

Lesson 02 Demo 02

Explore the Axis in Tableau

Objective: To demonstrate the process of creating different axis in Tableau to visualize sales data across categories and regions

Tools required: Tableau Desktop

Prerequisites: None

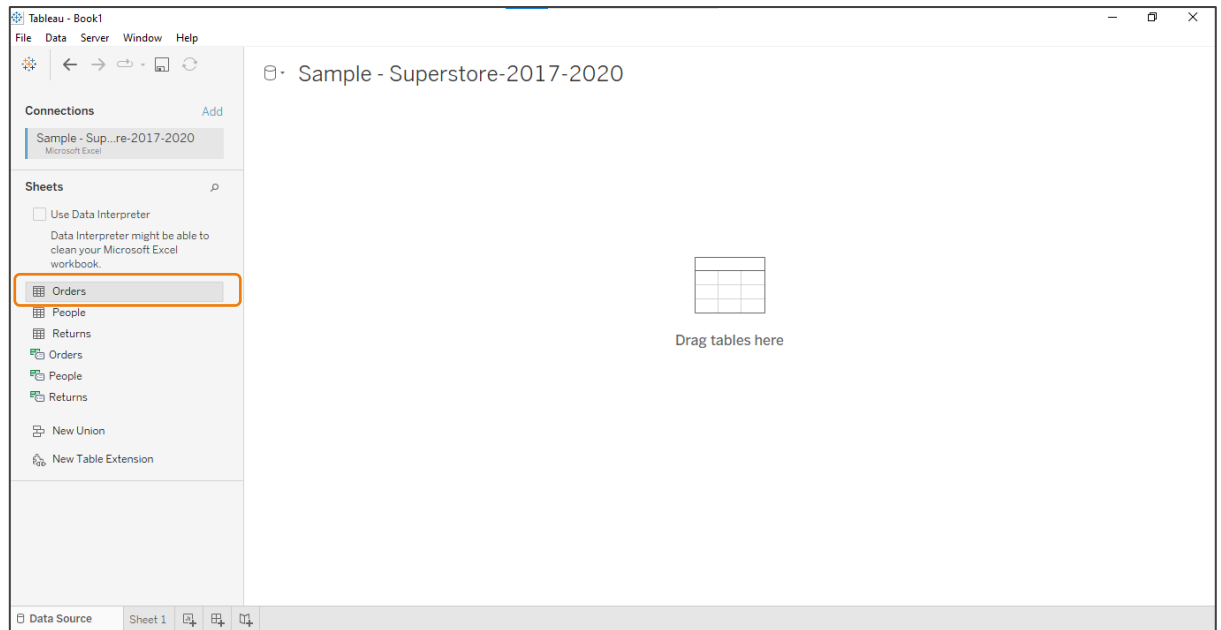
Note: Use the **Sample – Superstore** dataset from the Tableau Desktop

Steps to be followed:

1. Import the dataset
2. Create multiple marks card
3. Dual axis
4. Sync axis
5. Duplicate as crosstab
6. Sort option
7. Edit axis

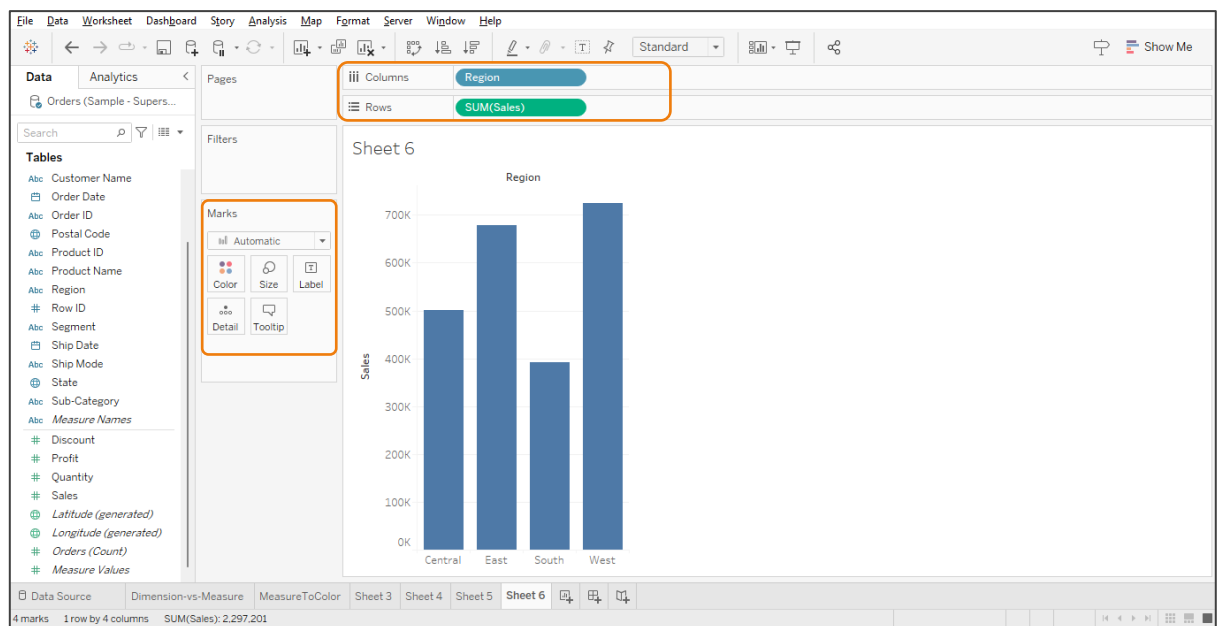
Step 1: Import the dataset

- 1.1 Navigate to the home page of Tableau Desktop and click on **Sample – Superstore**. Drag **Order** table to the blank space.



Step 2: Create multiple marks card

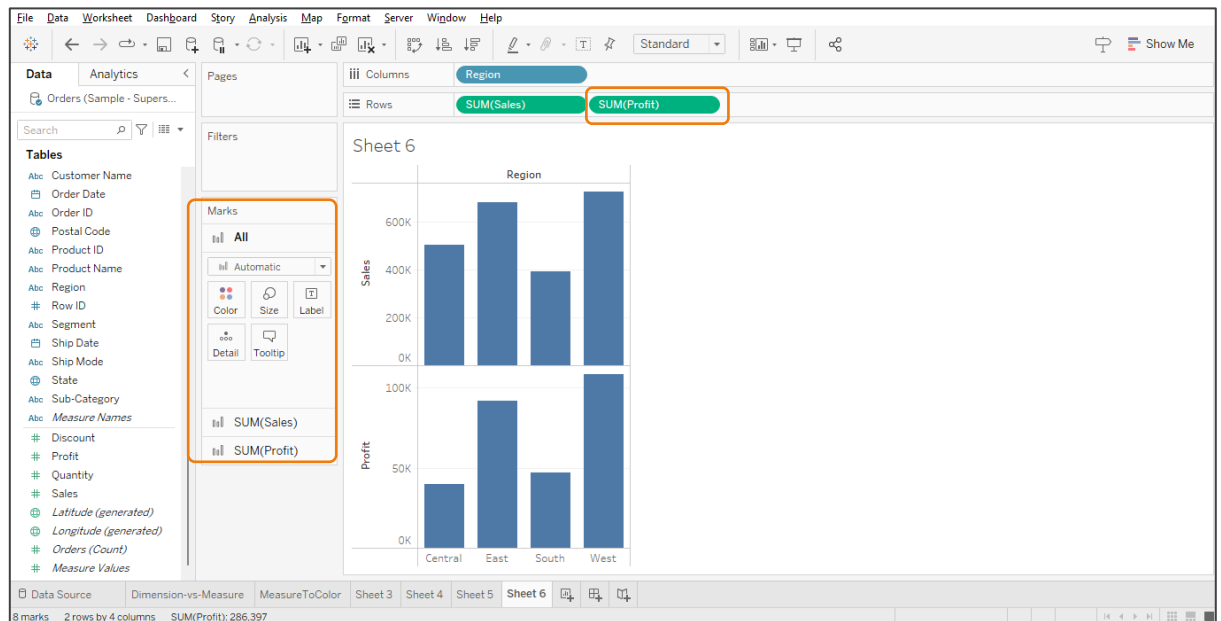
2.1 Drag **Region** to **Columns** and **Sales** to **Rows**



Observation: There is one marks card indicated in the chart.

2.2 Bring **Profit** to **Rows**, place it next to **Sales**

The output appears as below:

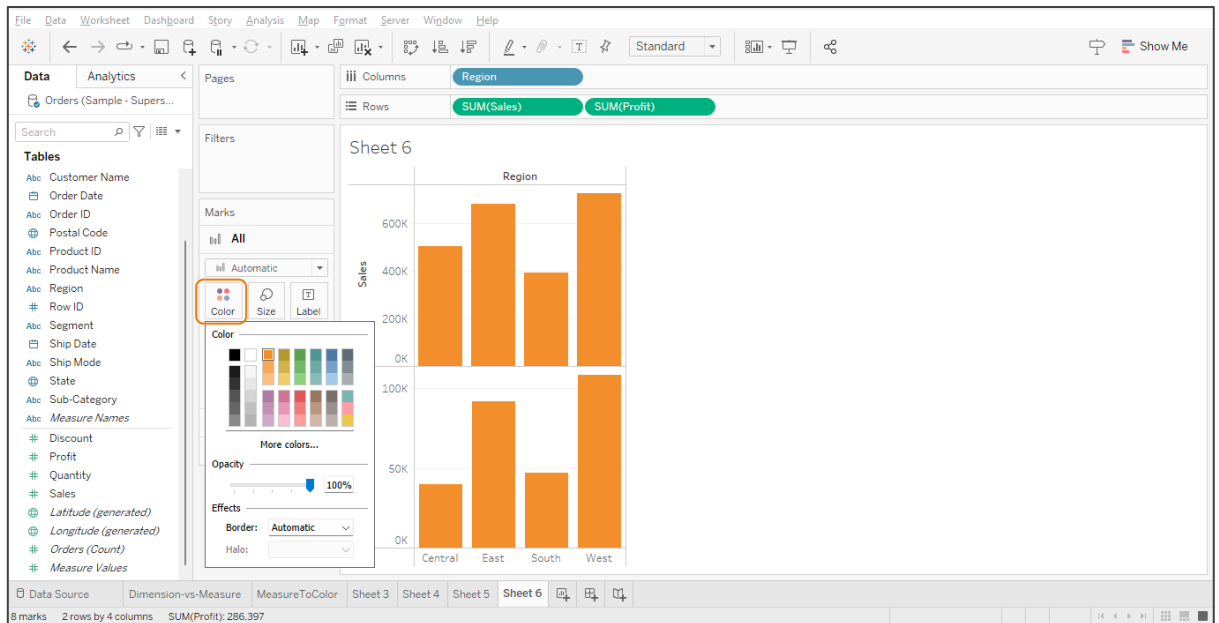


Observation: There are three marks cards:

- The **All** marks card (visible in the chart above)
- **SUM(Sales)** marks card (closed in the chart above)
- **SUM(Profit)** marks card (closed in the chart above)

