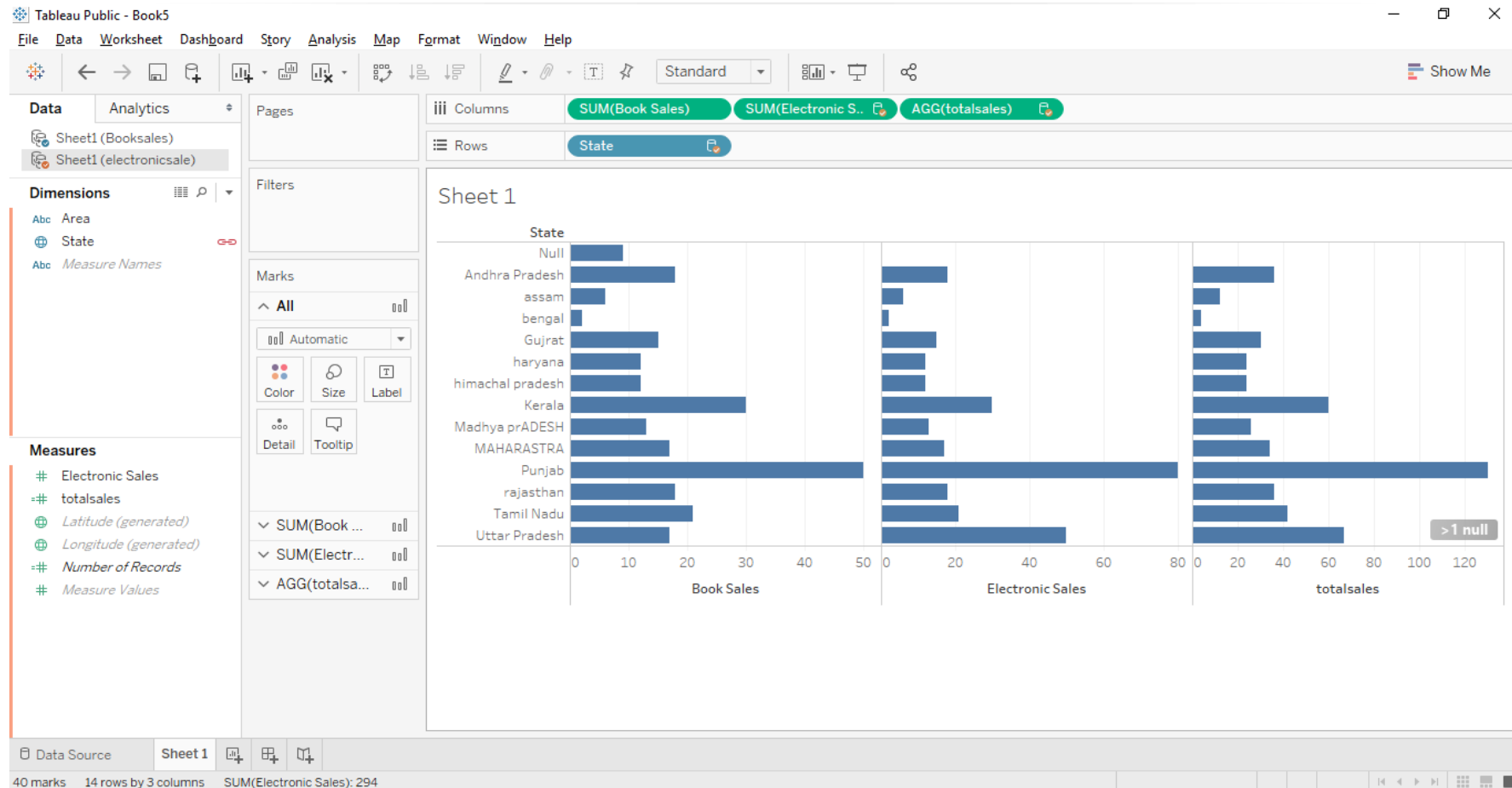
electronicsale - Microsoft Excel

	A	B	C	D	E	F
1	Area	State	Electronic Sales			
2	North	Uttar Pradesh	50			
3	North	Punjab	80			
4	North	haryana	12			
5	North	himachal pradesh	12			
6	East	bengal	2			
7	East	assam	6			
8	West	rajasthan	18			
9	West	Gujrat	15			
10	West	Madhya prADESH	13			
11	West	Odisha	35			
12	South	MAHARASTRA	17			
13	South	Kerala	30			
14	South	Tamil Nadu	21			
15	South	Andhra Pradesh	18			



# Data Blending Calculations

We can also create calculated fields using data blending.



# ASSIGNMENT



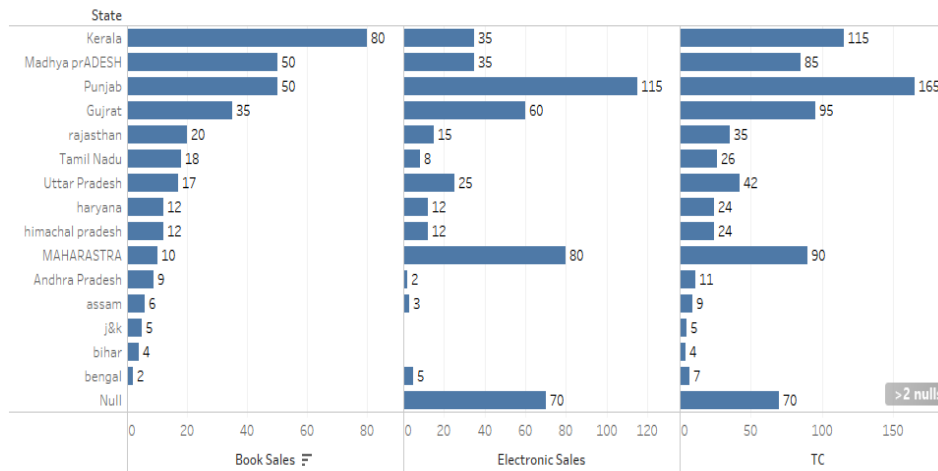
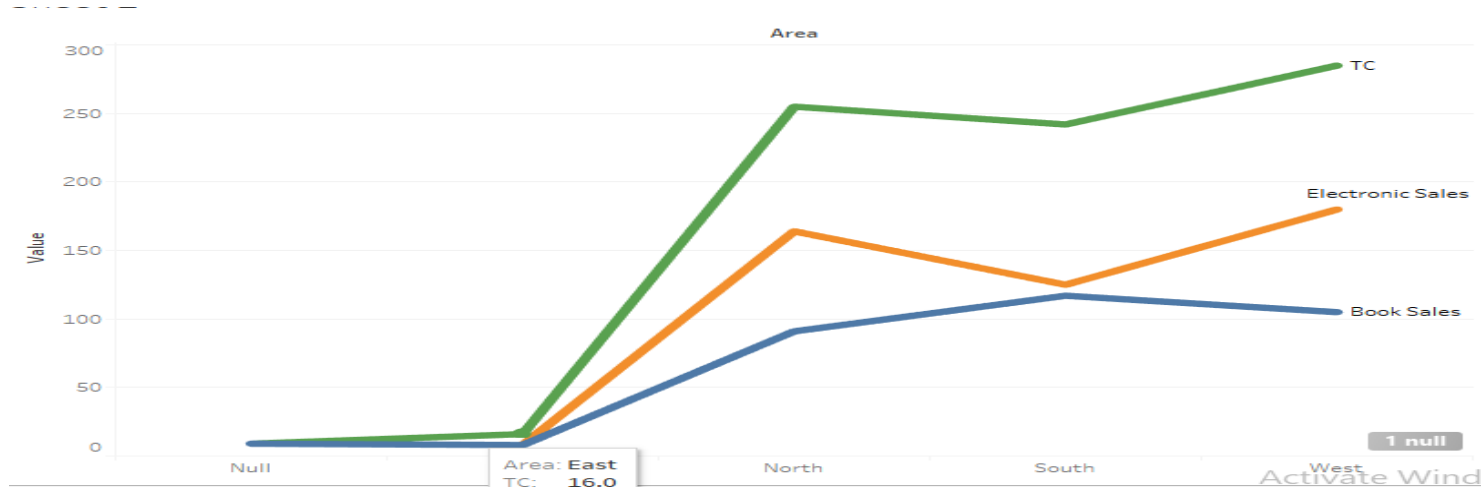
Use Inner Join to join electronic & books data source and in the Tabular format display electric, book & total sales on the basis of Region & State.

Use Full Join to join electronic & books sheets and create a line graph to display Area wise Electronic ,Book & Total sales in same plot area.

Blend the data from electronic & books data source and display Electronic ,Book & Total sales on the basis of state.



# ASSIGNMENT



Region	State	Book Sales	Electronic Sales	TC
East	assam	6.0	3.0	9.0
	bengal	2.0	5.0	7.0
North	haryana	12.0	12.0	24.0
	himachal pradesh	12.0	12.0	24.0
	Punjab	50.0	115.0	165.0
	Uttar Pradesh	17.0	25.0	42.0
South	Andhra Pradesh	9.0	2.0	11.0
	Kerala	80.0	35.0	115.0
	MAHARASTRA	10.0	80.0	90.0
	Tamil Nadu	18.0	8.0	26.0
West	Gujrat	35.0	60.0	95.0
	Madhya prADESH	50.0	35.0	85.0
	rajasthan	20.0	15.0	35.0

