# Lesson 06 Demo 01
# Calculated Fields

**Objective:** To demonstrate how to create a calculated field for the profit ratio and use the field to show profit ratio for different segments, regions, categories, and sub-categories

**Tools required:** Tableau Desktop

**Prerequisites:** None

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**Note:** Download the **superstore-excel.xlsx** datasets from the Reference Materials section of the LMS

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**Note: What is Profit Ratio?**
Profit Ratio is the ratio of Profit by Sales, where profit is expressed as a percentage of sales in % terms.
**Profit Ratio = Profit/Sales**

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## Steps to be followed:

1. Import the **Sample-Superstore** dataset
2. Preview the data
3. Create a calculated field for the profit ratio
4. Use the calculated field in visualization to create charts
5. Analyze the profit ratio at different levels

**Step 1: Import the Sample–Superstore dataset**

    1.1    Open a new Tableau Book and click on **Microsoft Excel** under the **To a File** section
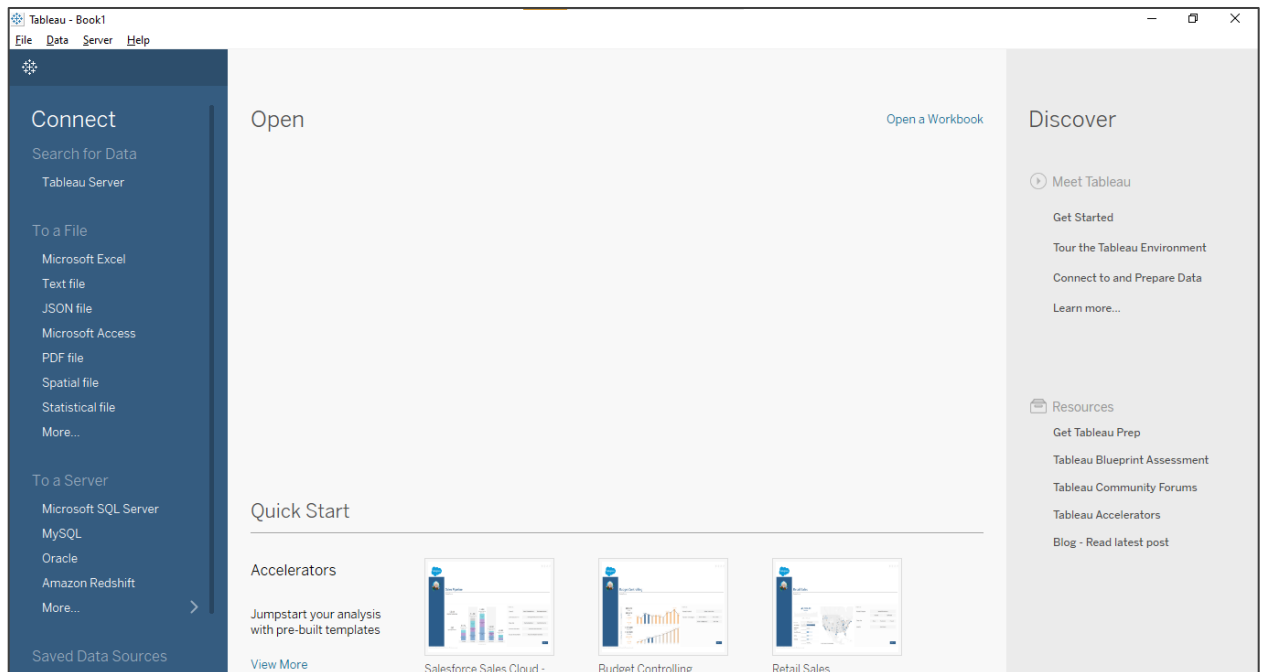
1.2     Choose the file **Sample-Superstore** from your local drive. Select the Excel file and click **Open**. Tableau will load and establish a connection with the file.
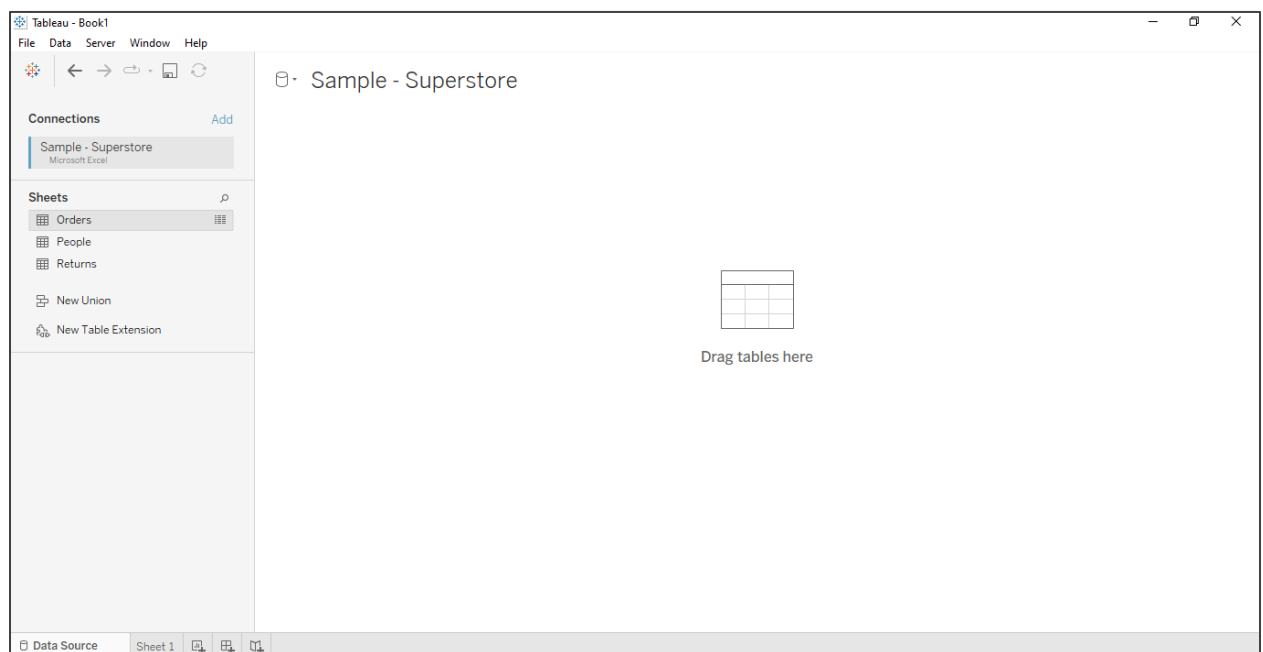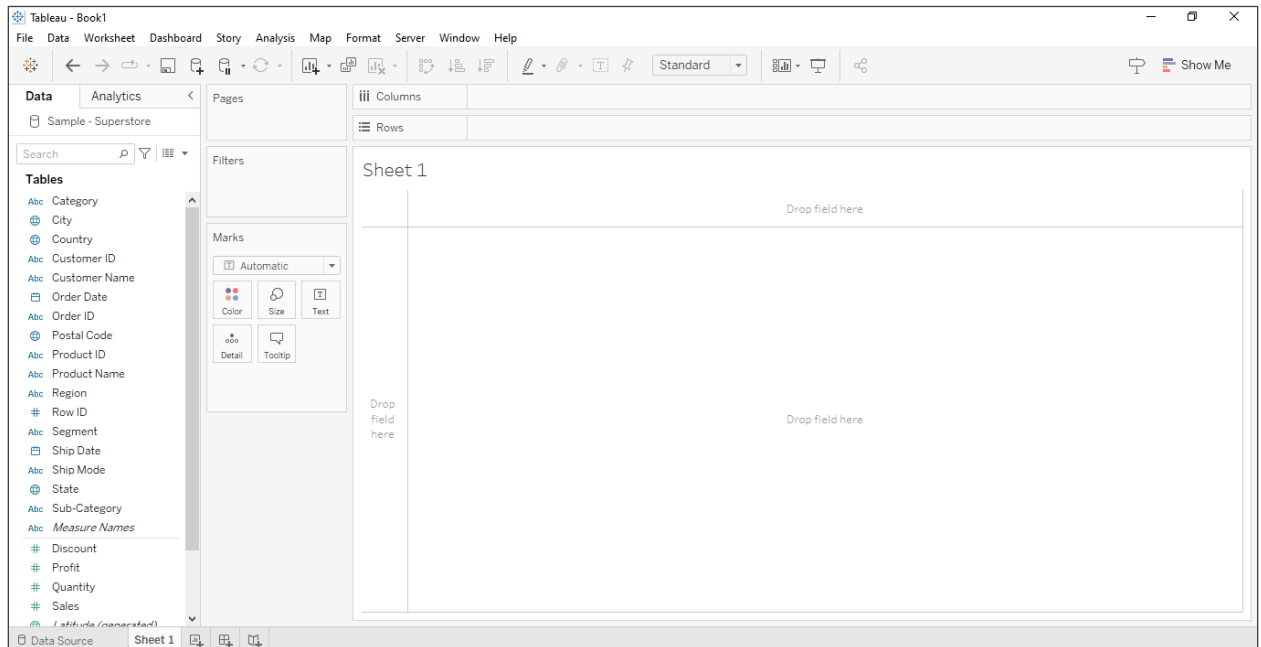
## Step 2: Preview the data