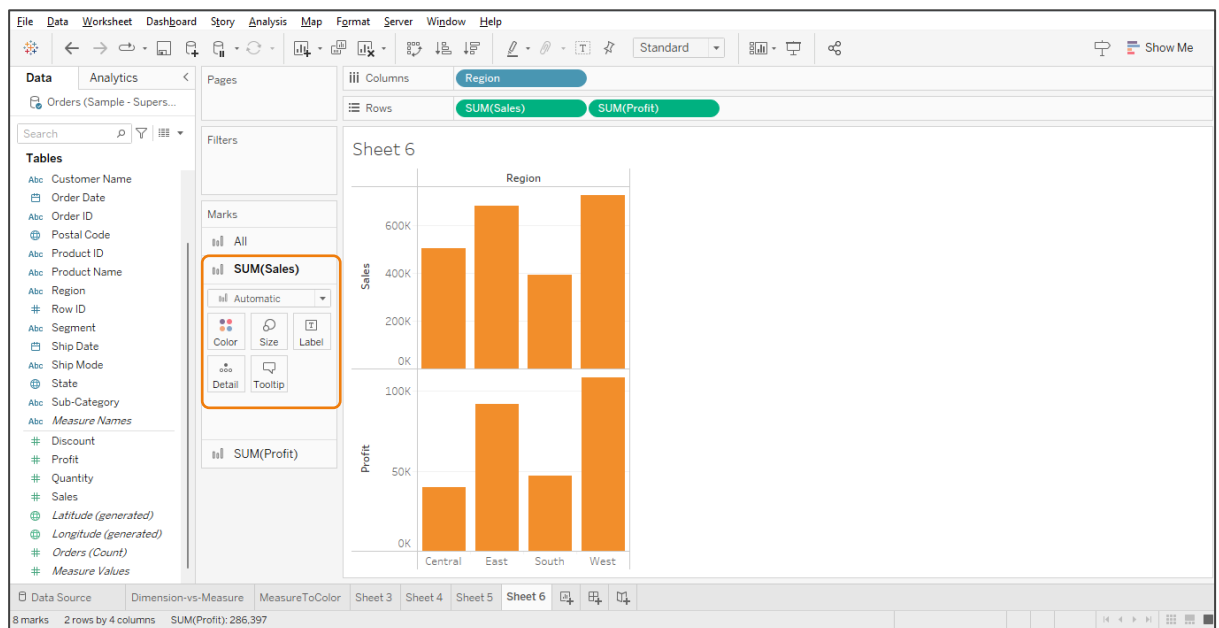
The **All** marks card edits both sales and profit charts, while the respective marks cards edit each individually. Use color marks or the **All** marks card to change both bar charts' colors.

2.3 Navigate to **All** marks card and click on **Color** marks; change the color to orange



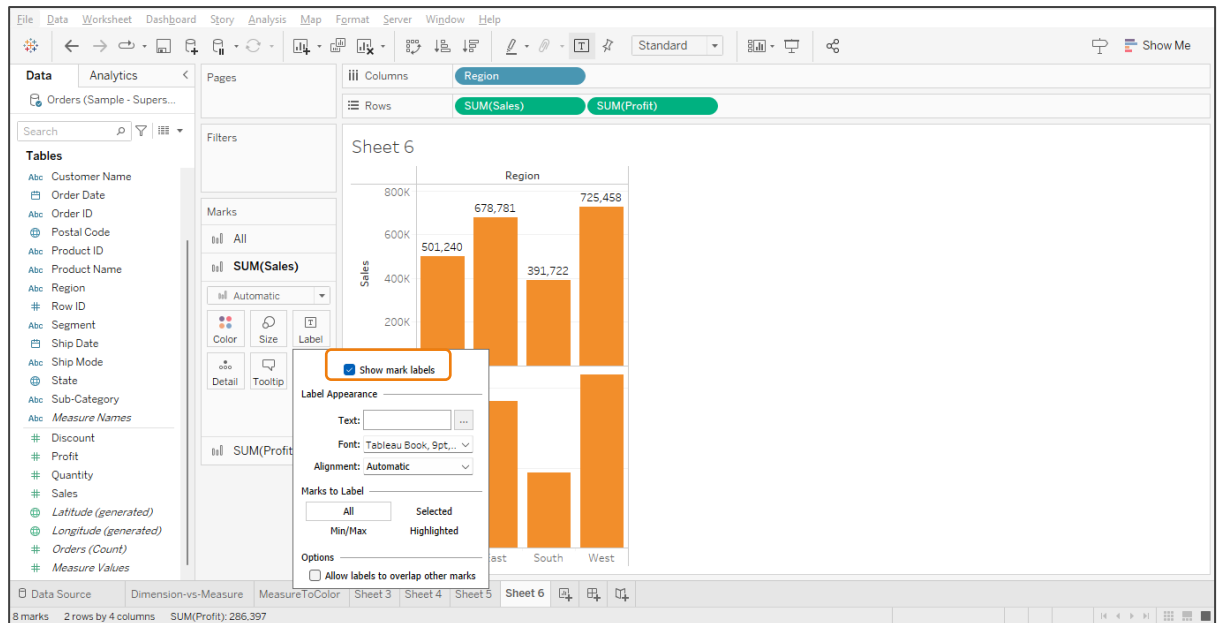
The color for both the charts changes as above.

2.4 Open the **SUM(Sales)** marks card



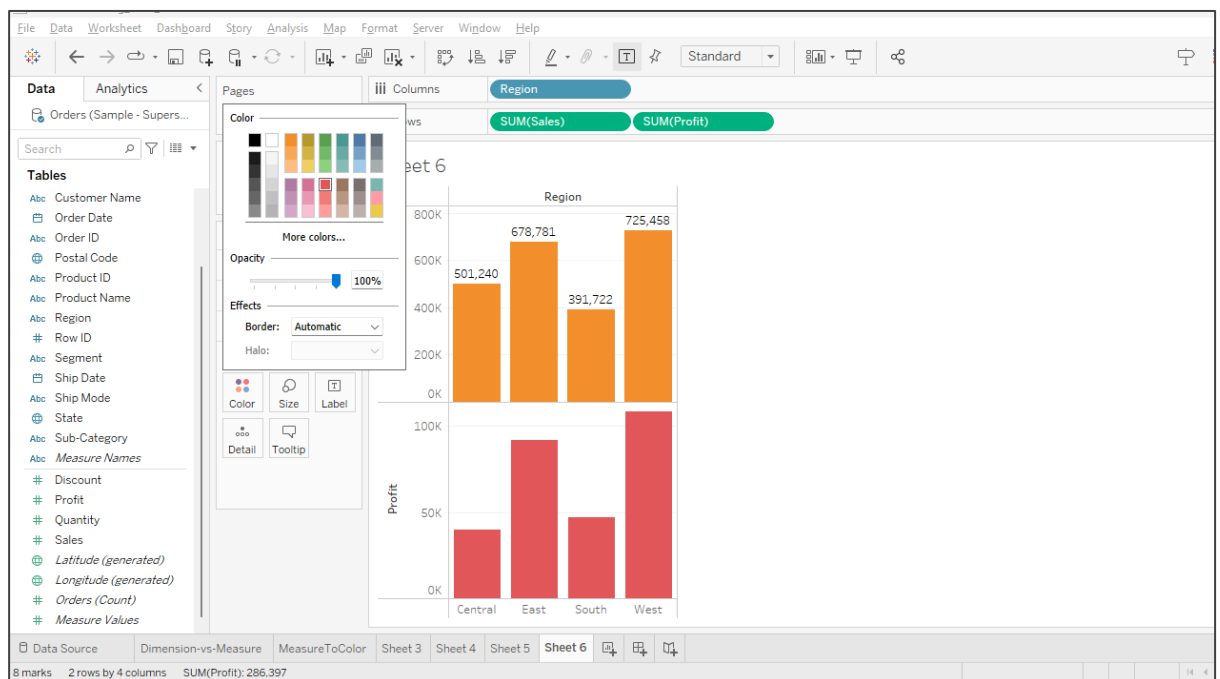
Observation: At the same time, only one mark card can be opened. As the sales marks card opens, the **All** marks card closes.

2.5 Click on **Label** to add labels to the sales chart; click on **Show marks labels**



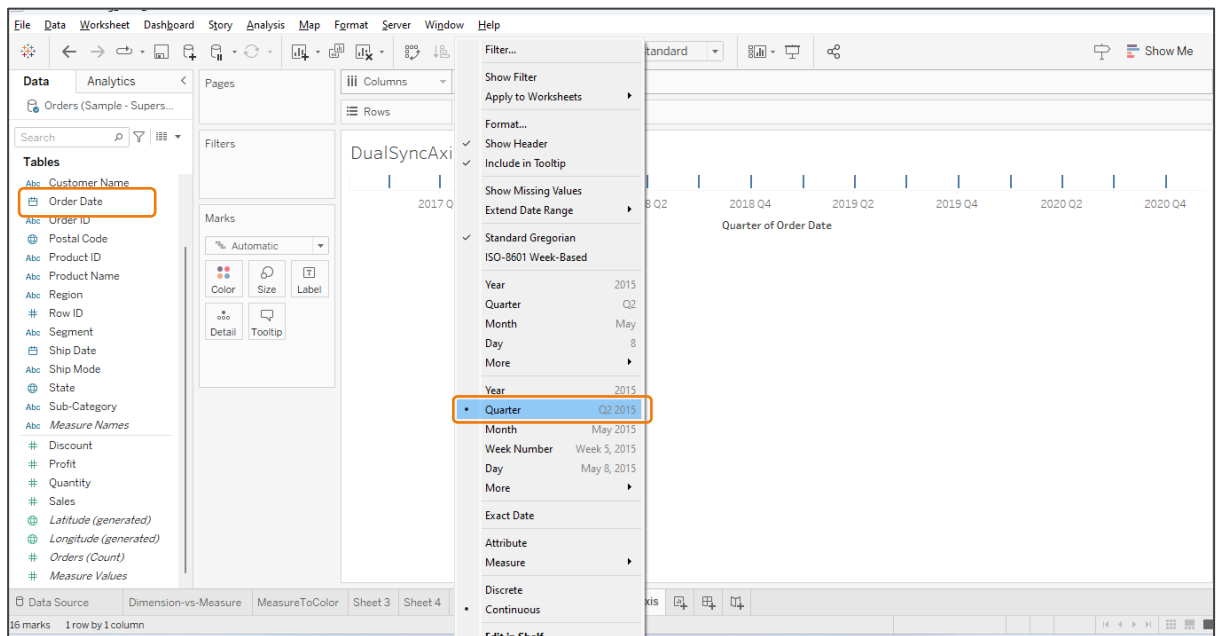
Observation: Here, the labels appear only for the sales chart, as we added them using only the **SUM(Sales)** marks card. There are no labels on the profit chart.