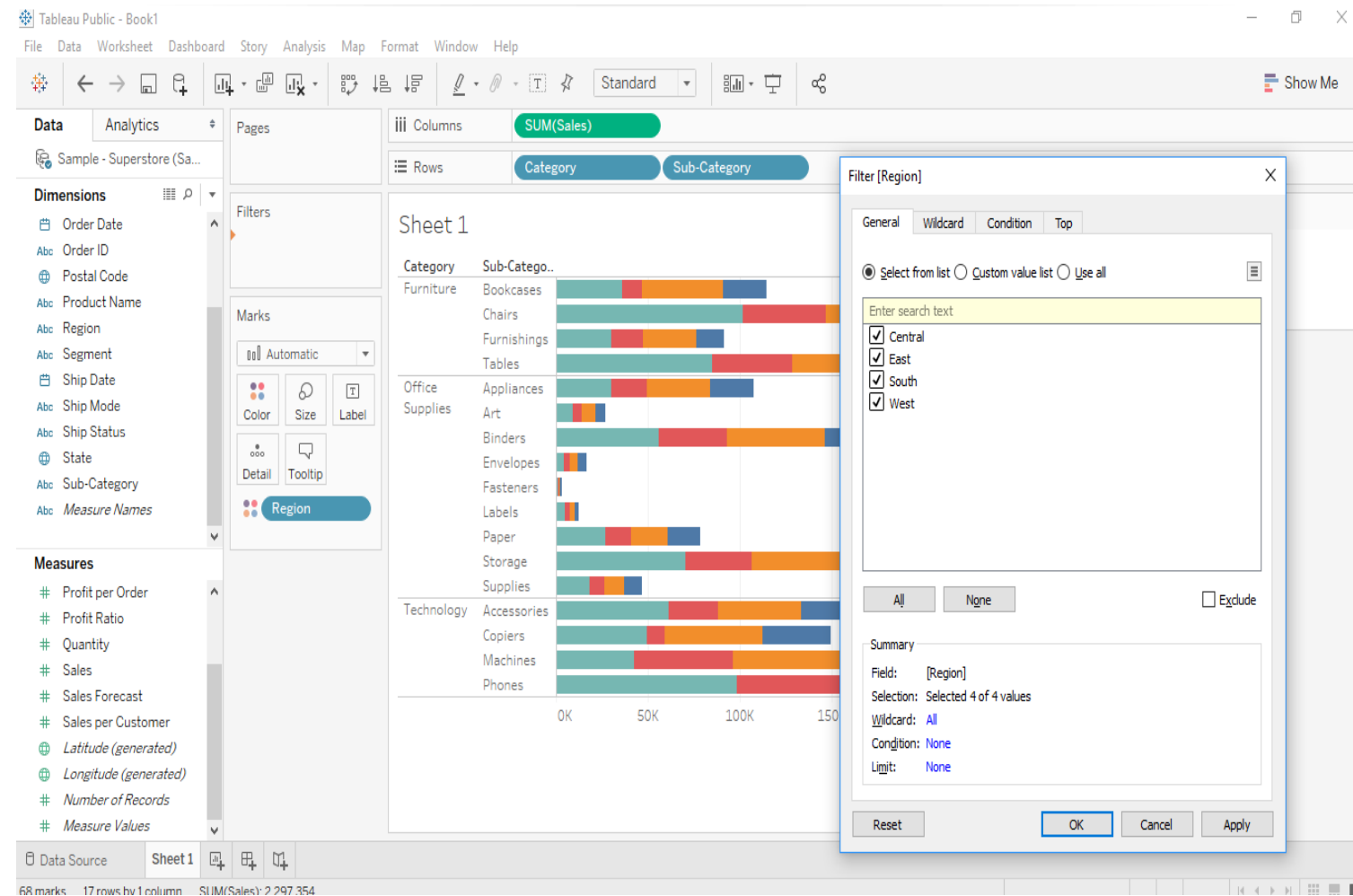




# Filtering Charts

Filters are used to filter the graphical view by four options:

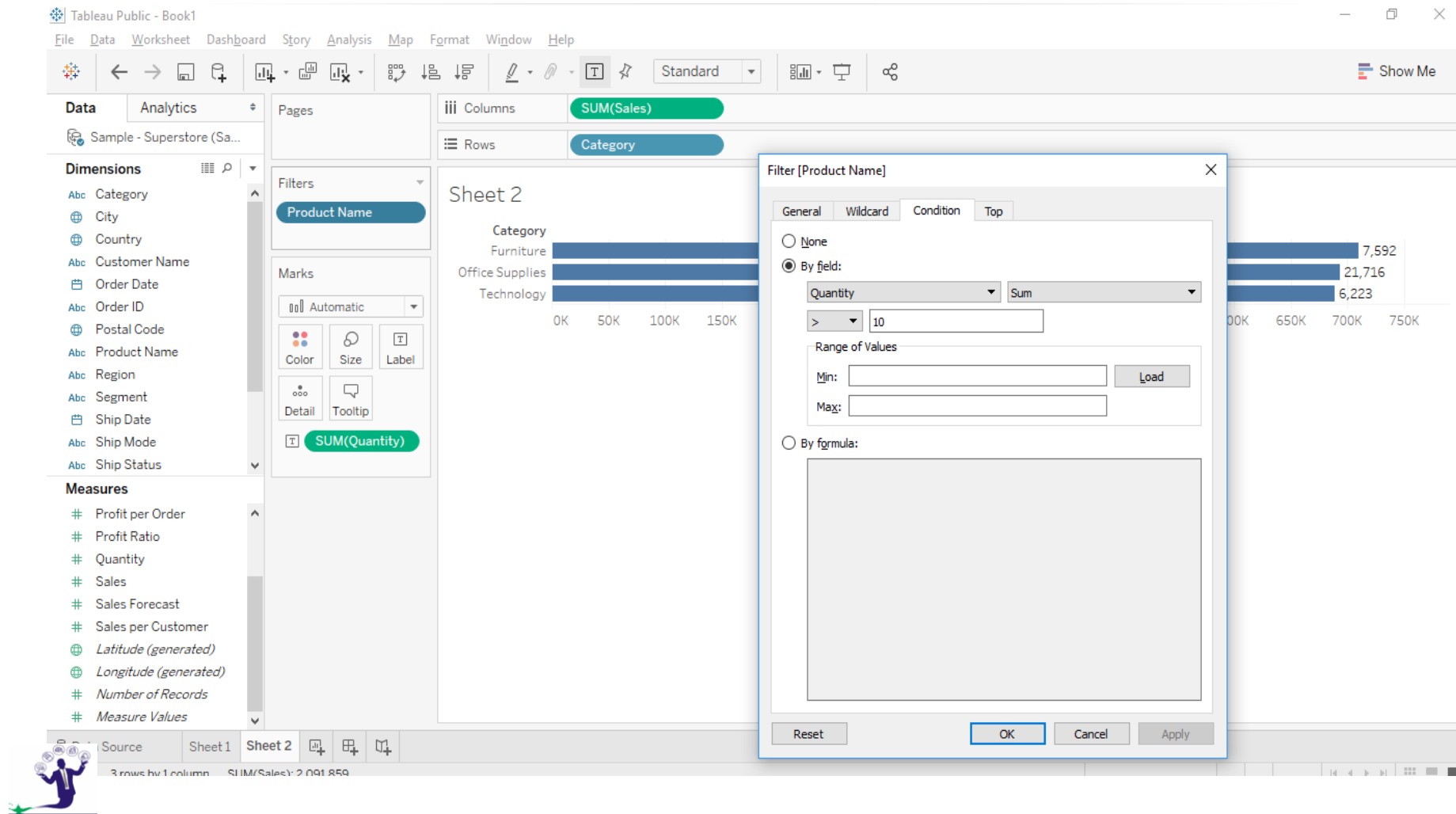
- General
- Wildcard
- Condition
- Top



# Filtering Charts

Filtering using condition tab.

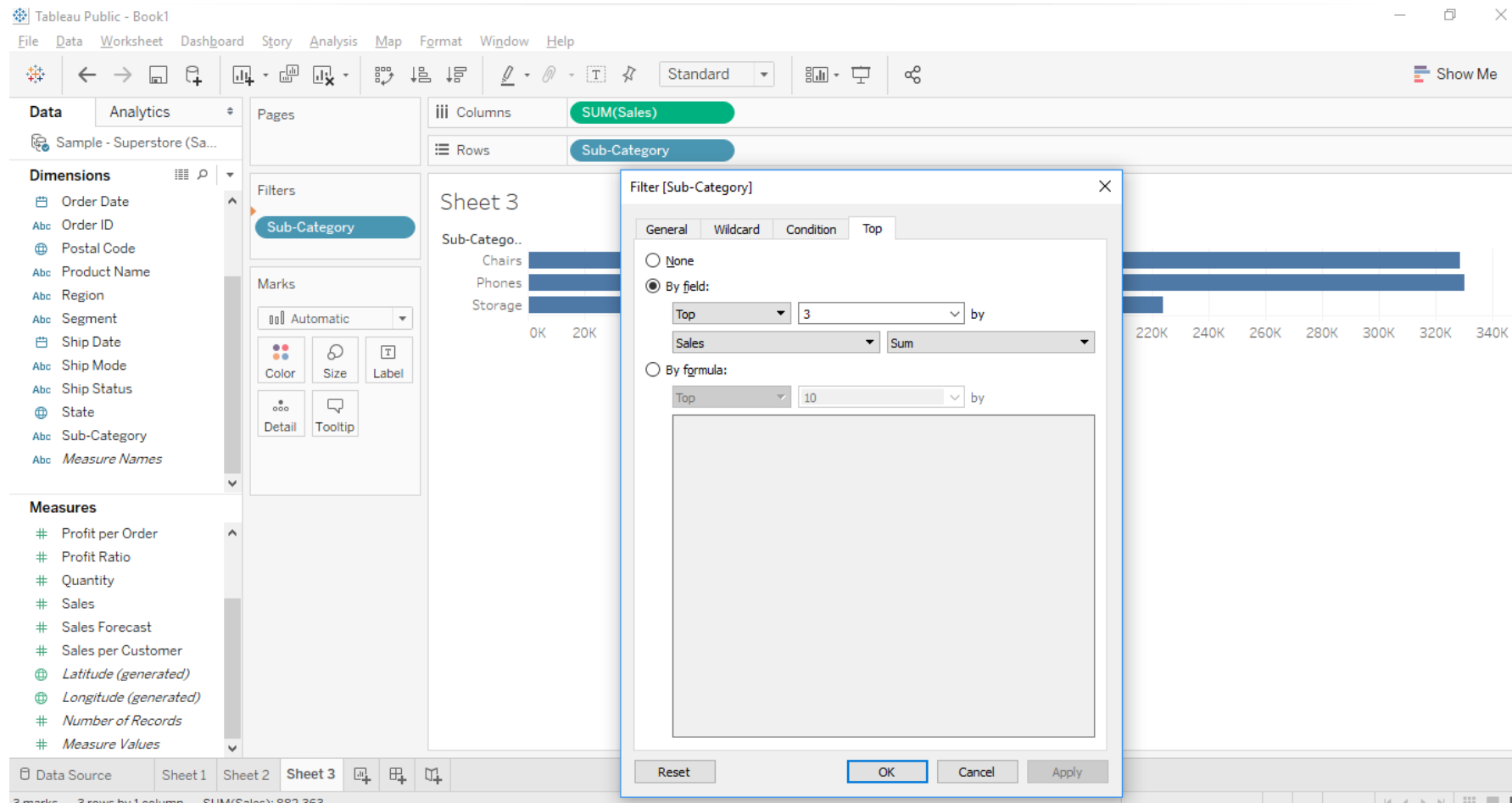
Eg: Total sales of the products where quantity sold is greater than 10.