2.1    Drag **Orders** to the preview pane to view the data. The data will be loaded into Tableau. You can see the different column names that are available.



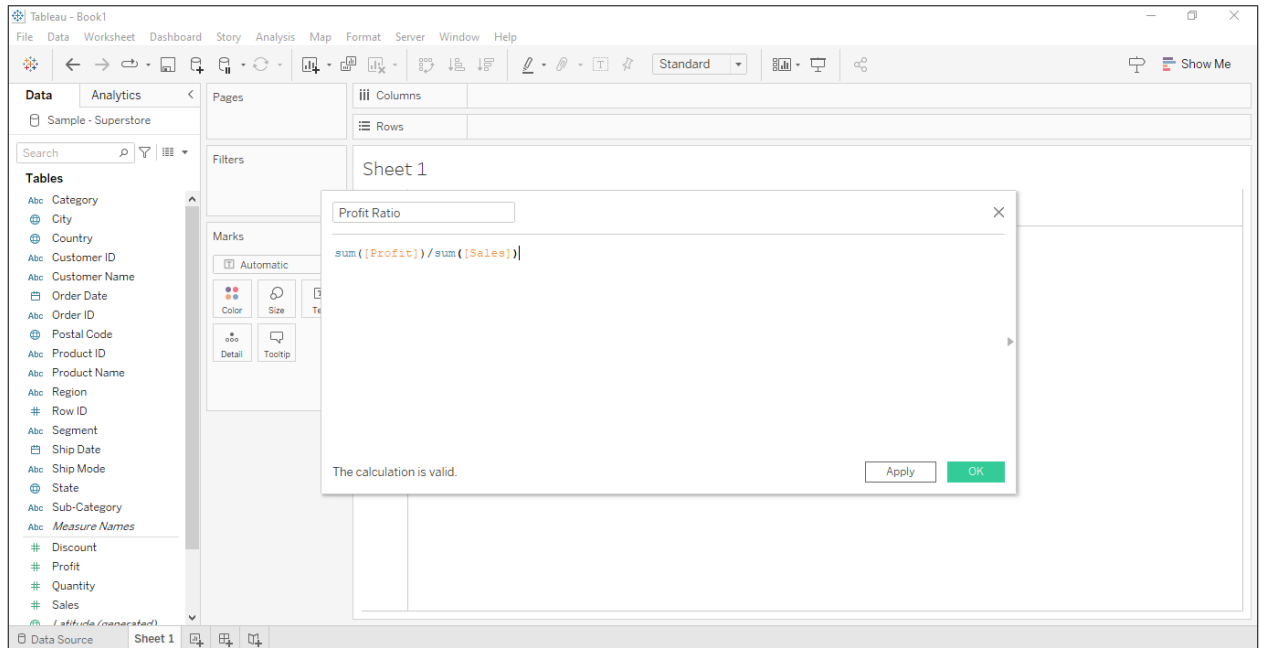## Step 3: Create a calculated field for the profit ratio