2.6 Open the **SUM(Profit)** marks card. Click on **Color** legend and change the color.

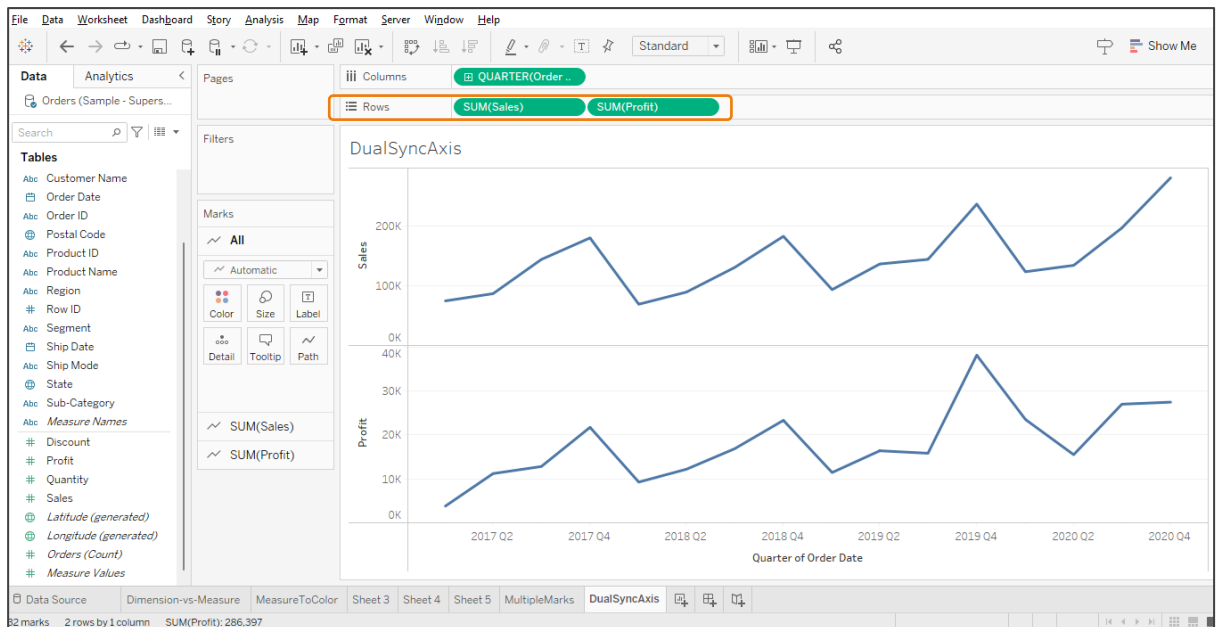


Step 3: Dual axis

3.1 Drag **Order Date** to **Columns**. Then right-click on **Order Date** and select **Quarter**

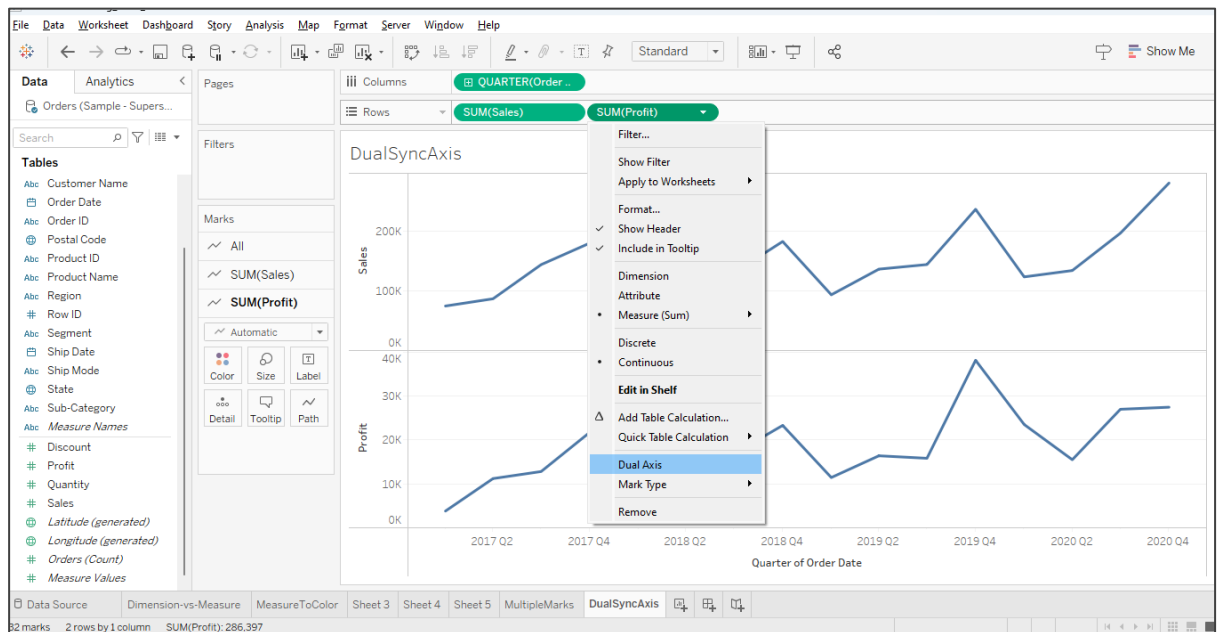


3.2 Bring **Sales** and **Profit** to **Rows**

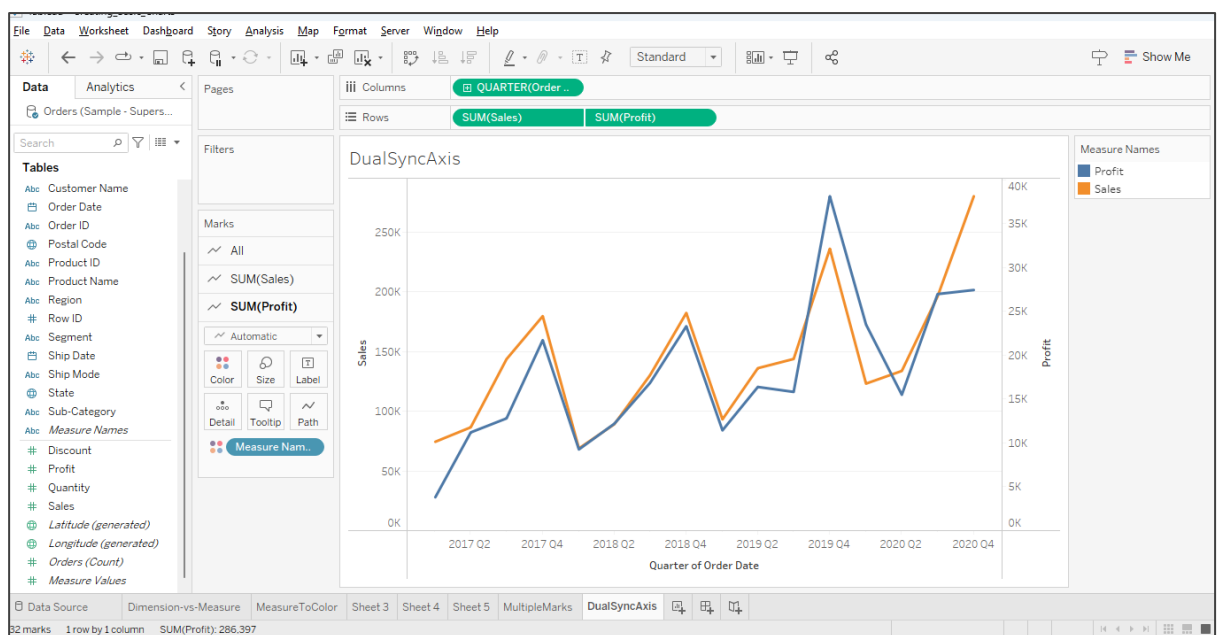


Note: Both charts currently have separate axes. To enable comparison on a single axis, utilize the dual axis option. It appears in the dropdown menu of the second marks card, specifically for **SUM(Sales)**.

3.3 Select the **Dual Axis** option from the **SUM(Profit)** measure



The output appears as below:

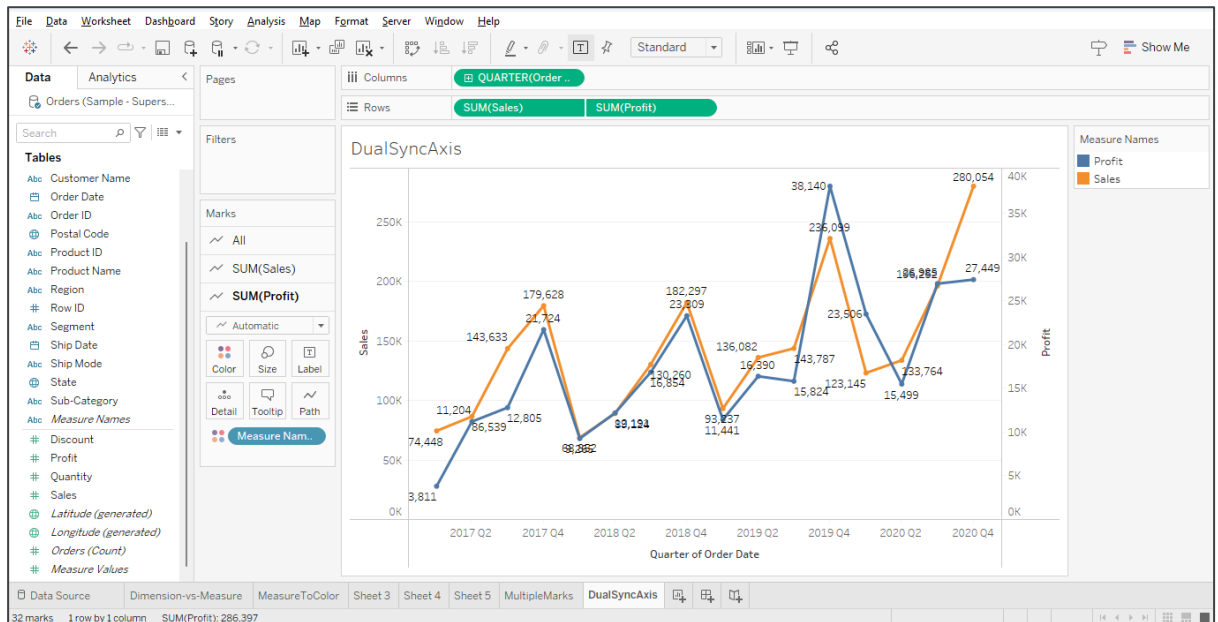


Observation:

1. Two lines appear on the same chart, facilitating comparison.
2. There are two axes appearing on each side of the chart. **Sales** on the left axis and **Profit** on the right axis.
3. The color legend automatically creates two lines with distinct colors.

- When the dual axis is applied, the two measure pills in the rows are merged.

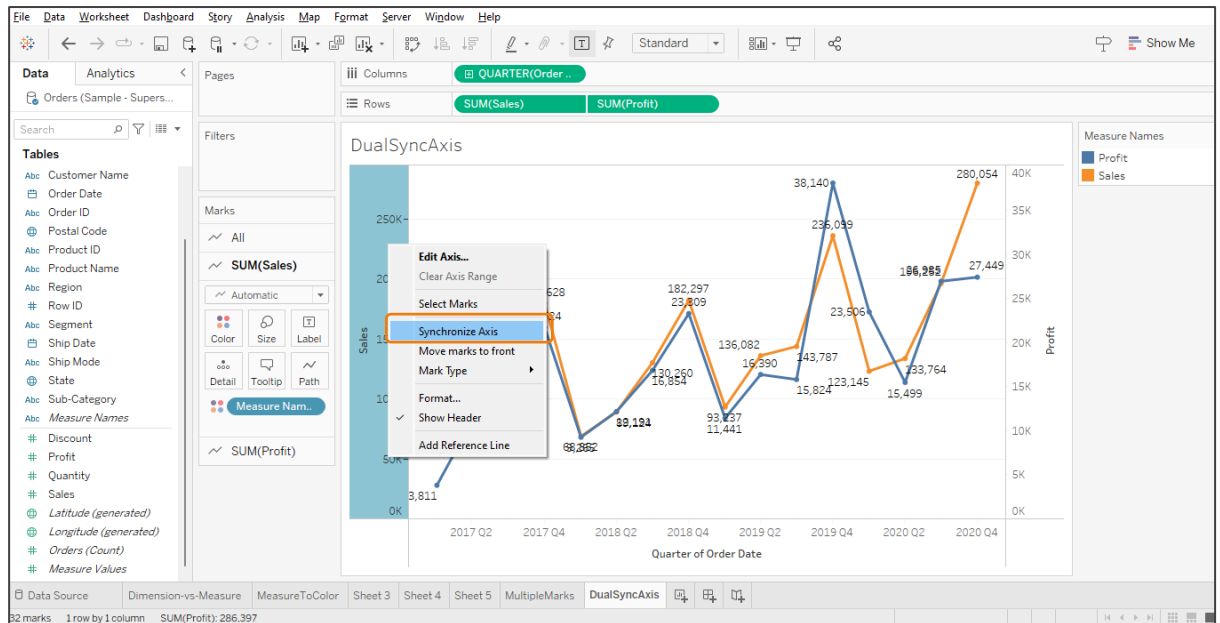
3.4 Drag **Sales** from the **Data** pane to **Label** marks card on **SUM(Profit)** and **SUM(Sales)**