# Filtering Charts

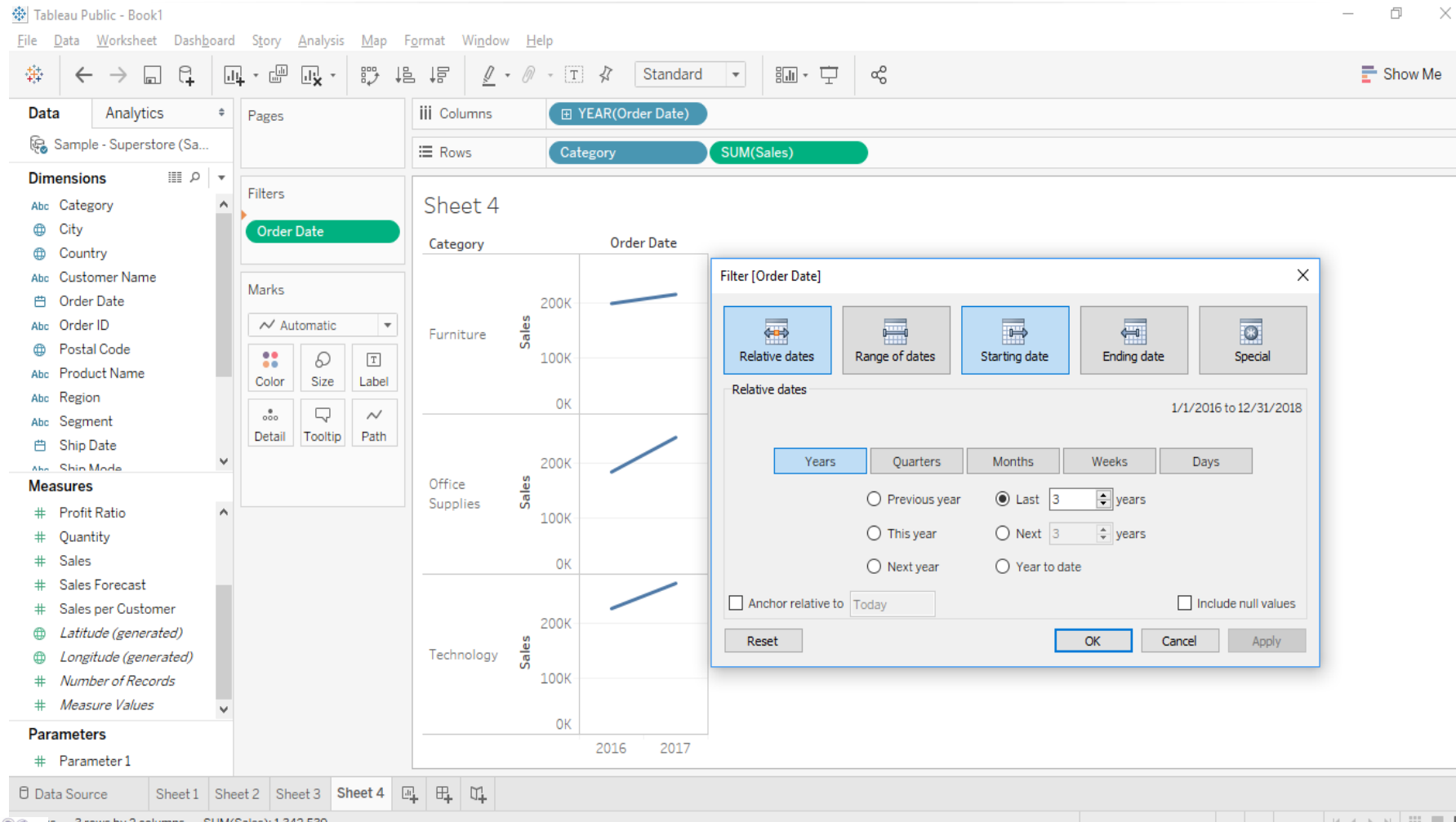
Filtering using Top tab.

Eg: Category wise Top / Bottom sales.



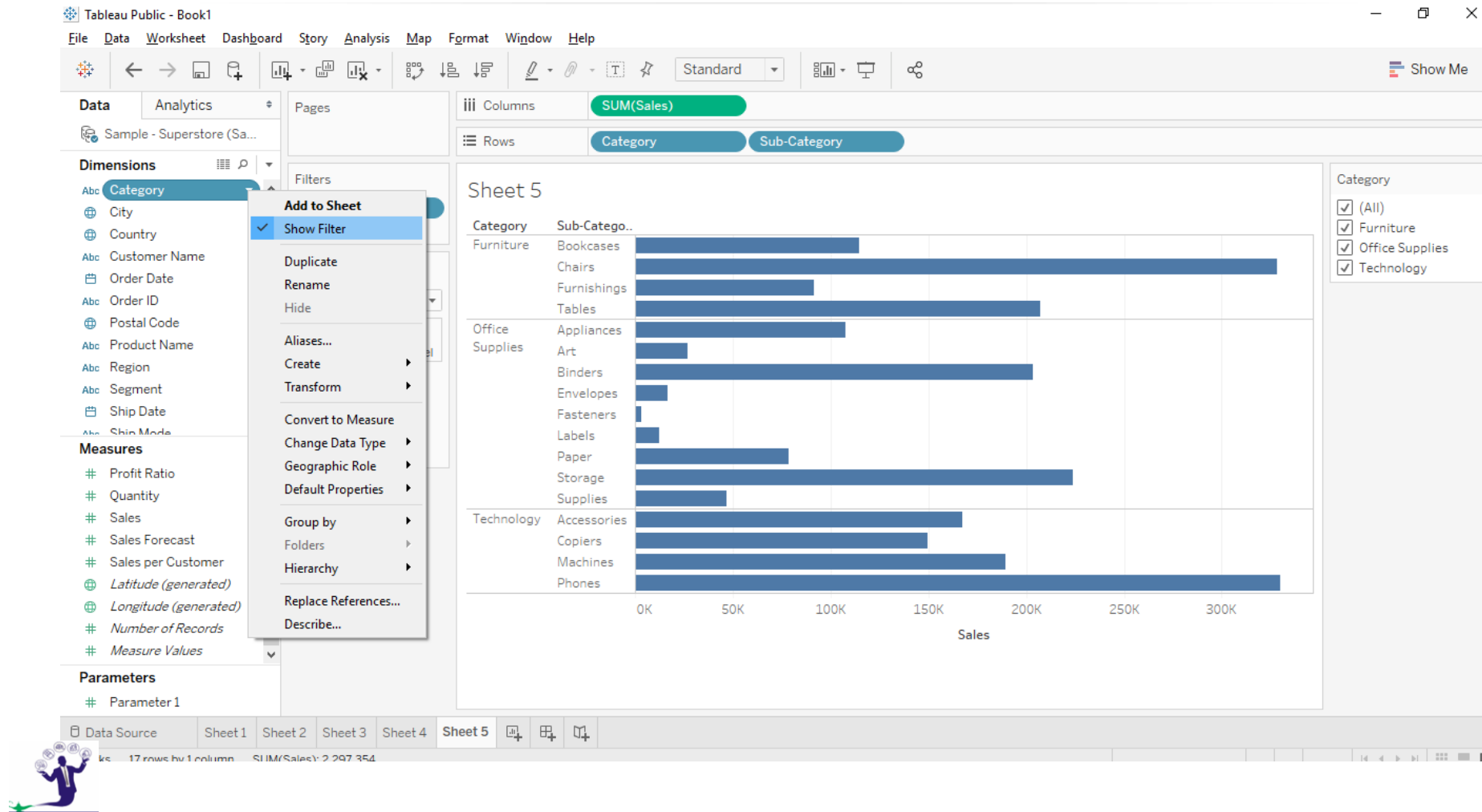
# Filtering Dates

Tableau allows us to filter the data based on dates, months, quarters, years..



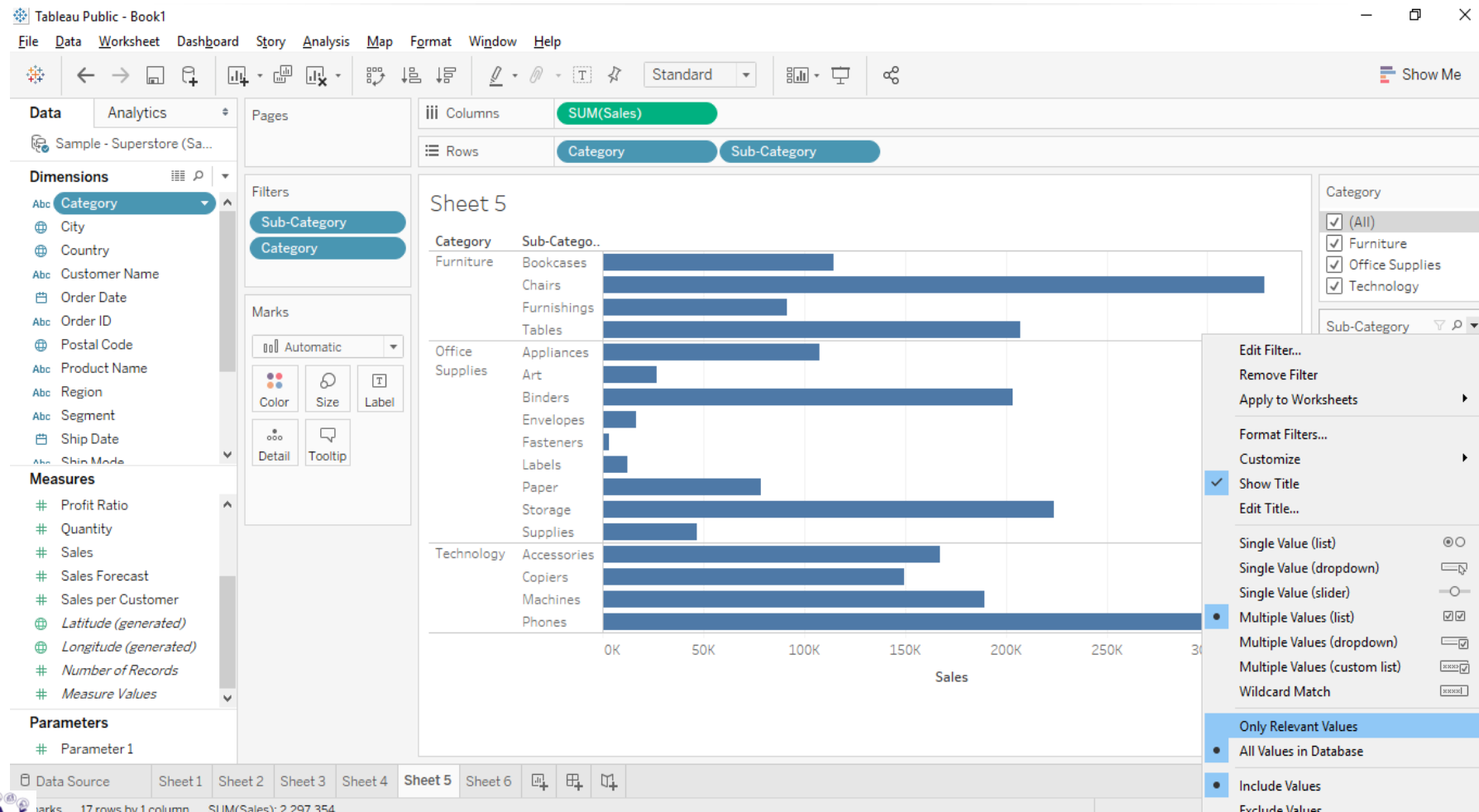
# Interactive Filters

Interactive filters allows us to update the graph at runtime.