## 3.1    Click on Sheet 1 to open the workspace



## 3.2    Right-click on the dropdown on the **Data** pane and click on **Create Calculated Field**
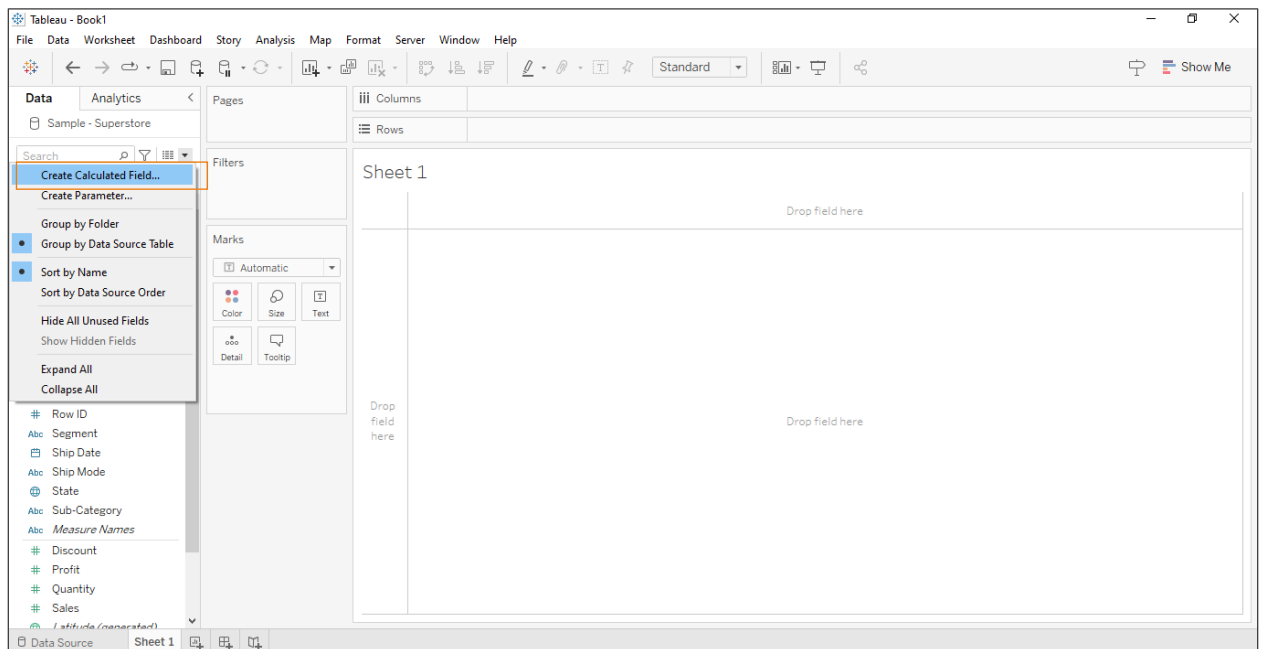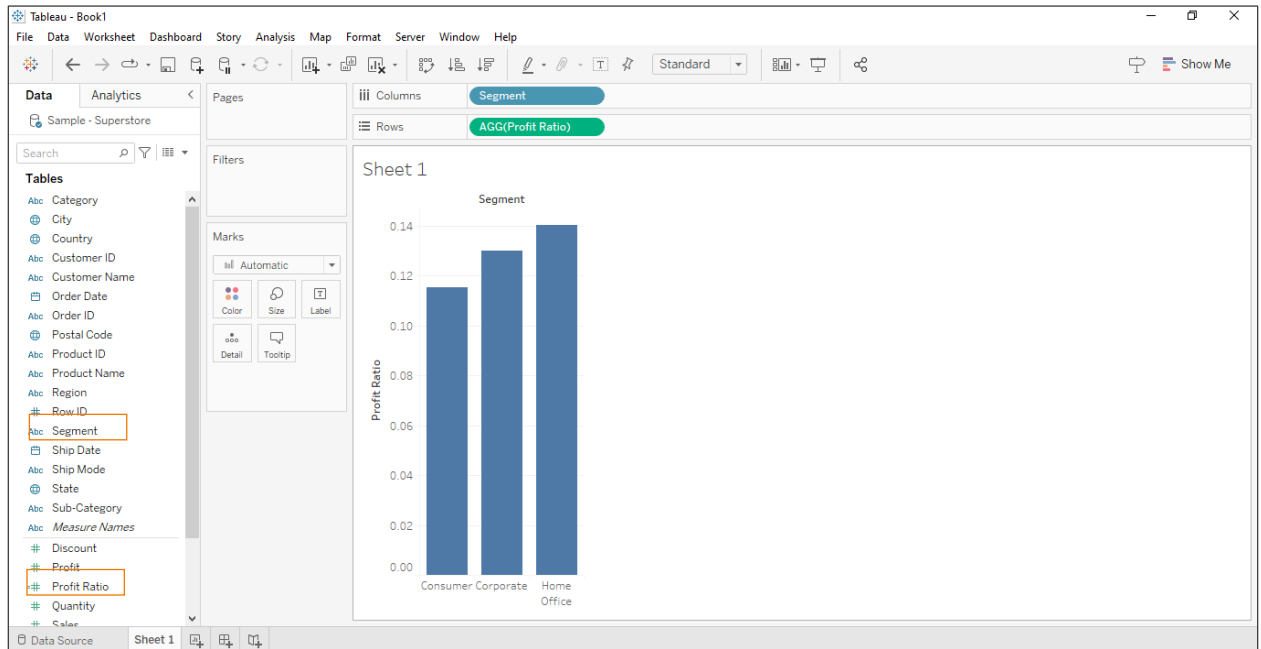
3.3    Name the calculation as **Profit Ratio** and write the calculation as
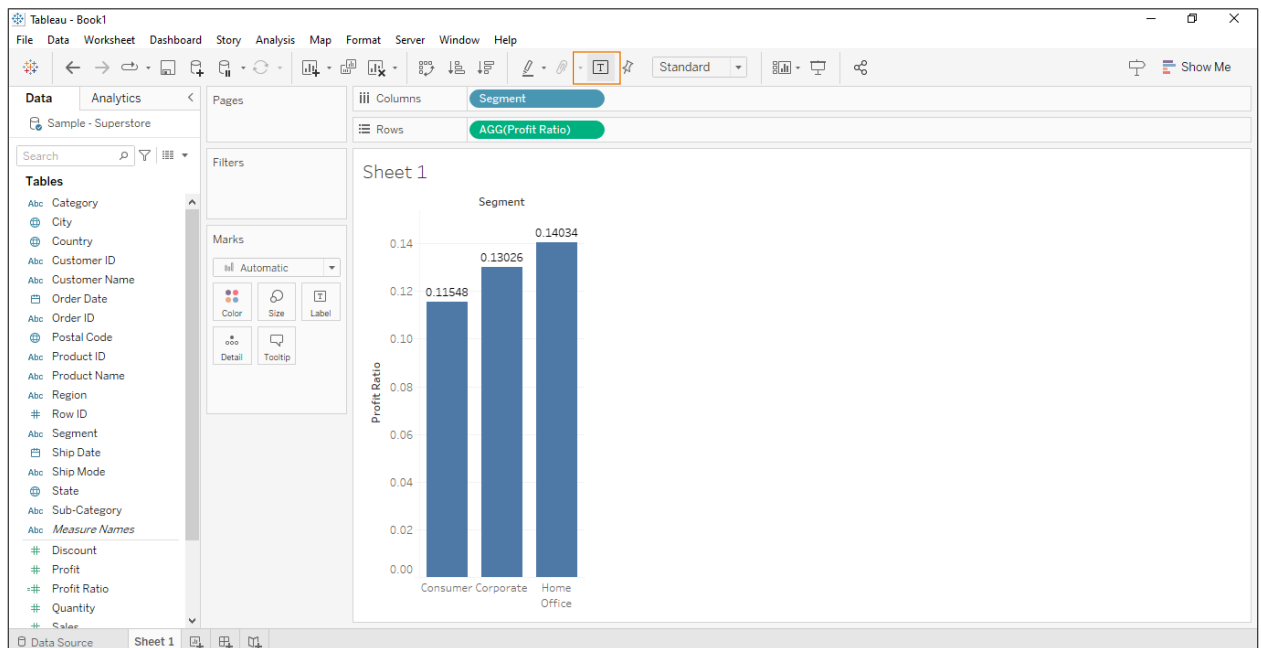**SUM([Profit])/SUM([Sales]).** Click on **Apply** and **OK**.