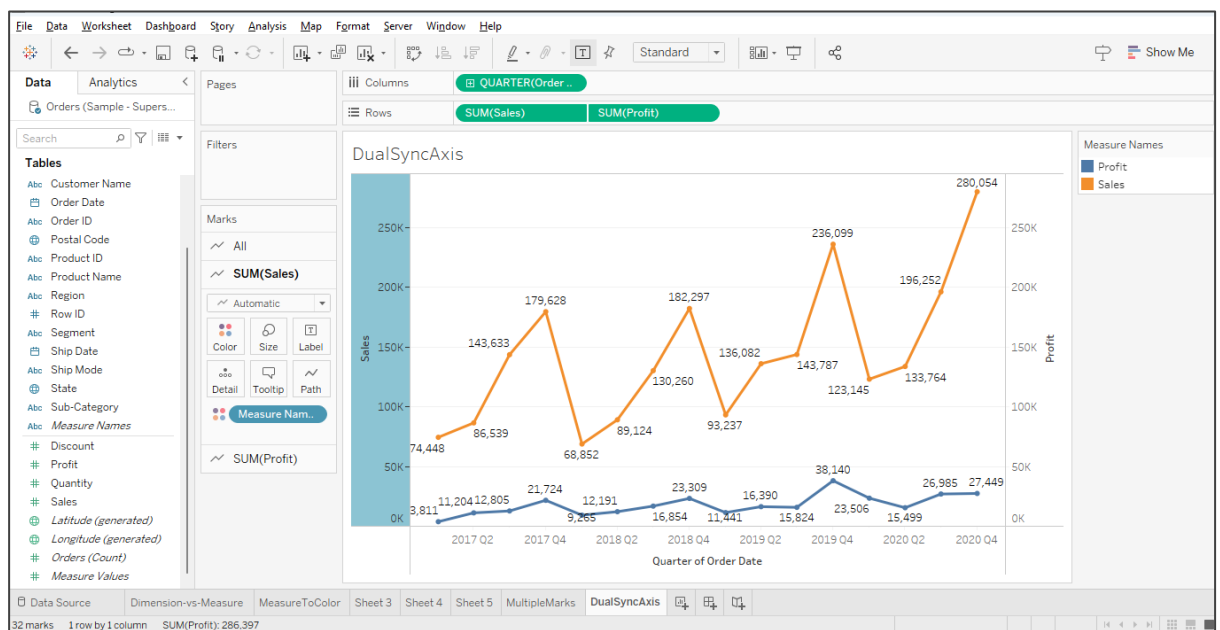
Note: The Y-axis scales for sales and profit differ, with sales ranging from 0 to 250K and profit from 0 to 40K. Consequently, the lines are created based on these scales, leading to a misleading representation where the profit line appears above sales despite having lower values. To correct this representation, we need to sync (synchronize) both axes and make them the same.

Step 4: Sync axis

- To sync axis, right-click on any of the axis, and select the **Synchronize Axis** option



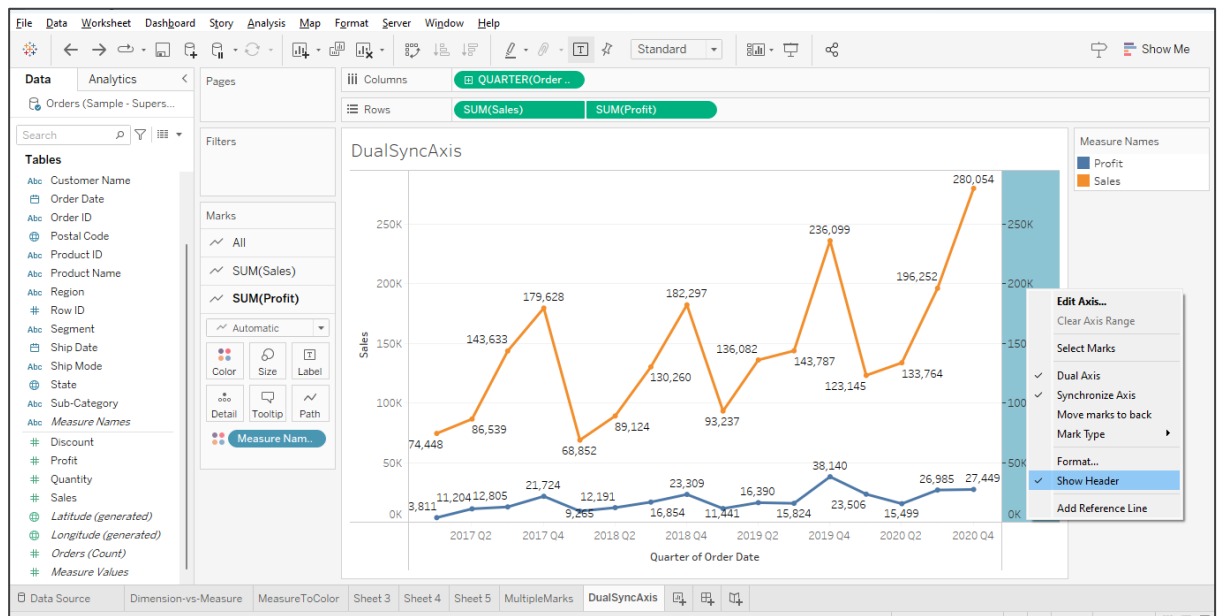
The chart axis scales are now synchronized as shown below:



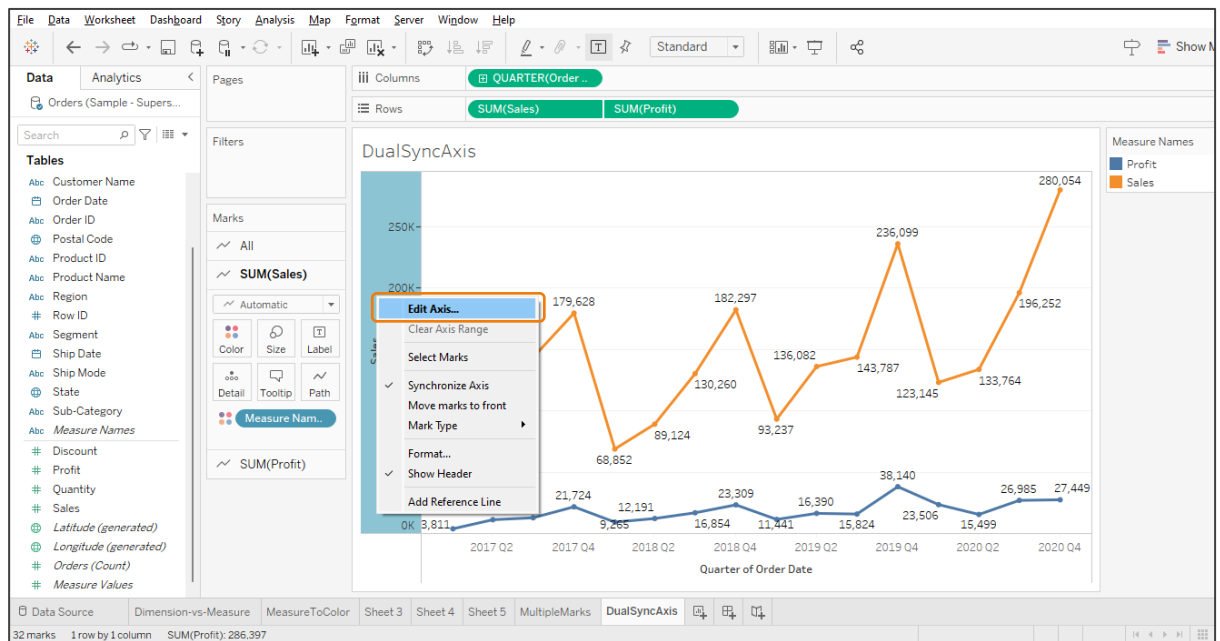
Observation: The **Sales** and **Profit** lines are comparable as they are on the same axis.

4.2 Right-click on the **Profit** axis and uncheck **Show Header** option

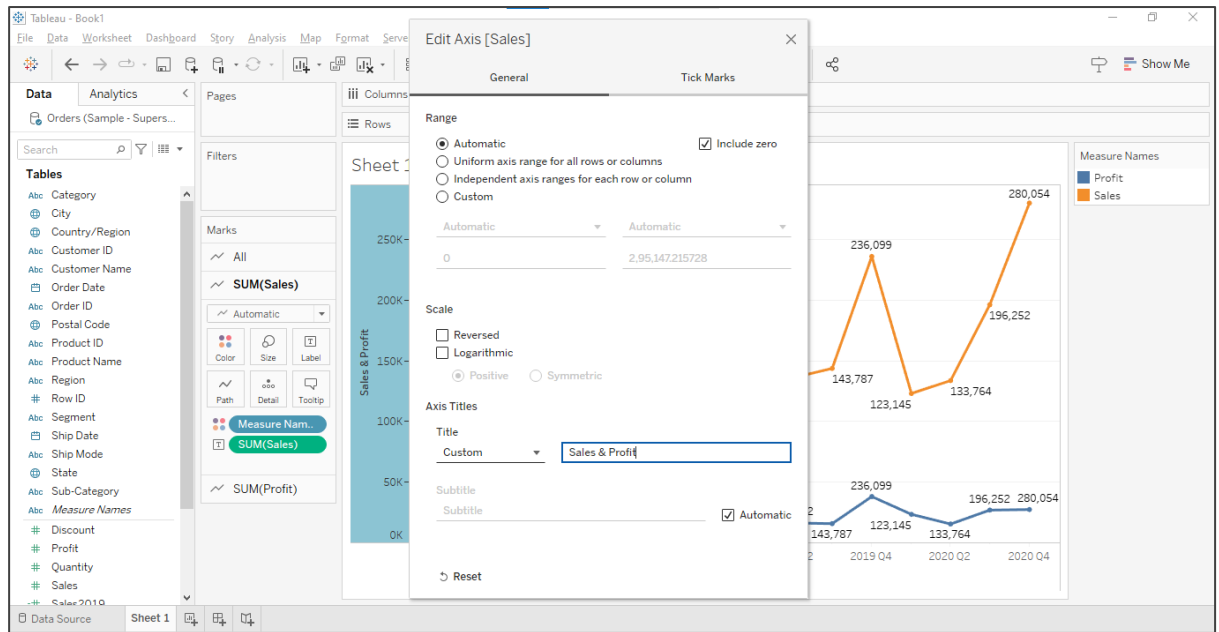
This will remove the profit axis that appears on the right side.