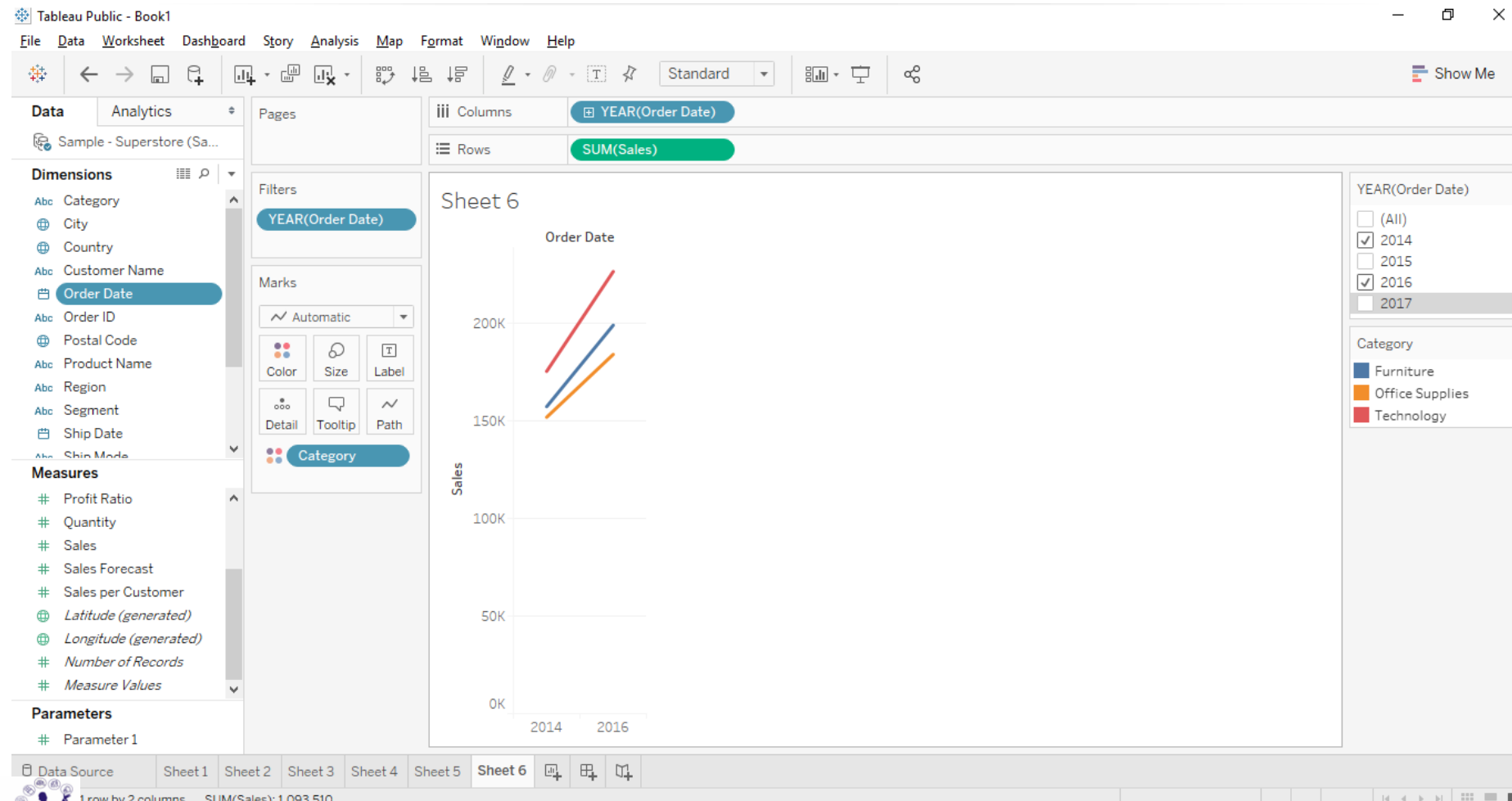
# Advance Interactive Filters

Advance Interactive filters also referred to as dependent filters.



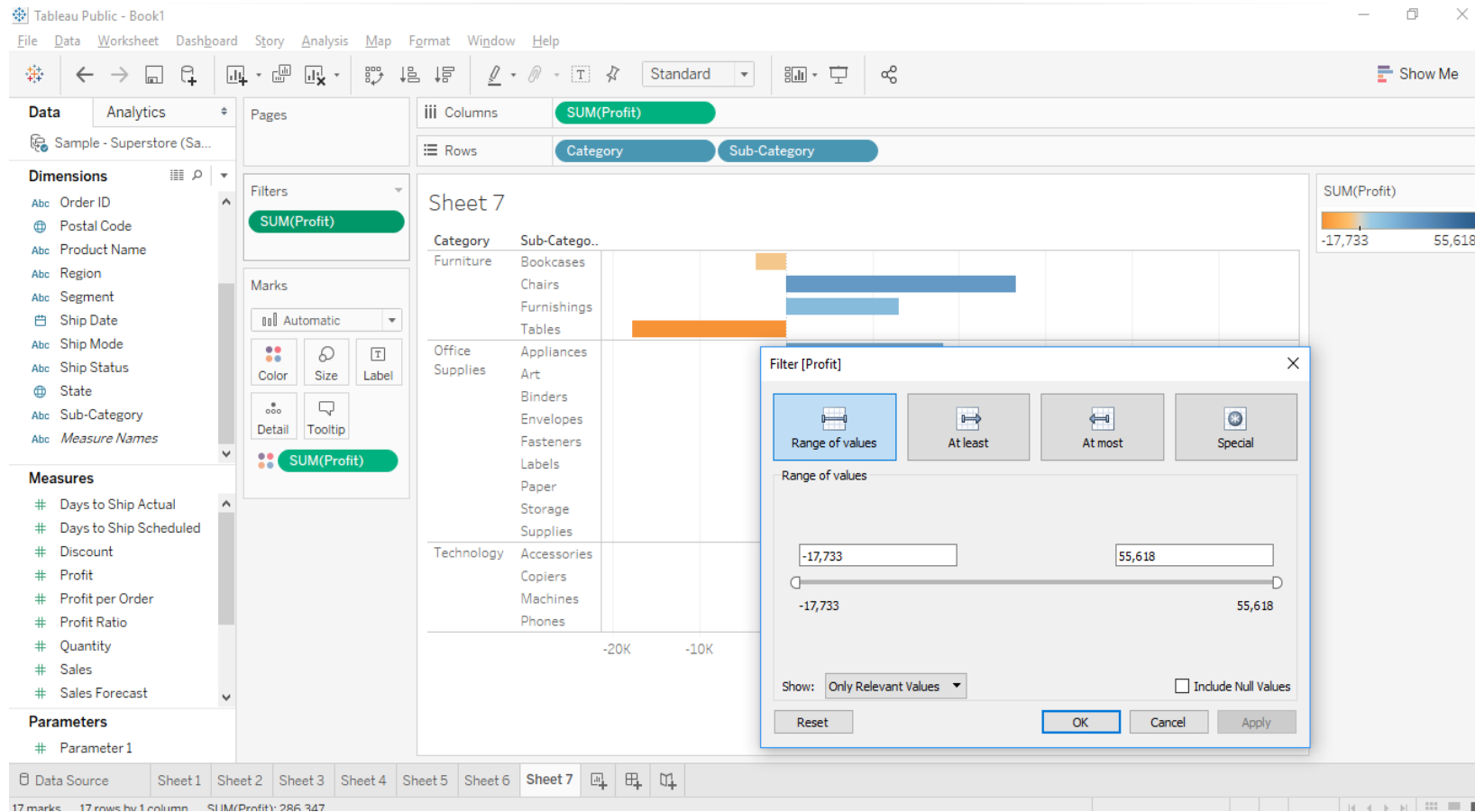
# Interactive Date Filters

We can also use interactive filters with date fields.



# Where Filters

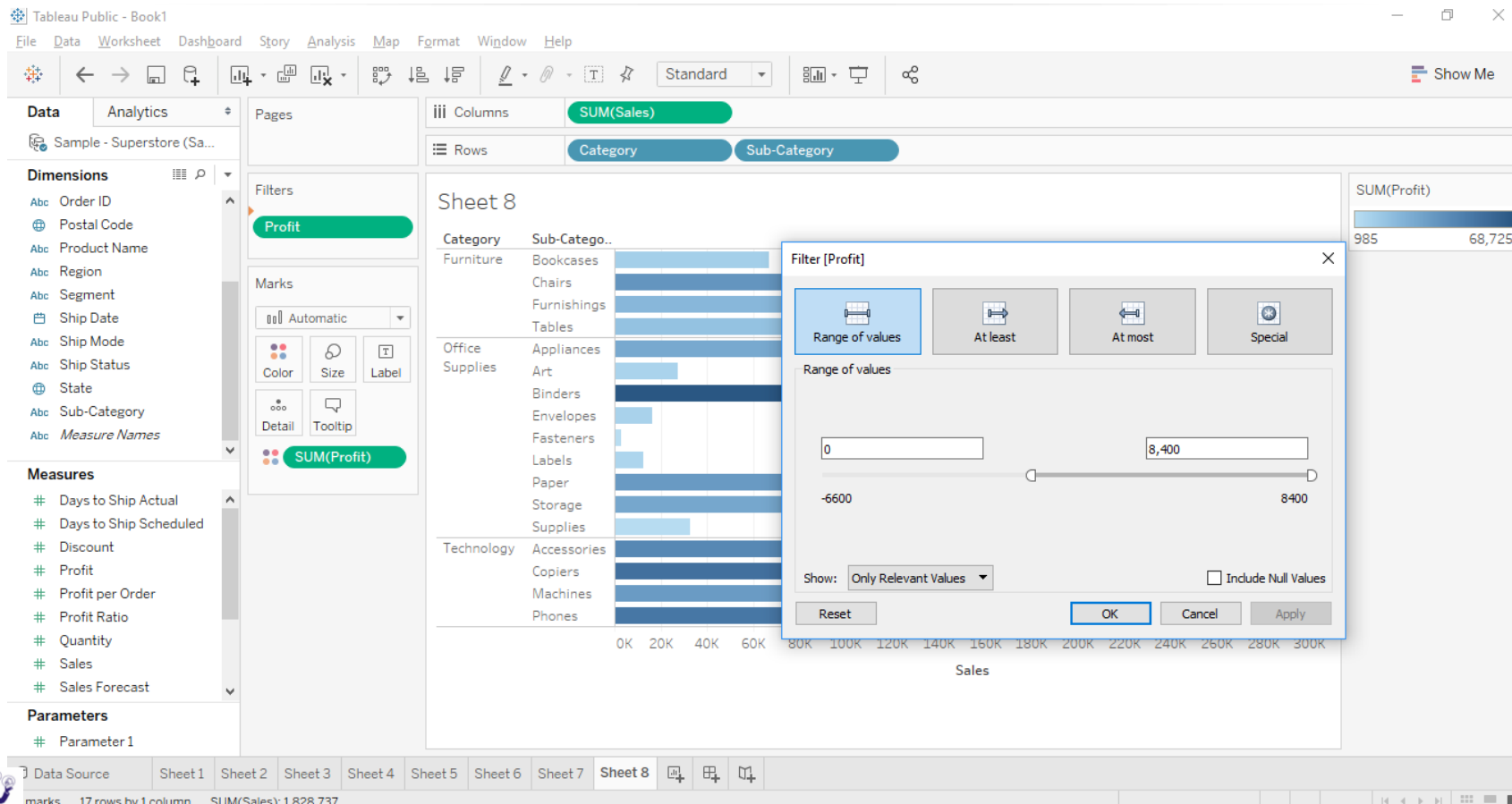
Summary Level Filters Eg: Analyzing the sales on the basis of profit i.e. showing only those categories where **the total profit** is positive.