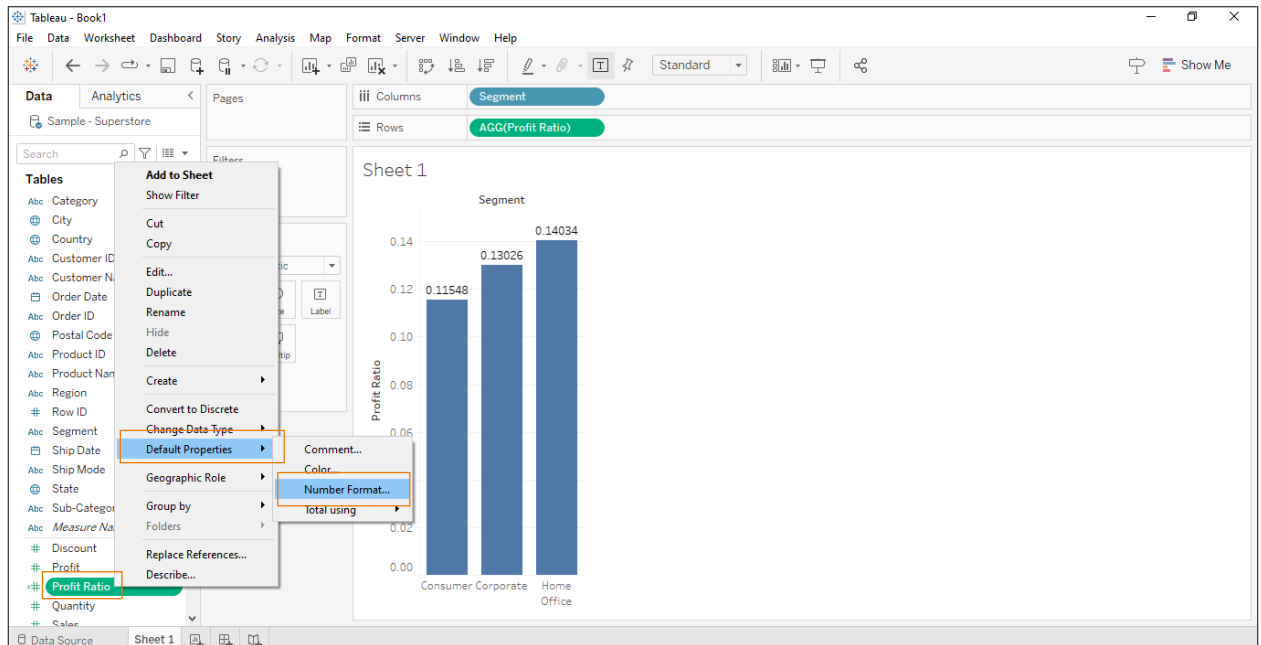## Step 4: Use the calculated field in visualization to create charts