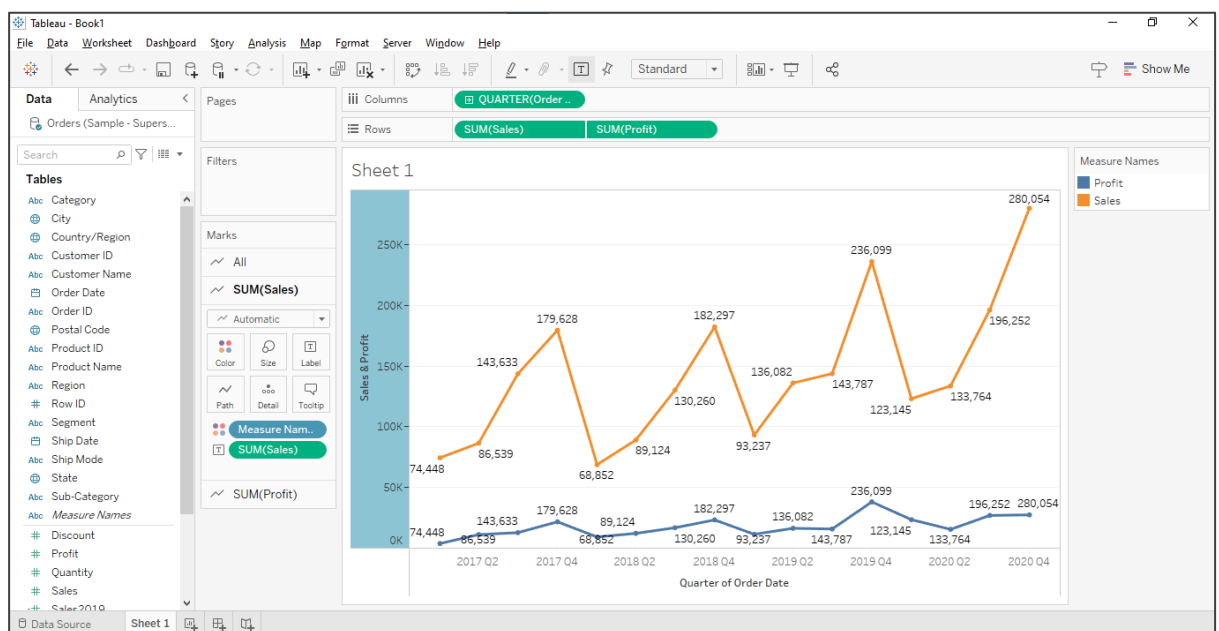
4.3 Right-click on **Sales** axis and select the **Edit Axis** option



4.4 From the **Edit Axis [Sales]** window, rename it to **Sales & Profit** then close the window



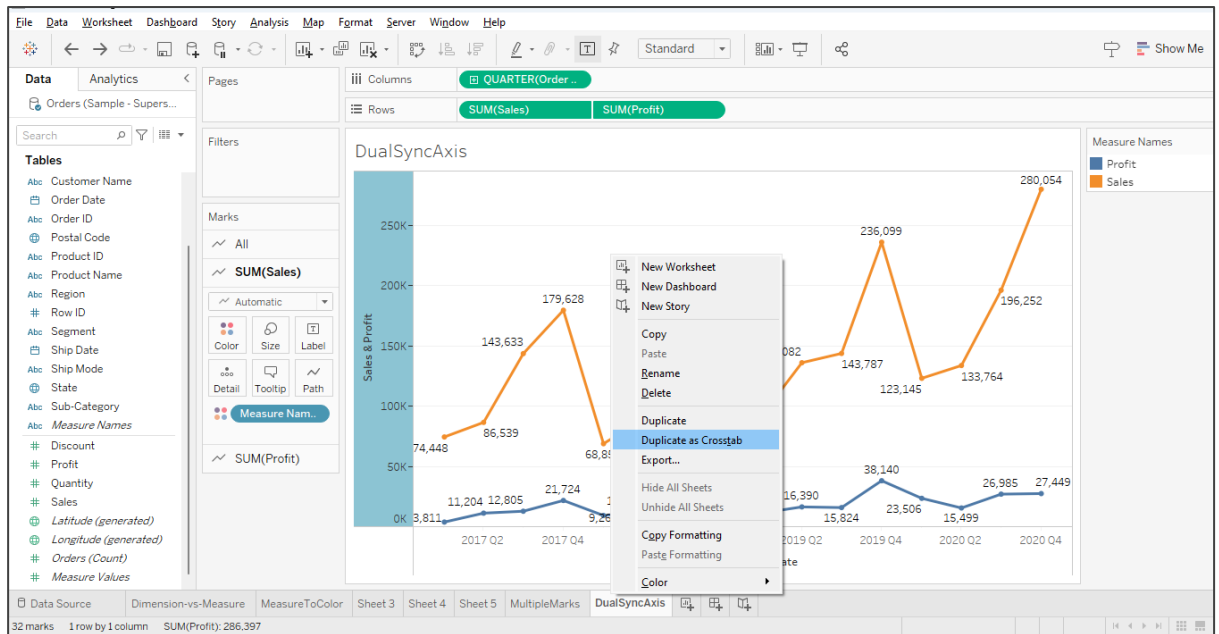
The output appears as shown below:



Step 5: Duplicate as crosstab

Note: You can easily convert any chart in Tableau into a crosstab format.

- 5.1 Right-click on the sheet name and select **Duplicate as Crosstab** from the options



A duplicate sheet is created as shown below:

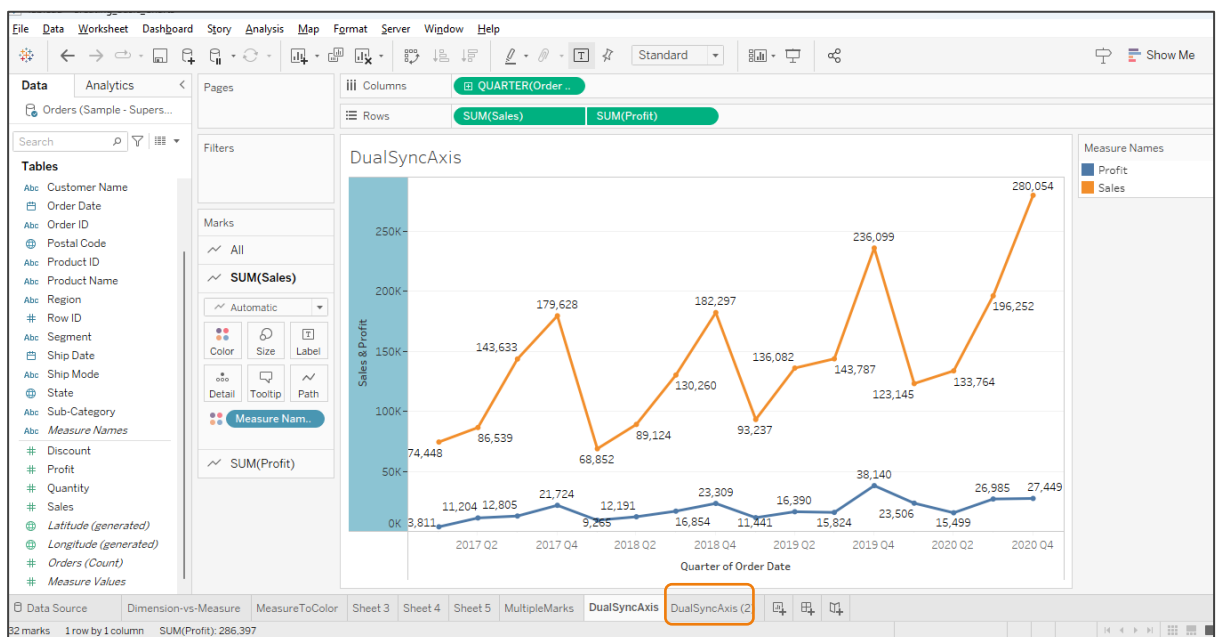
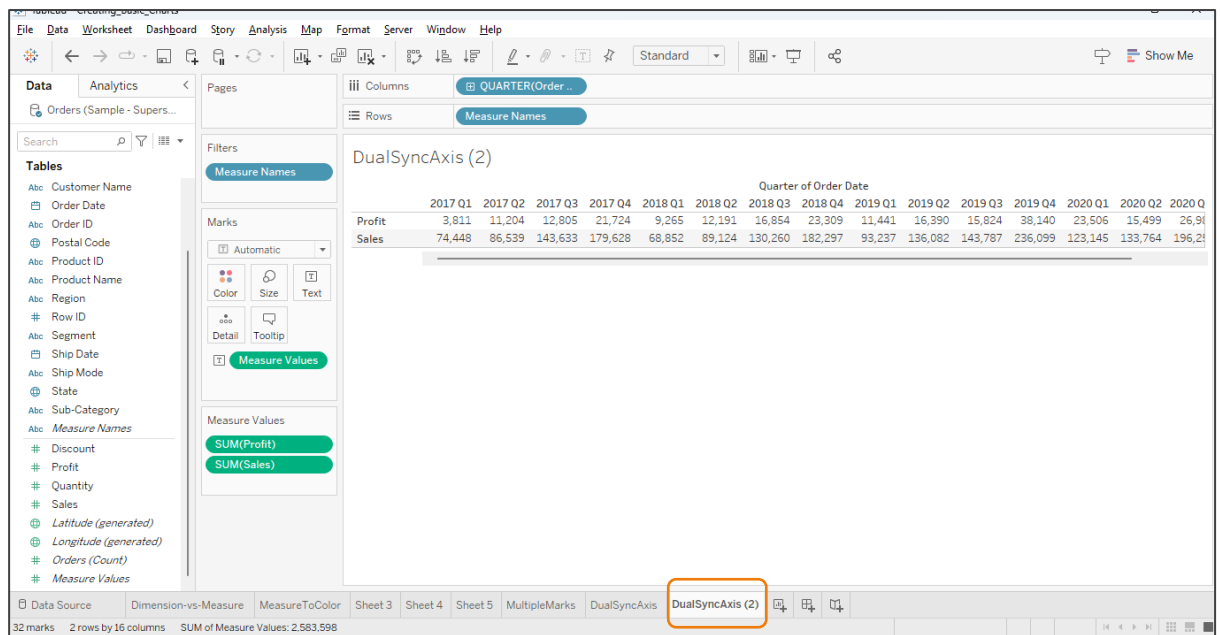


Tableau effortlessly transformed the line charts into cross-tables with just one click, as shown below:



Step 6: Sort option

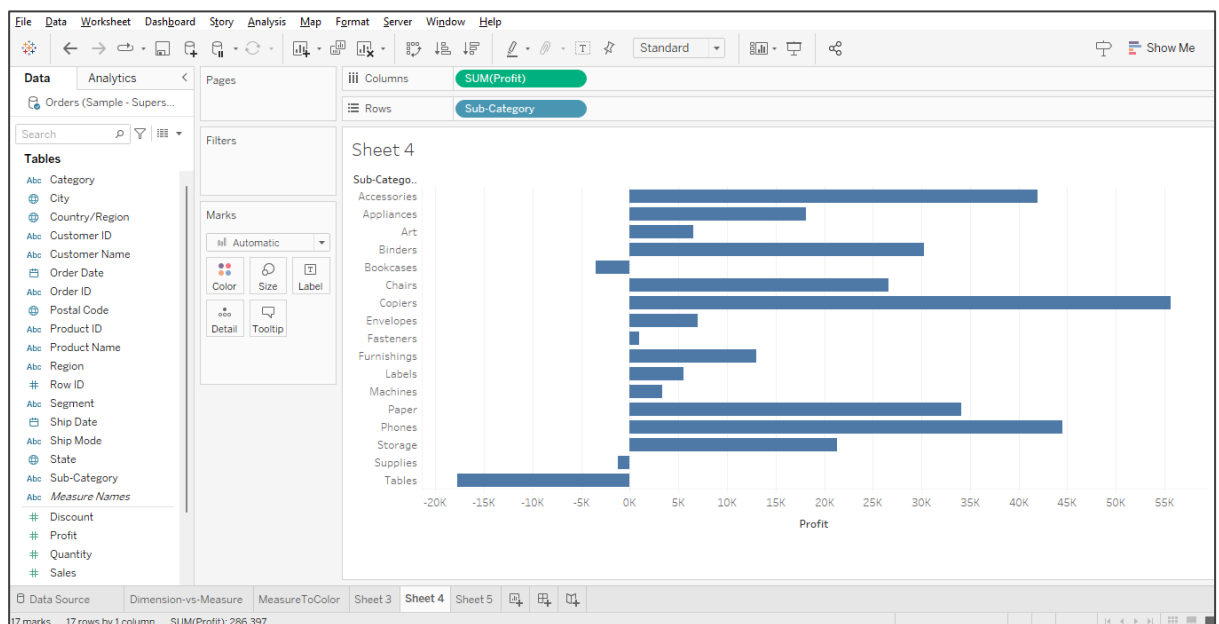
Note: There are multiple ways you can sort the views on the sheet.