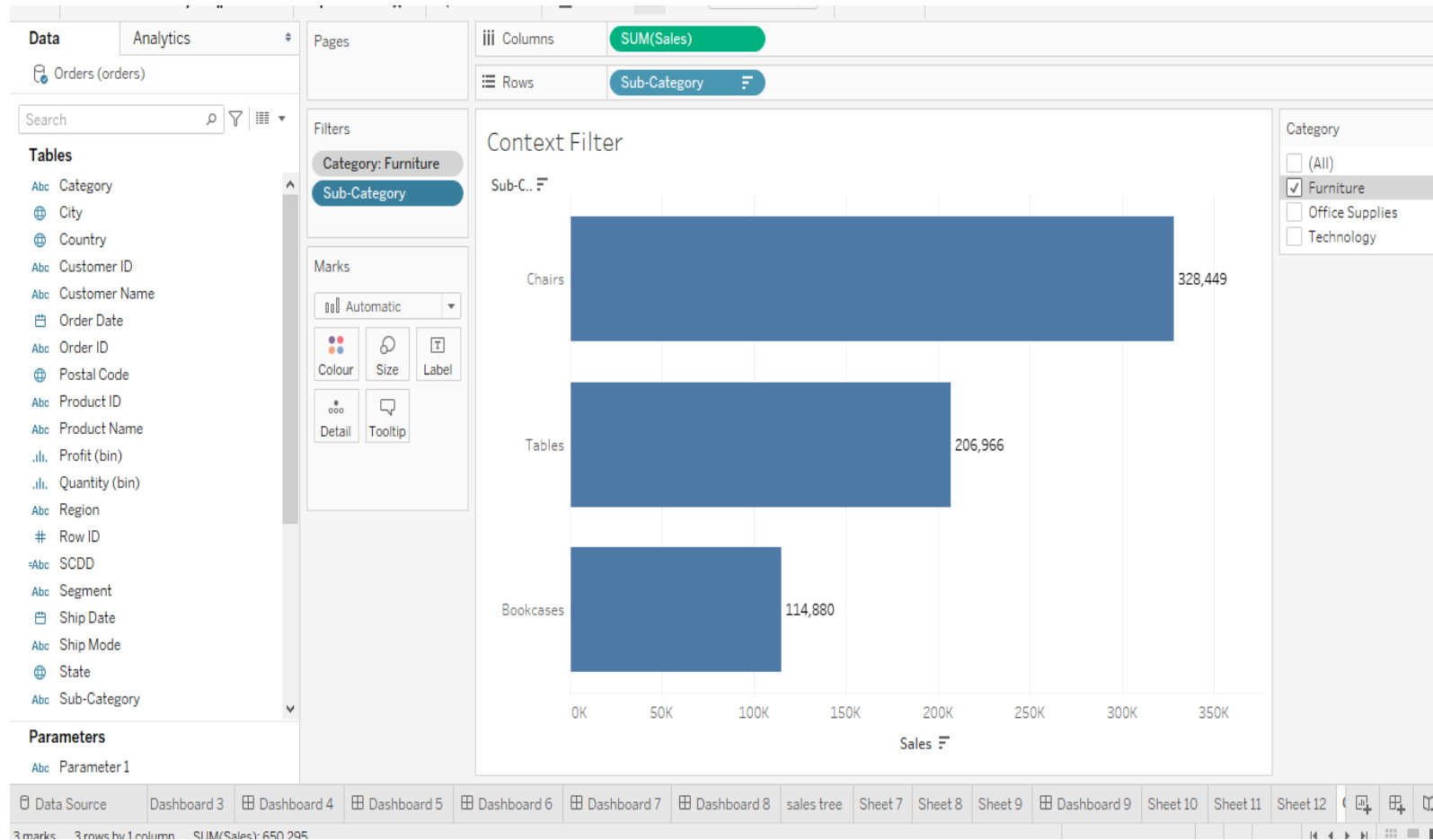
# Where Filters

Record Level Filters Eg: Analyzing the sales on the basis of profit i.e. showing only those categories where **the profit** is positive.



# Context Filter

The filters are independent to each other. If we want that the second filter to process on the records returned by the first filter, the second filter is known as dependent filters because they process only the data that passes through the context filter.



# Data Source Filters

Data source filter will filter the data from the data source i.e. It will impact all the sheets created from the respective data .

The screenshot displays the Tableau Public interface with a bar chart titled 'Region' showing sales for 'Central' and 'South' regions. The 'Columns' shelf contains 'Region' and the 'Rows' shelf contains 'SUM(Sales)'. A context menu is open over the 'Data' pane, with 'Edit Data Source Filters...' selected. An 'Add Filter' dialog box is also open, showing a list of fields to filter by, including 'Category', 'City', 'Country', 'Customer Name', 'Days to Ship Actual', 'Days to Ship Scheduled', 'Discount', 'Order Date', 'Order ID', 'Postal Code', 'Product Name', 'Profit', 'Profit per Order', 'Profit Ratio', 'Quantity', 'Region', 'Sales', 'Sales Forecast', 'Sales per Customer', 'Segment', and 'Ship Date'. The 'Edit Data Source Filters' dialog box is also visible, showing a table with 'Filter' and 'Details' columns.

Tableau Public - Book1

File Data Worksheet Dashboard Story Analysis Map Format Window Help

Sample - Superstore (Sa...)

Dimensions

- Order ID
- Order Date
- Postal Code
- Product Category
- Region
- Segment
- Ship Date
- Ship Mode
- Ship State
- State
- Sub-Category
- Measure

Measures

- Days to Ship Actual
- Days to Ship Scheduled
- Discount
- Profit
- Profit per Order
- Profit Ratio
- Quantity
- Sales
- Sales Forecast
- Sales per Customer

Columns: Region

Rows: SUM(Sales)

Sheet 3

Region

Sales

Central South

500K 400K 300K 200K 100K 0K

Add Filter

Select a field:

Enter search text

- Category
- City
- Country
- Customer Name
- Days to Ship Actual
- Days to Ship Scheduled
- Discount
- Order Date
- Order ID
- Postal Code
- Product Name
- Profit
- Profit per Order
- Profit Ratio
- Quantity
- Region
- Sales
- Sales Forecast
- Sales per Customer
- Segment
- Ship Date

OK Cancel

Edit Data Source Filters

Filter	Details
--------	---------

Add... Edit... Remove

Data Source Sheet 1 Sheet 2 Sheet 3

2 marks 1 row by 2 columns SUM(Sales): 893,006



# Ways to Filter

Filter by Self – Drag & Drop the desired pill in the filter self and set the options.

Interactive Filters – Click on the desired pill, from the drop down list select Show Filter.

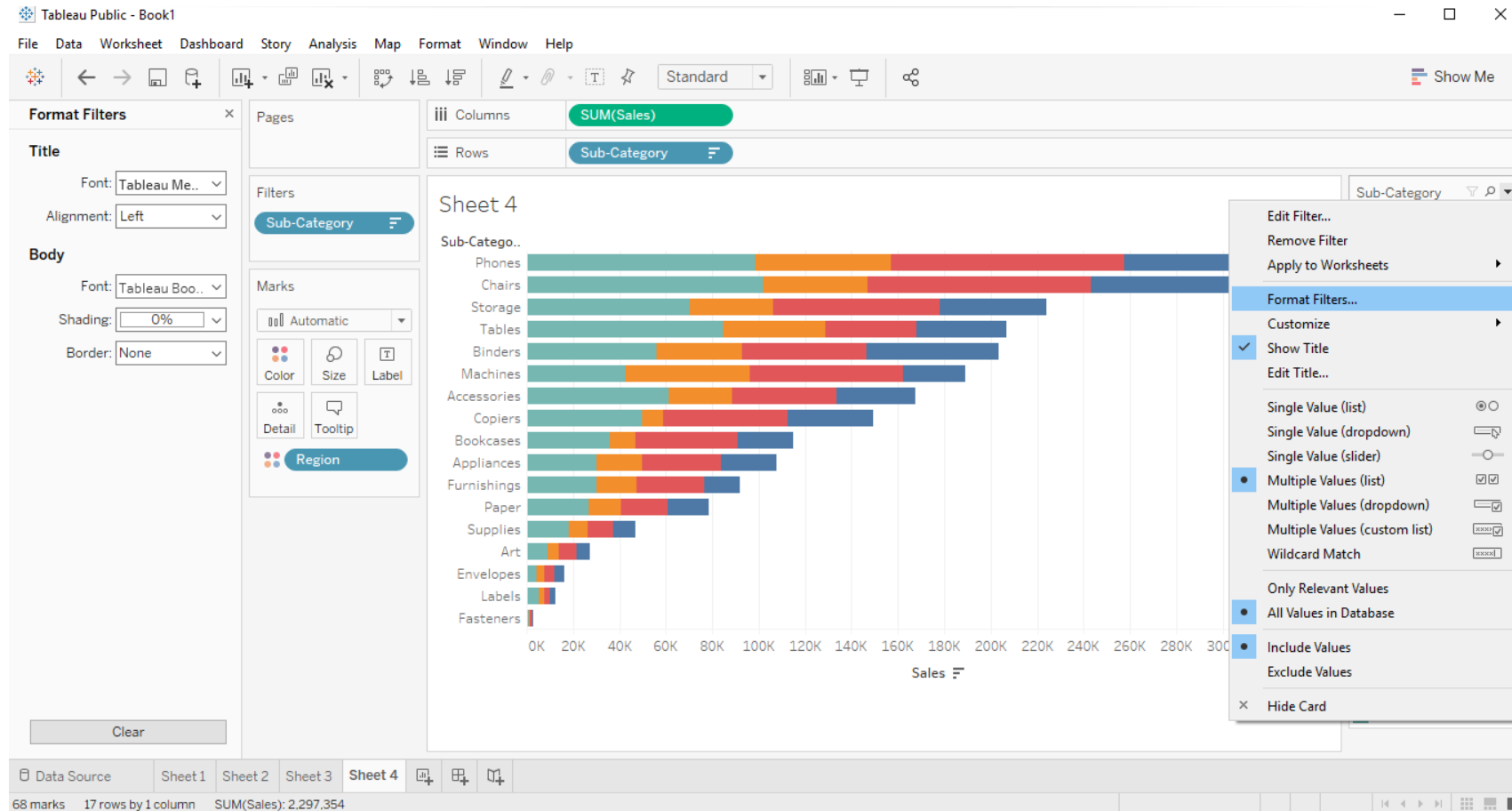
Headers – In the Graph double click on the header, to filter for that header.

Legends – Click on the legend and select the Keep Only option.



# Formatting Filter

In filters click on the drop down arrow and select format filters to get the filter formatting options.



# ASSIGNMENT



Create a Bar chart to display top 10 profit making subcategories along with the categories.

Chart to display only those Sub Categories & categories where the revenue is 200K to 250K.

Display month wise profit of each category . Should be interactive on the basis of year. Use a slider as filter.

Create a bar chart to represent category & subcategory wise sales, where the revenue is more than 200K and profit is more than 20K.

Using the data source filter update all the above charts only for Technology category.





Q1: Use the Superstore data to develop a visualization to show how long it takes, on average, for orders to ship (the time it takes to ship an order after the order is received) on a monthly basis. (Hint - this will require a calculation.). How does the average shipping time vary by state?