## 4.1    Drag **Segment** dimension into the **Columns** field and **Profit Ratio** measure into the **Rows** field
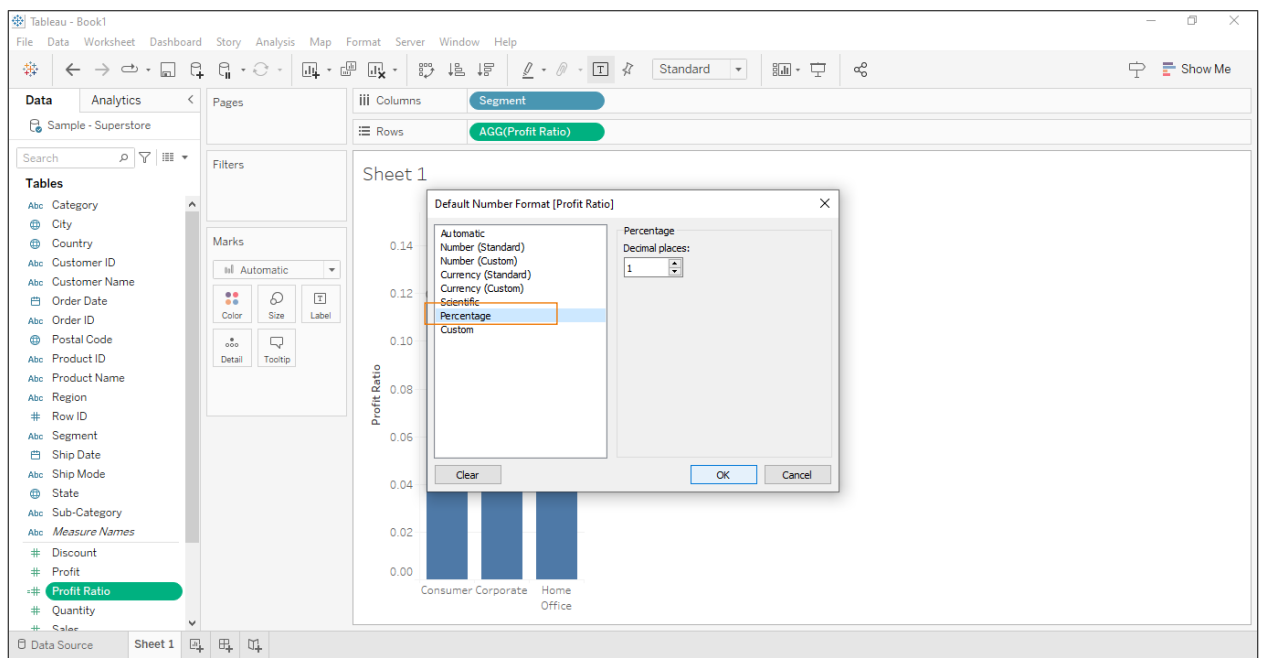