- A. Using menu icons
- B. Using icons on the horizontal and vertical axes
- C. Using dimension menu

A. Using menu icons

6.1 Drag **Sub-Category** to **Rows** and **Profit** to **Columns**

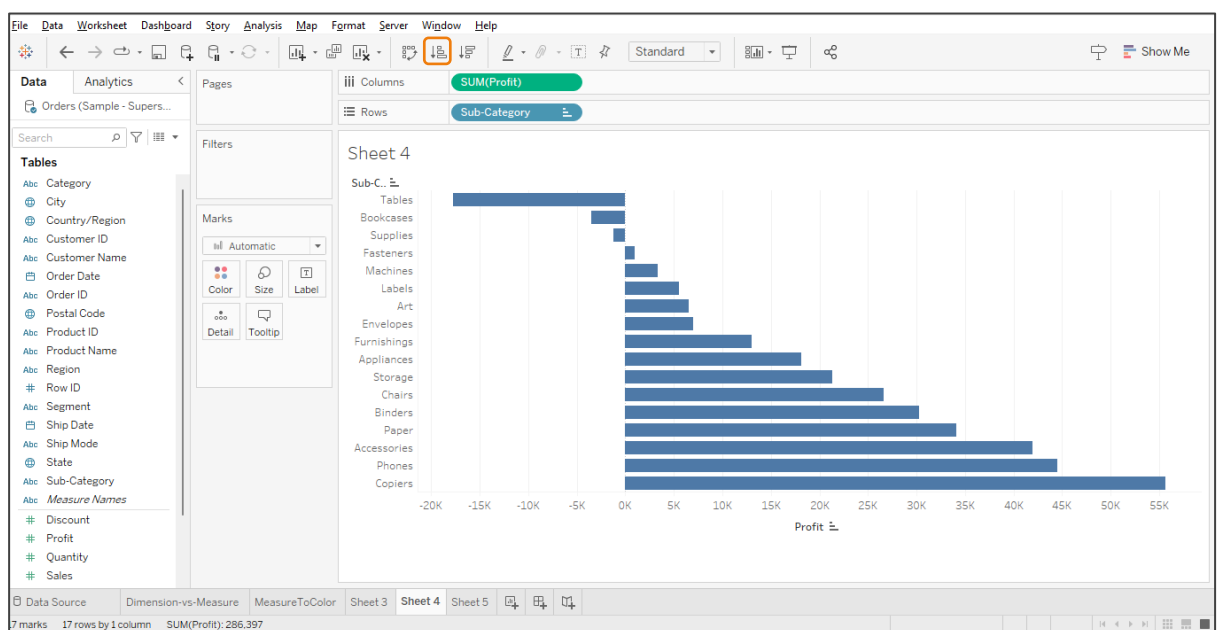
The output appears as below:



Note: The sort option offers two types: ascending sort and descending sort

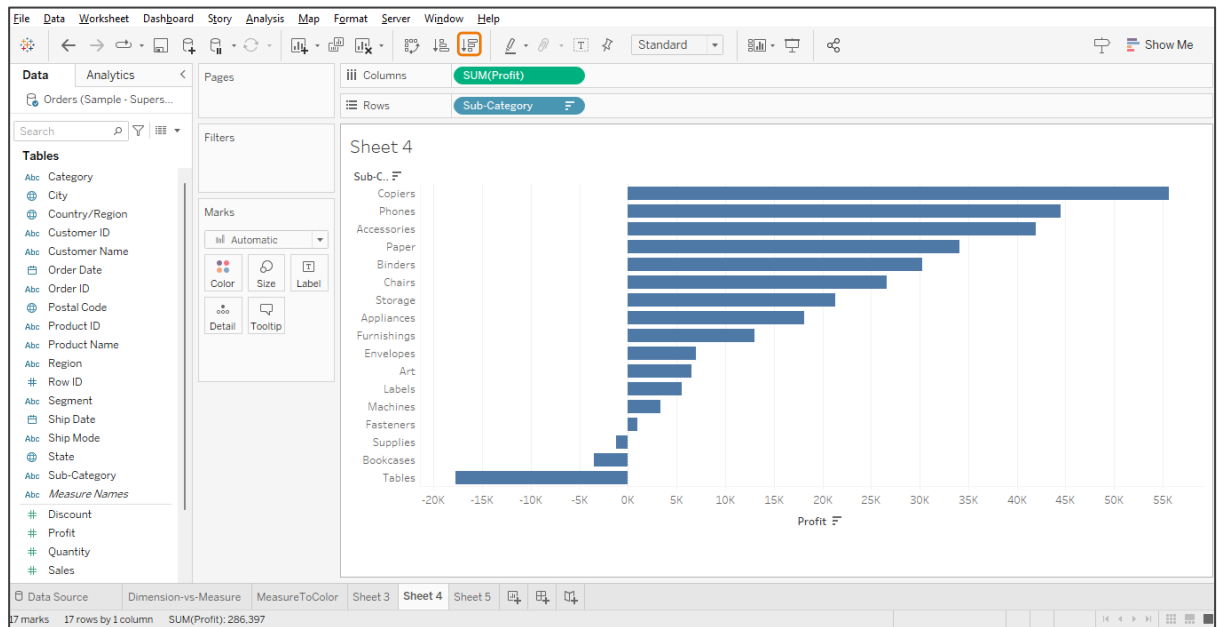
Ascending sort

6.2 Click on ascending sort from the menu to sort the views accordingly



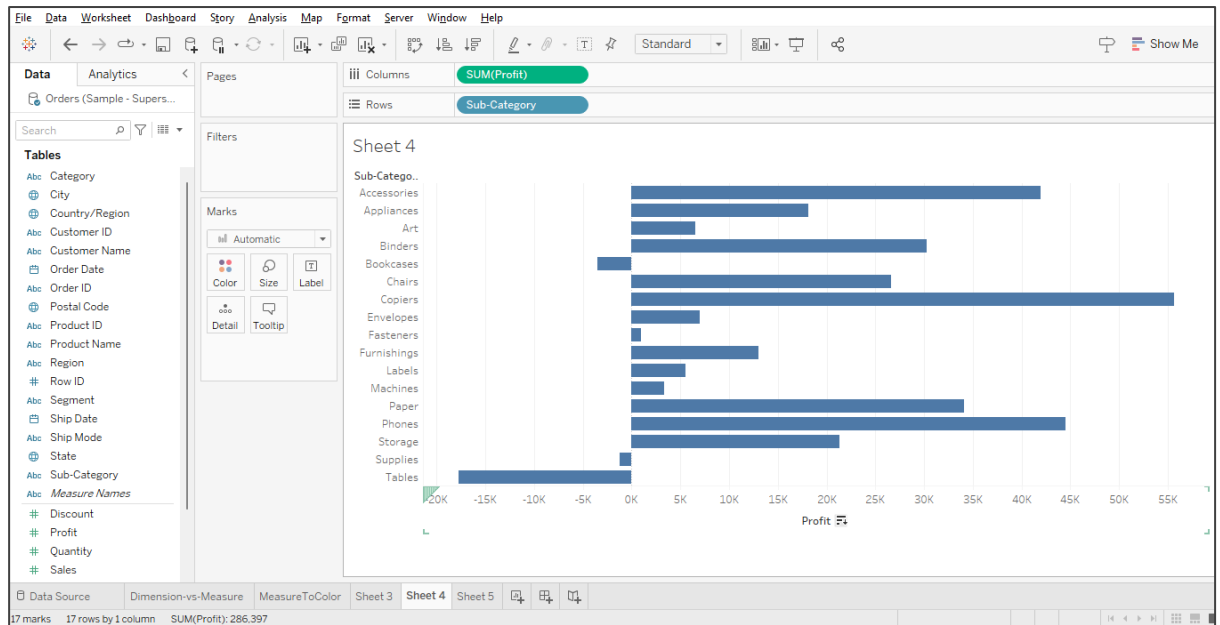
Descending sort

6.3 Click on descending sort from the menu to sort the views accordingly



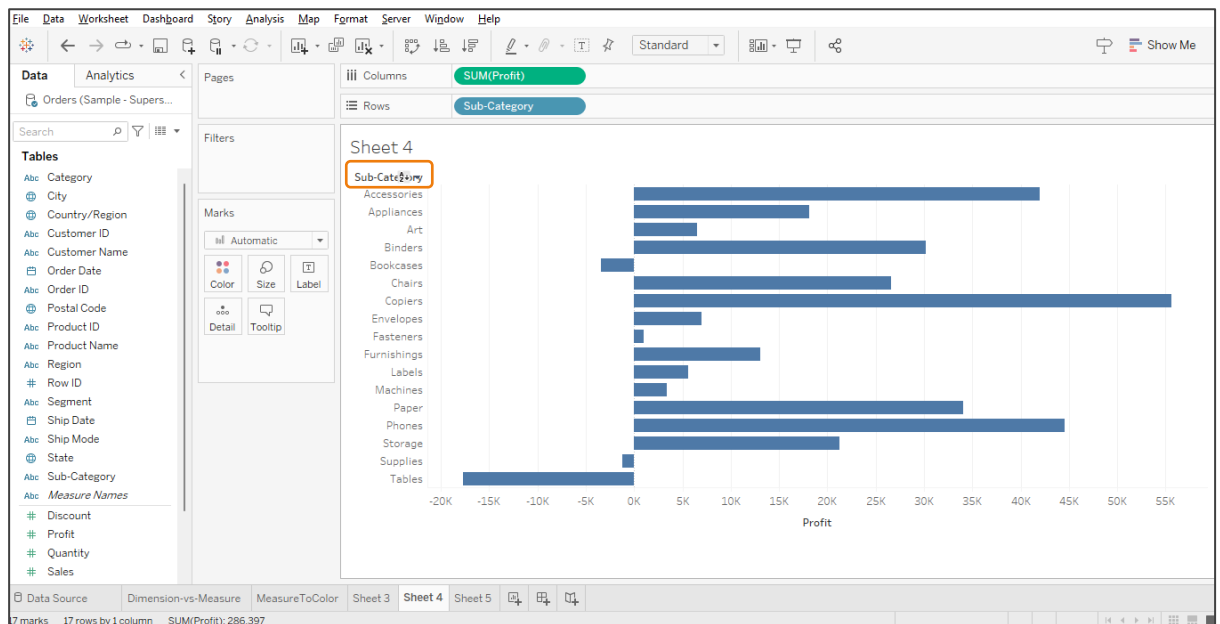
B. Using icons on the horizontal and vertical axes