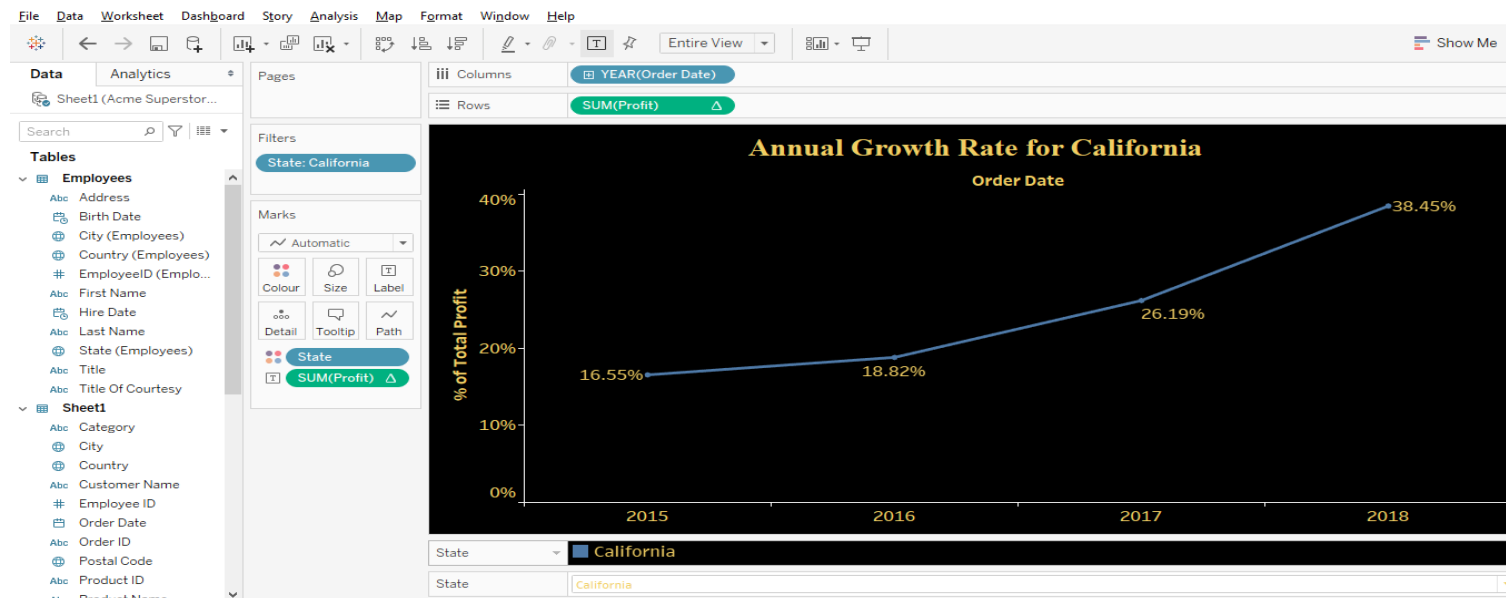
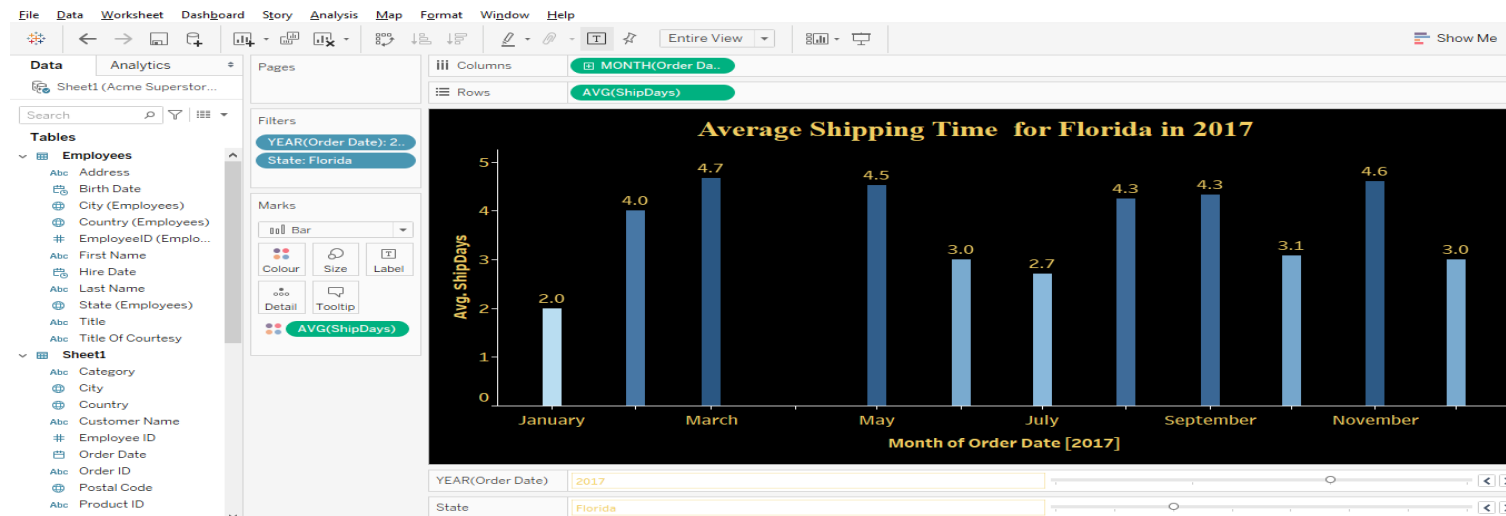
Q2: Use the Superstore data to produce a visualization to help managers understand annual growth (or lack thereof) in profit by state.

Q3: Use the Employees data to create a visualization that shows the number of customers per salesperson. Please display the salesperson's last name, not their ID. (Hint - you will need to join multiple tables so that the orders placed are attached to the employee who helped to place the order)

Q4: Use the Employees data to produce a visualization that shows total Sales by SalesPerson and City to analyze which salesperson is selling how much, and where they are selling.

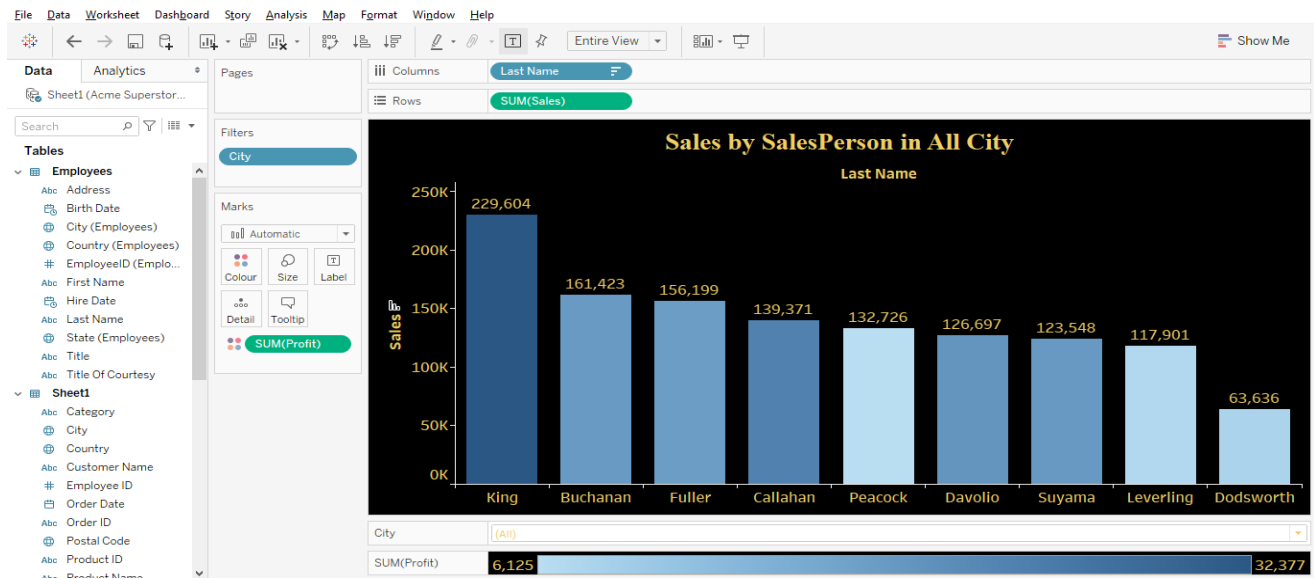
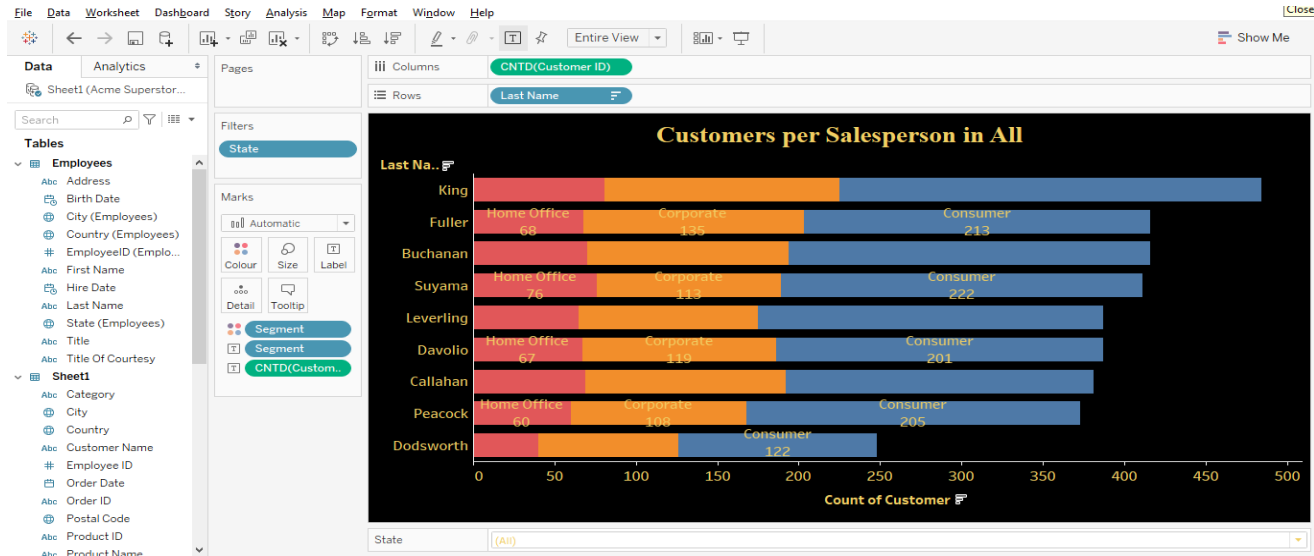


# test



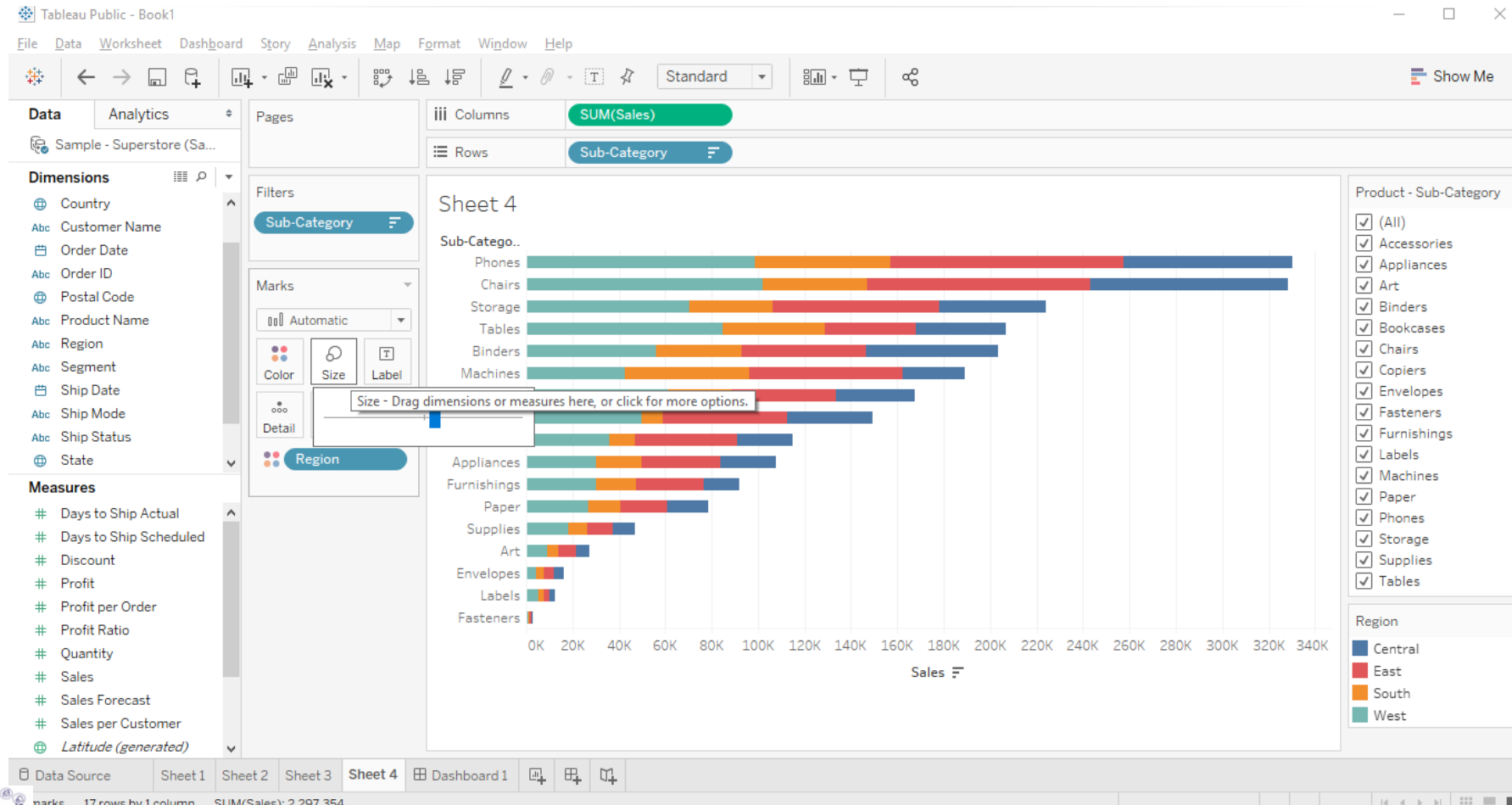


# test



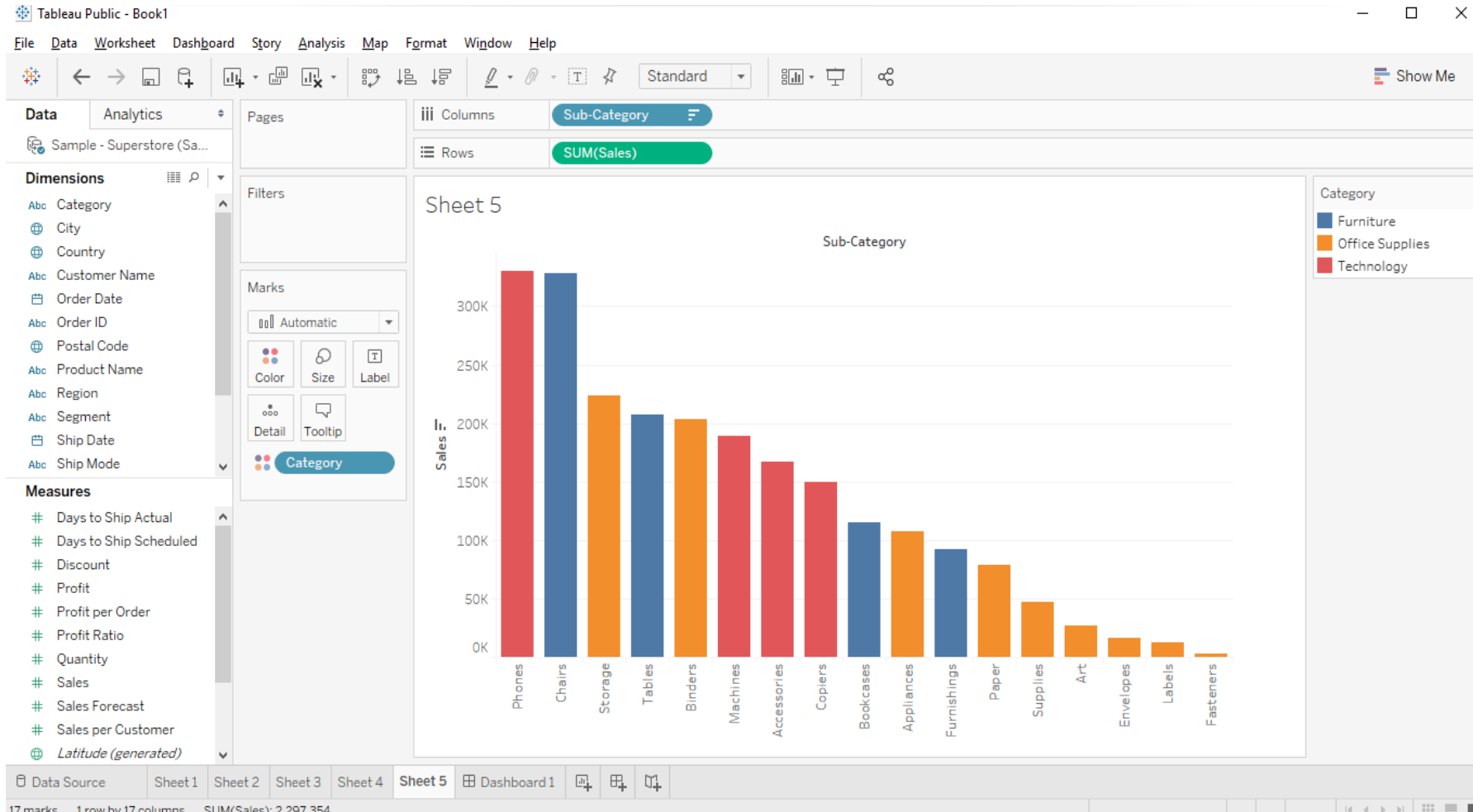
# Manipulating Graph Size

The Size option in the Marks card allow us to alter the size of the graph.



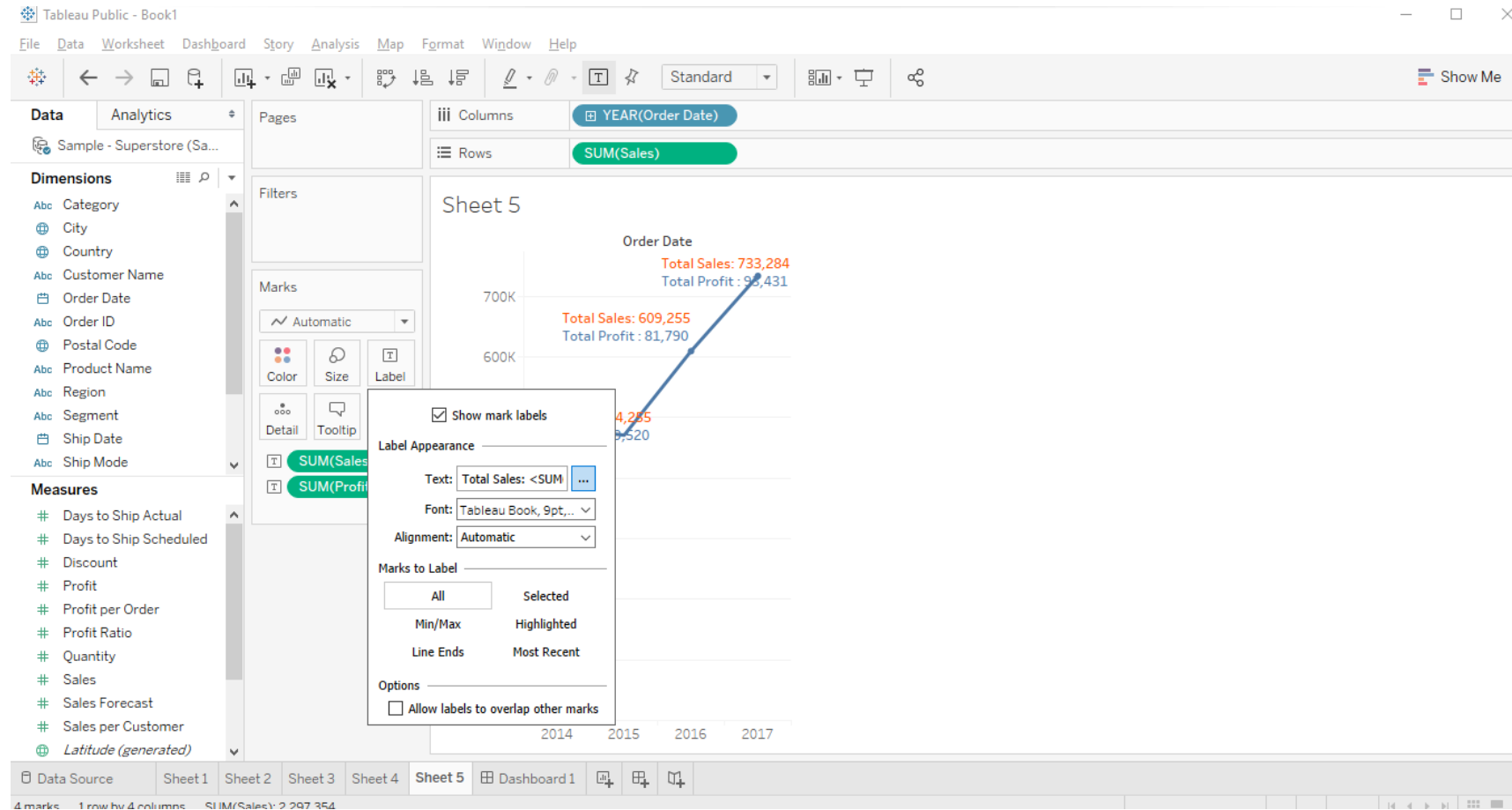
# Manipulating Colors

Colors help us to further classify the data.