6.4 Click on the sort icon on the **X-axis**



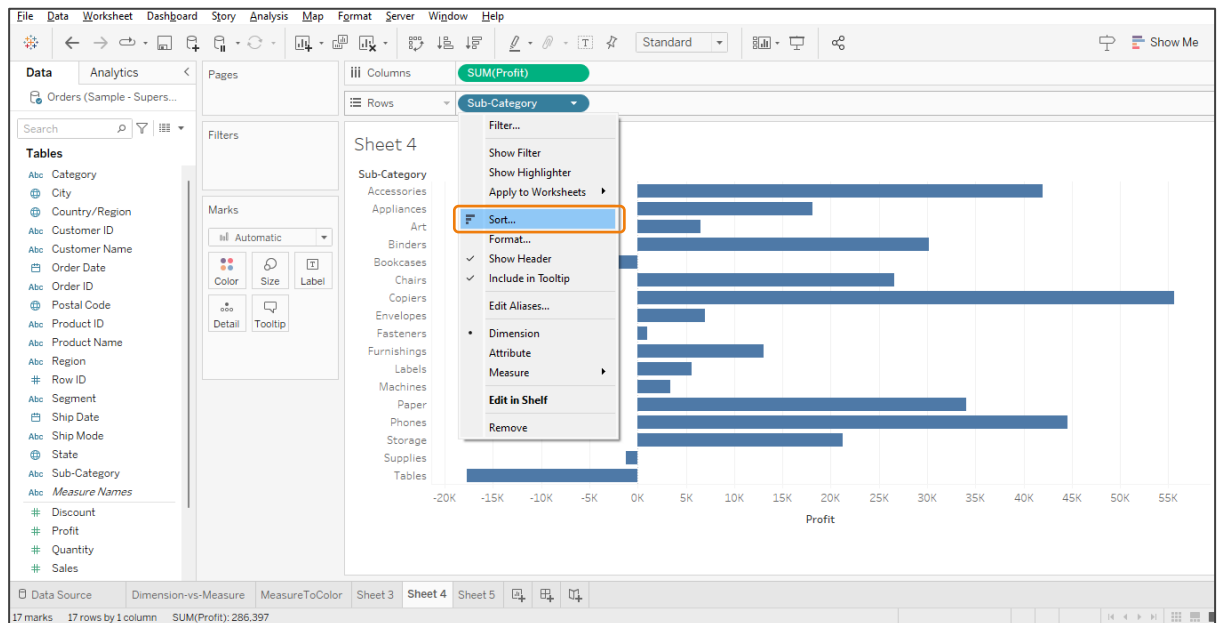
Note: Repeatedly clicking the sort icon will sort the chart in descending, ascending, and alphabetical order based on the source sort.

- Click the sort icon (located on the vertical axis) while hovering the cursor over the **Sub-Category** title to sort the chart alphabetically in ascending (A to Z) or descending (Z to A) order

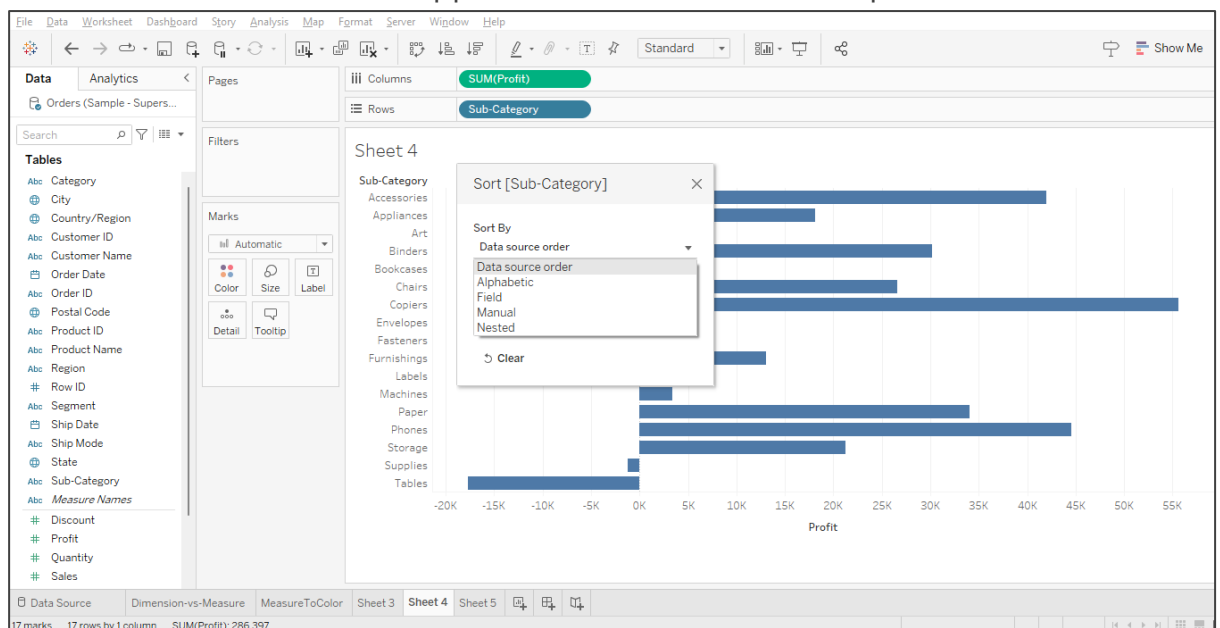


C. From the dimension menu

6.6 Right-click on the **Sub-Category** dimension and select **Sort**



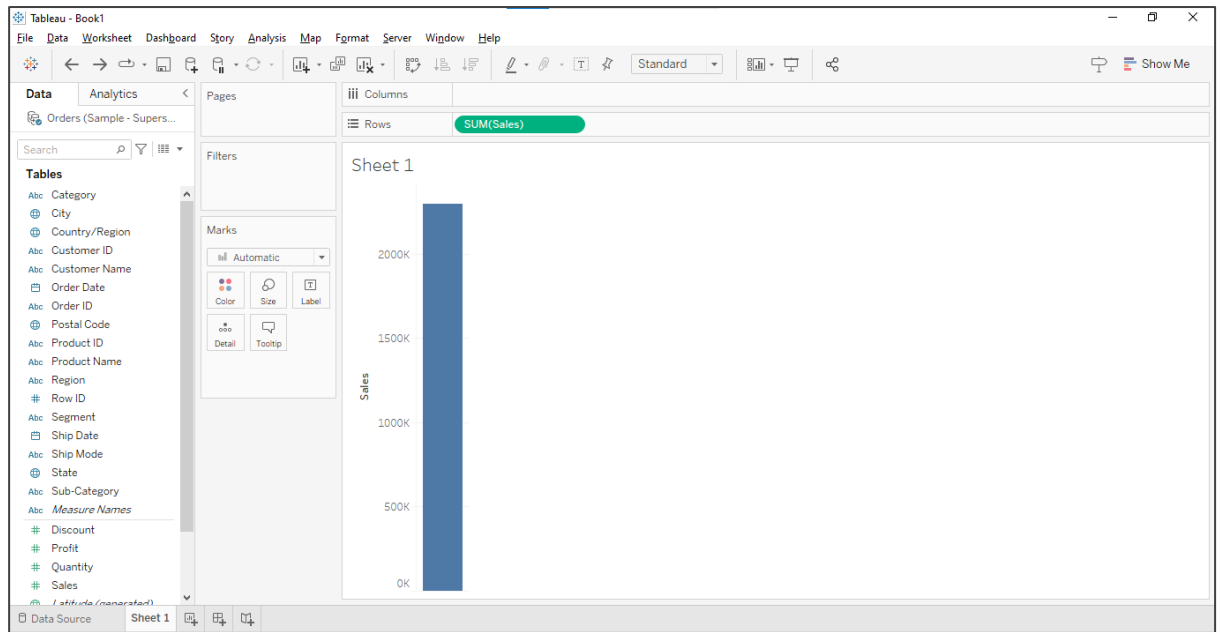
The sort menu window will appear; choose the item as required.



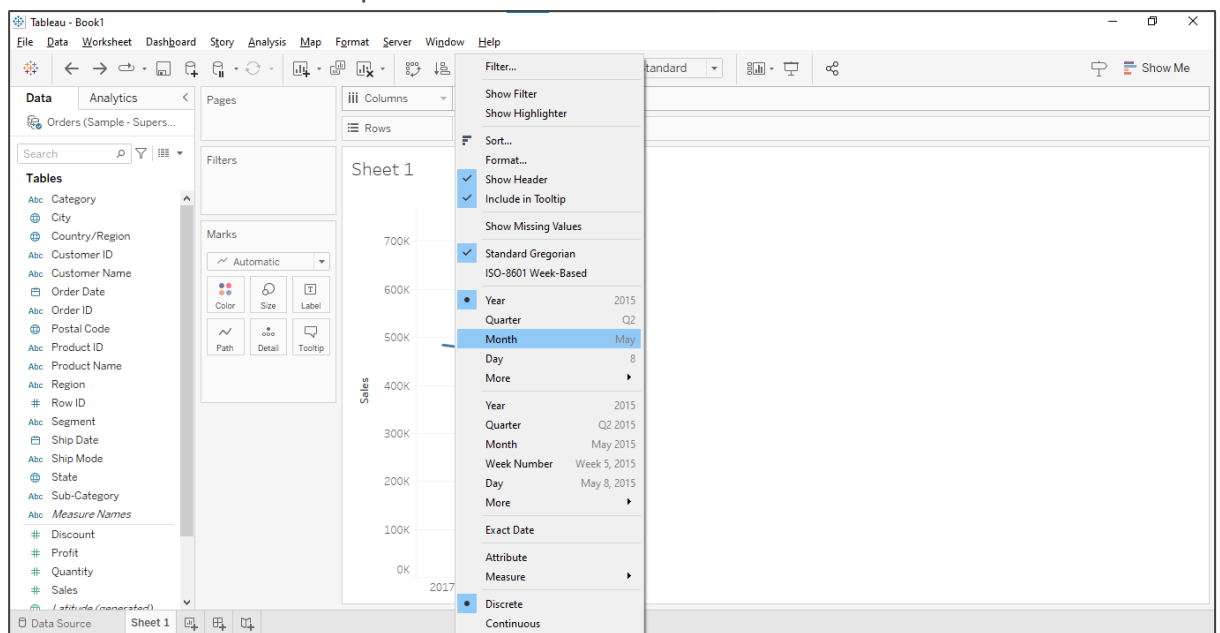
Observation: With these sorting options, you can arrange your data in ascending or descending order based on various criteria.