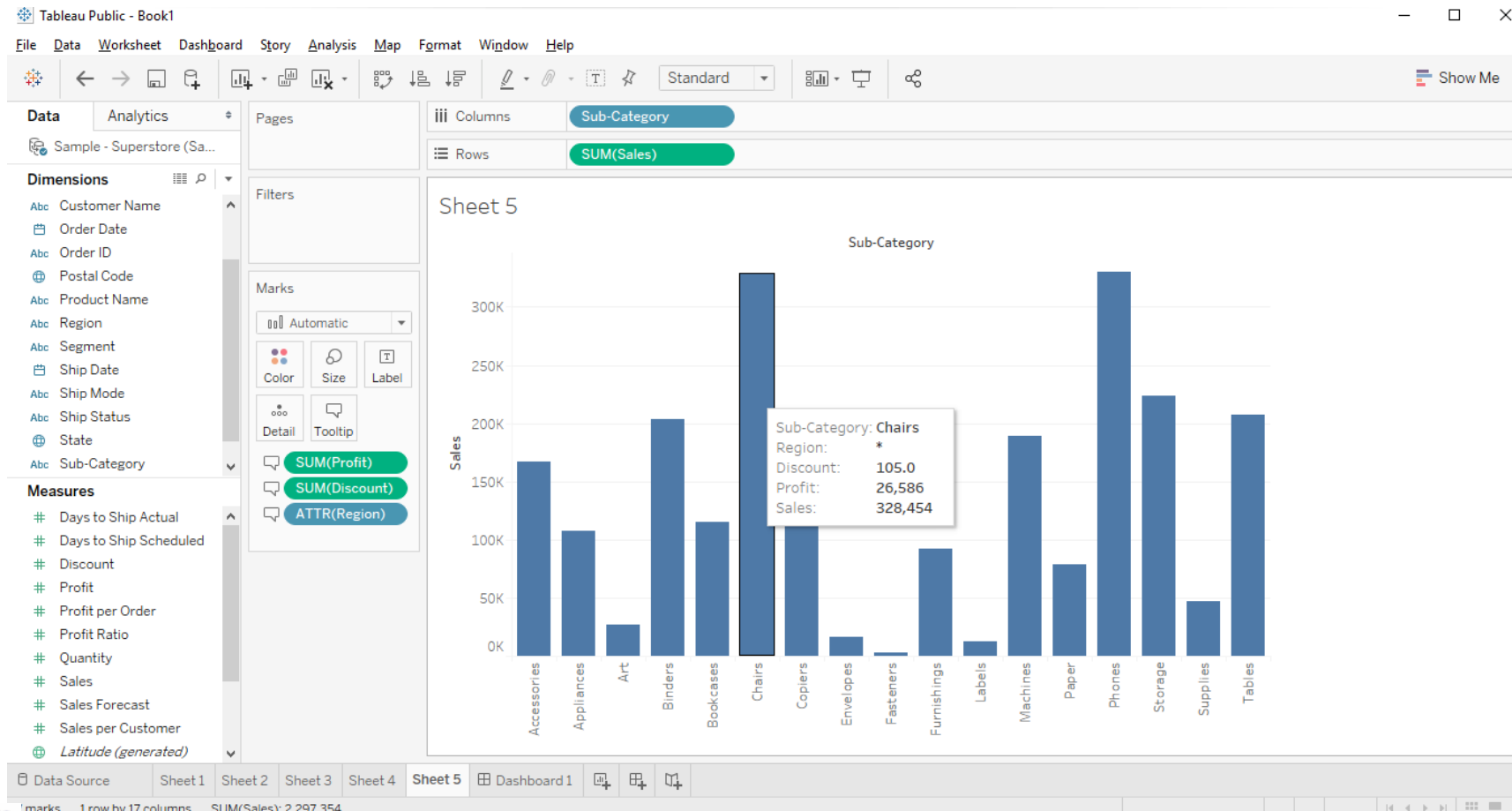
# Displaying Text/Labels

Labels help us to show the exact data value.



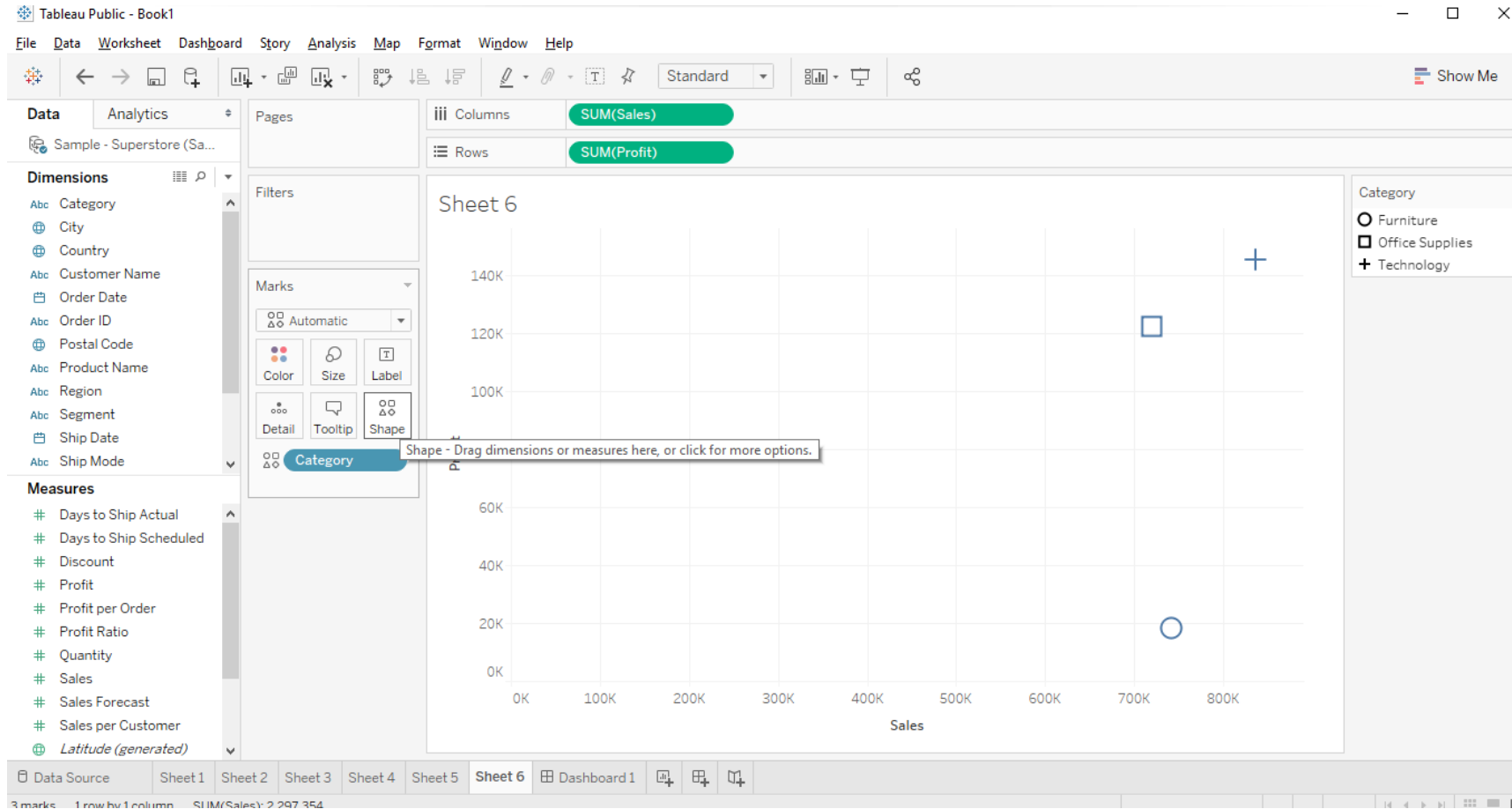
# Getting Tooltip

When we click on any data point we get a small box known as tooltip. We can add any measure or dimension in the tooltip.



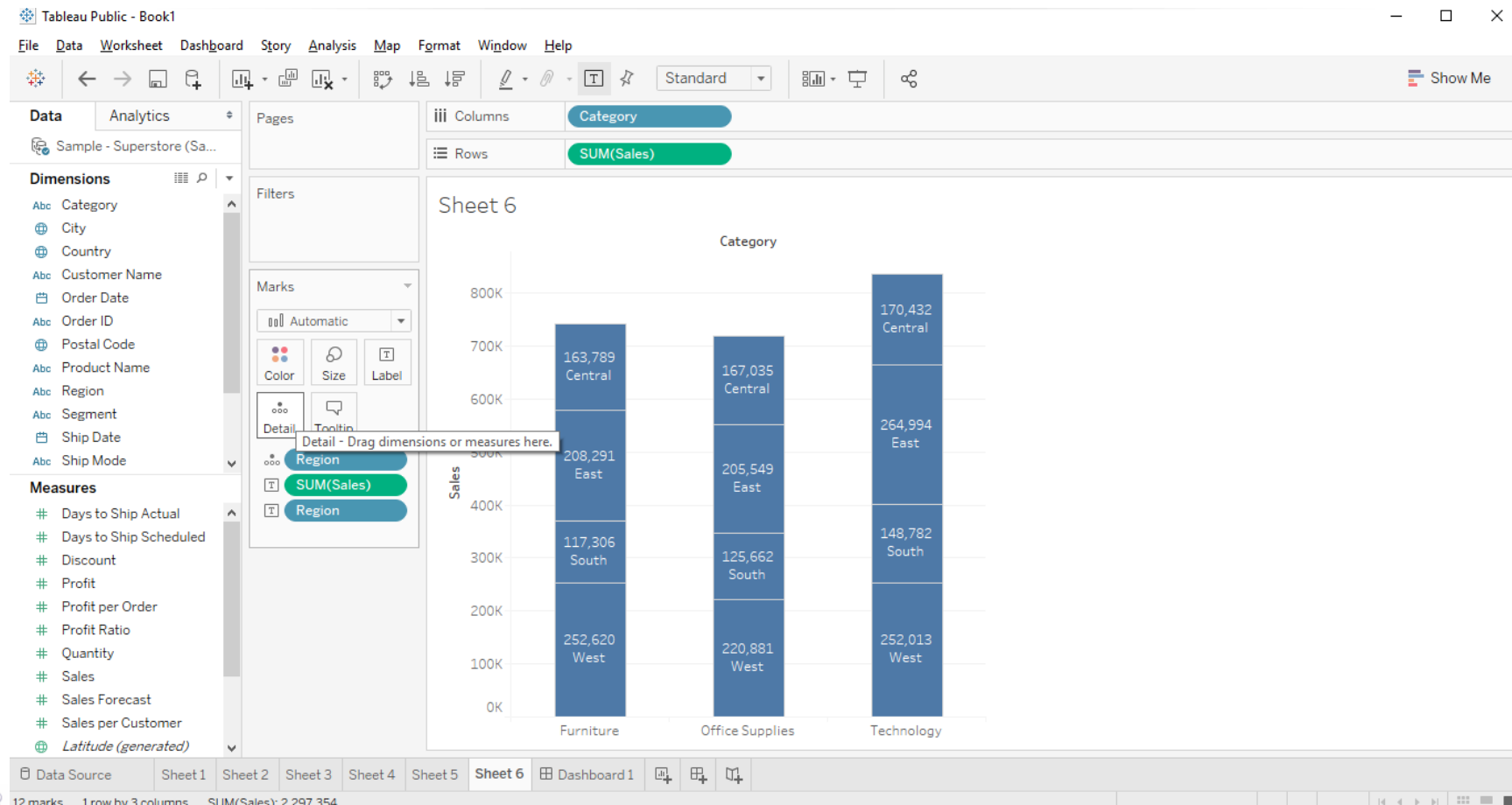
# Assigning Shapes

Tableau also allows us to use default or customized shapes in charts.



# Displaying Details

The Detail mark is similar to the colors mark. Colors creates the section in various colors, however, detail creates the section in same color.



# ASSIGNMENT



Create a bar chart to represent region wise profit. The Bars should also display category, sales & profit value.  
Display sub category wise quantity sold & average profit using bar chart.