Step 7: Edit axis

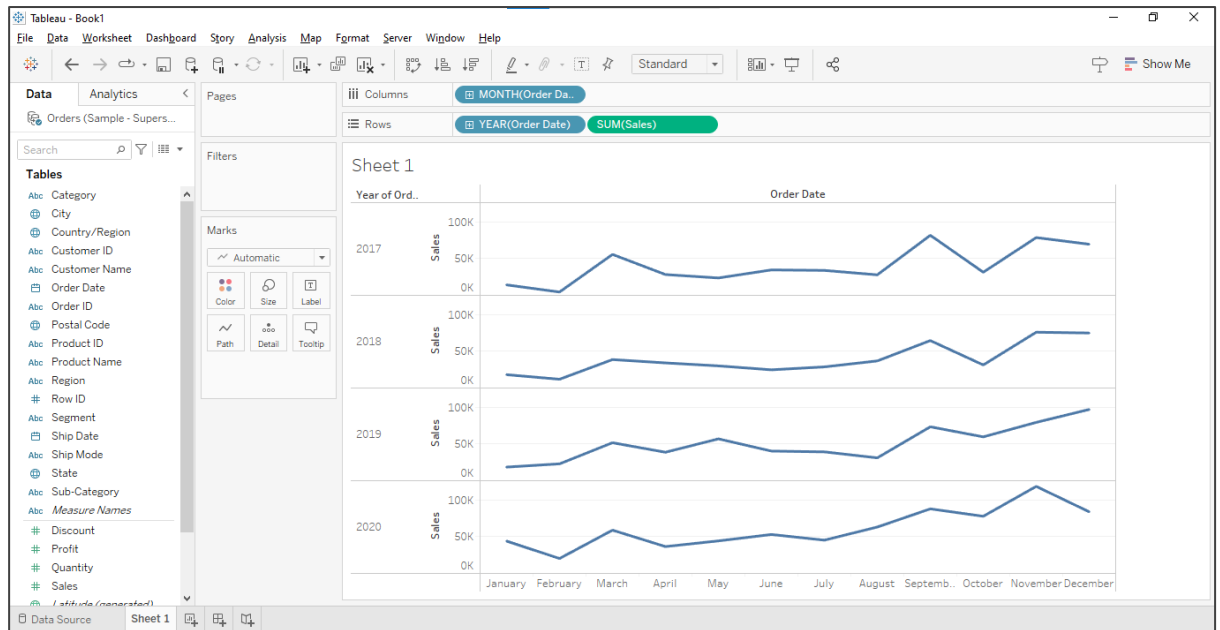
7.1 Drag **Sales** to **Rows**



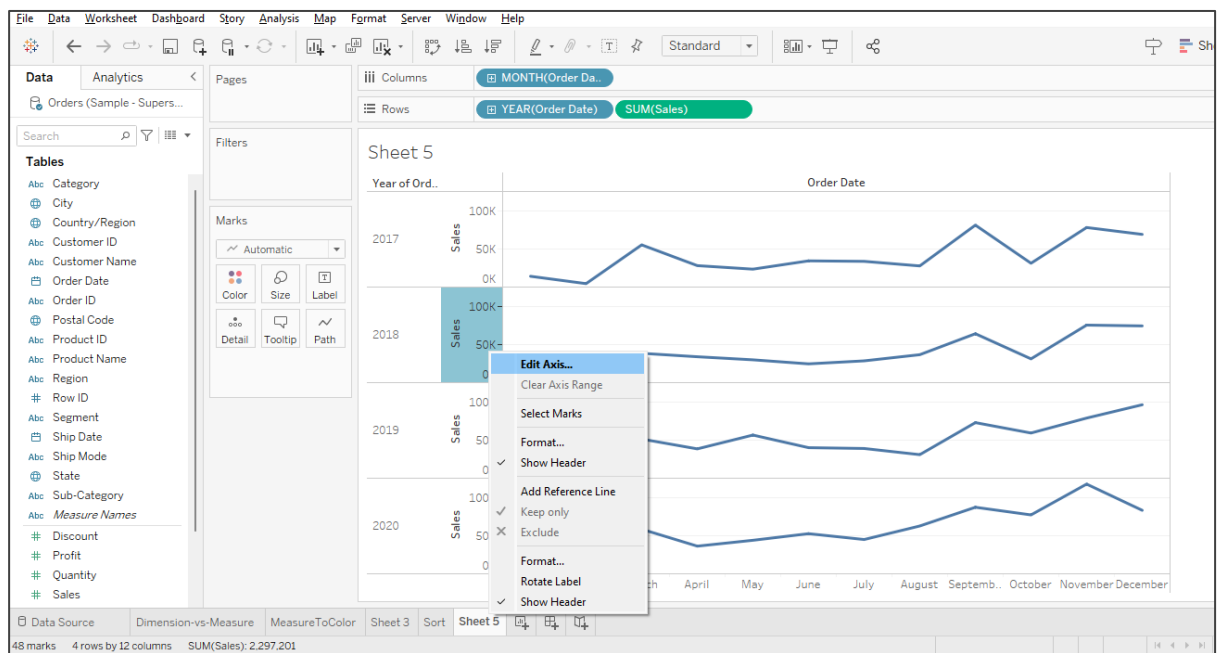
7.2 Drag **Order Date** to **Columns**. Change the aggregation from **YEAR** to **MONTH** (date part)



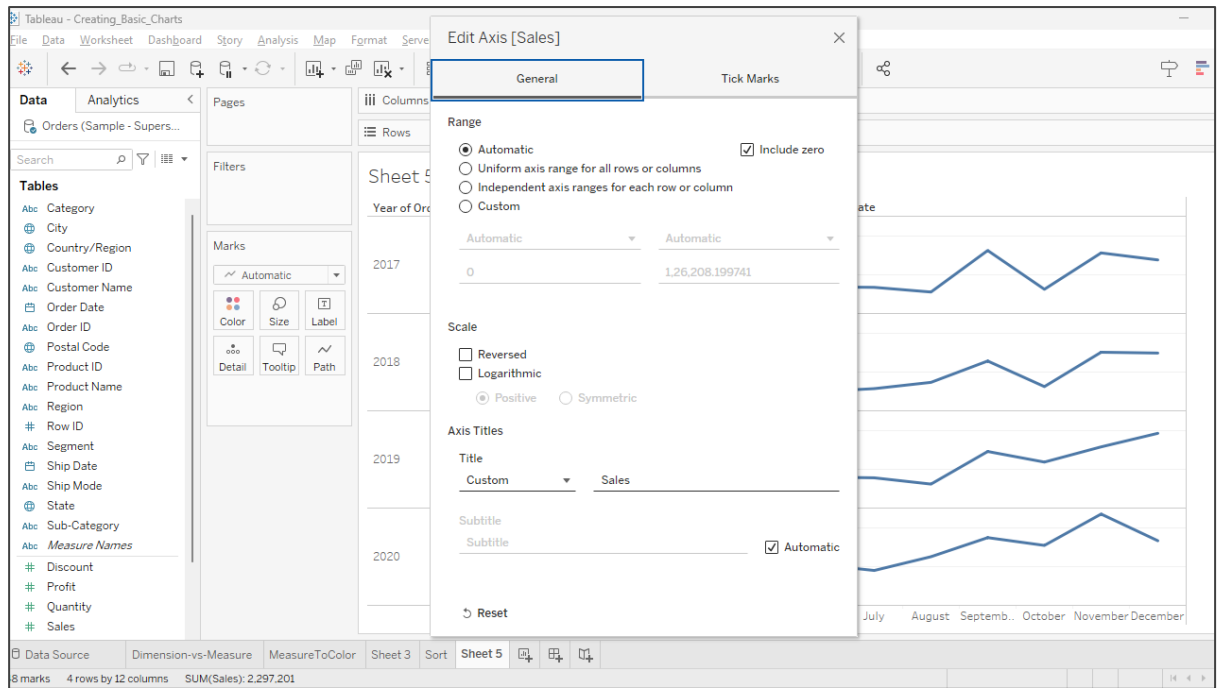
7.3 Drag **Order Date** again to **Rows**



7.4 Right-click on any of the axis (2017, 2018, 2019 or 2020) and select **Edit Axis** option

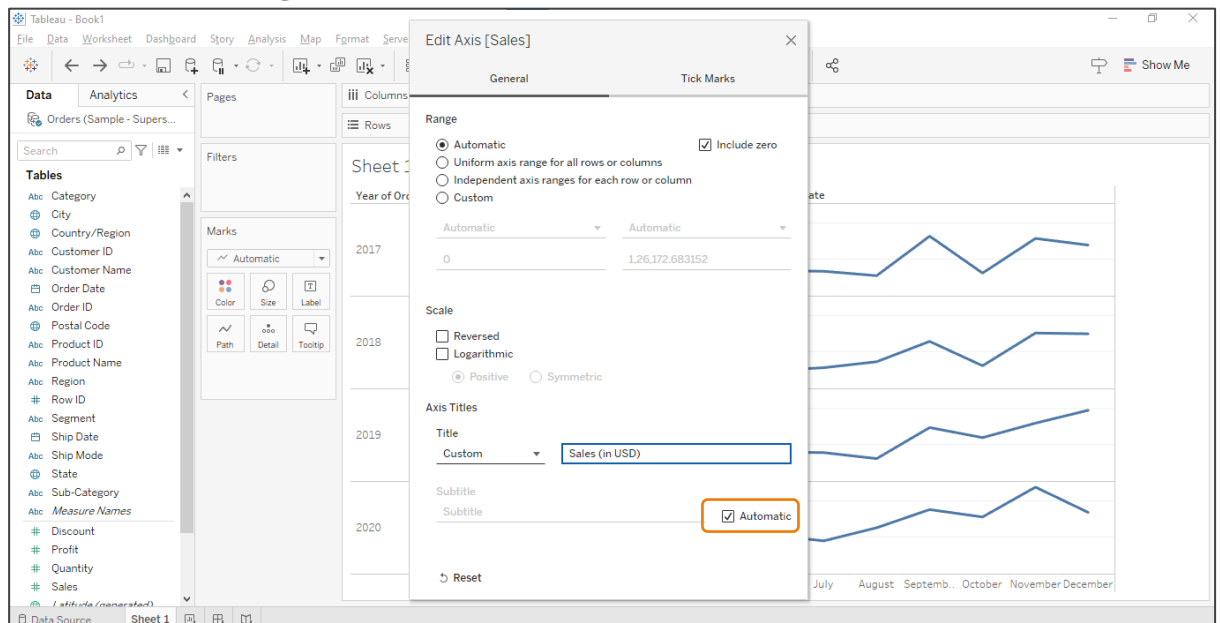


Edit Axis [Sales] window opens as shown below:

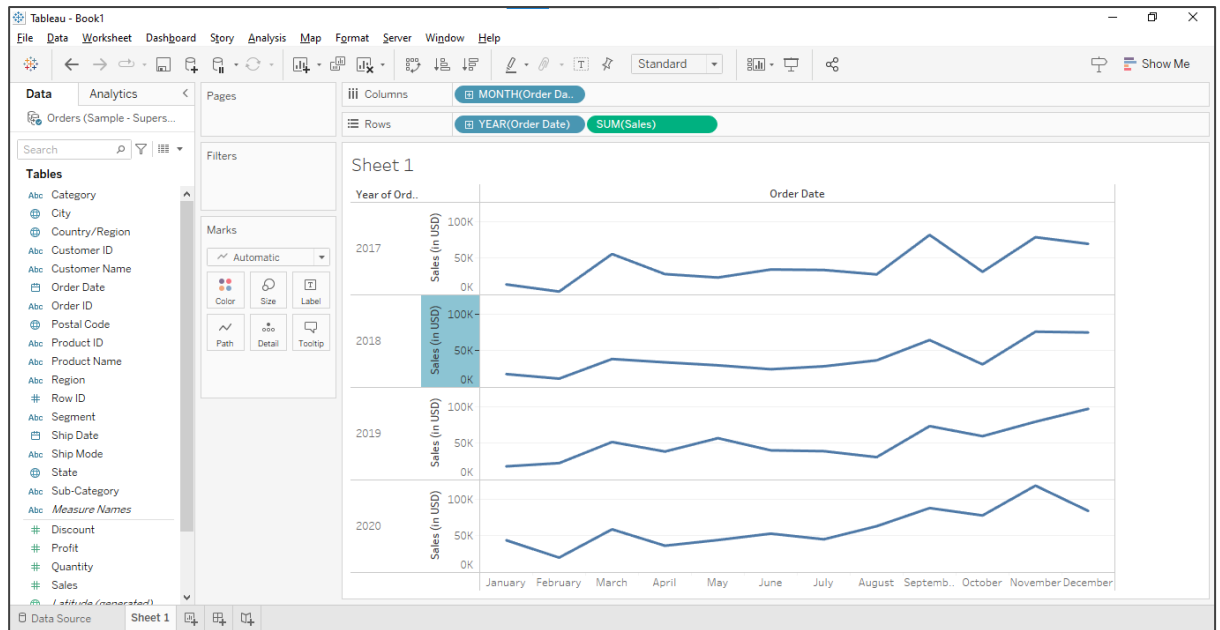


7.5 Axis Titles

7.5.1 Update the **Axis Titles** from **Sales** to **Sales (in USD)**. Add a subtitle by unchecking the **Automatic** checkbox located on the right side, if needed.



The final output is shown below:



With these steps, you have successfully showcased techniques like creating multiple marks cards, dual axis comparison, synchronized axis scales, duplicating visualizations, sorting options, and editing axis titles. These methods enable effective data analysis and presentation, enhancing insights and understanding.