## 4.2    Click on the **Show Mark Labels** shortcut in the menu

4.3    Right-click on the **Profit Ratio** measure and then click on **Default Properties** and select **Number Format**



4.4    Now, select **Percentage** as the default number format and choose the decimal place as 1. Click on **OK**.
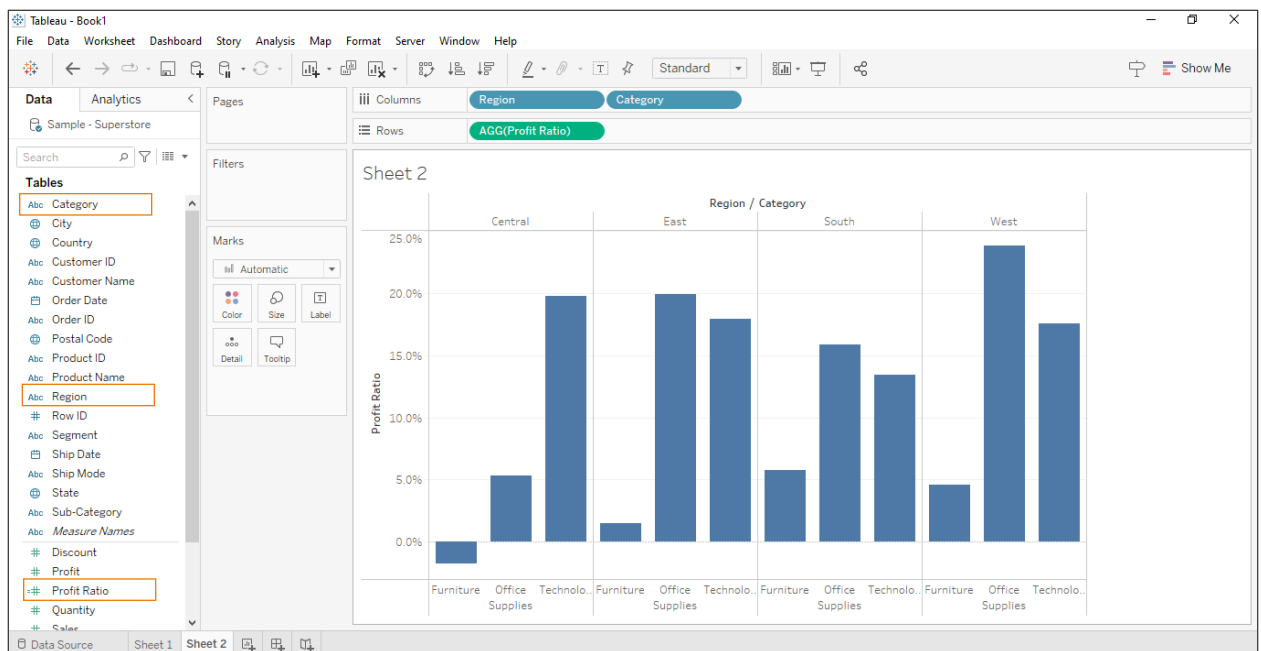
> **Note: Profit Ratio for other dimensions (levels)**
> Once you have created a calculation, you can use it within the same Tableau file in other sheets and new sheets also.

## Step 5: Analyze the profit ratio at different levels

5.1    Open a new sheet. Bring **Region** and **Category** to the **Columns** field and **Profit Ratio** to the **Rows,** respectively.
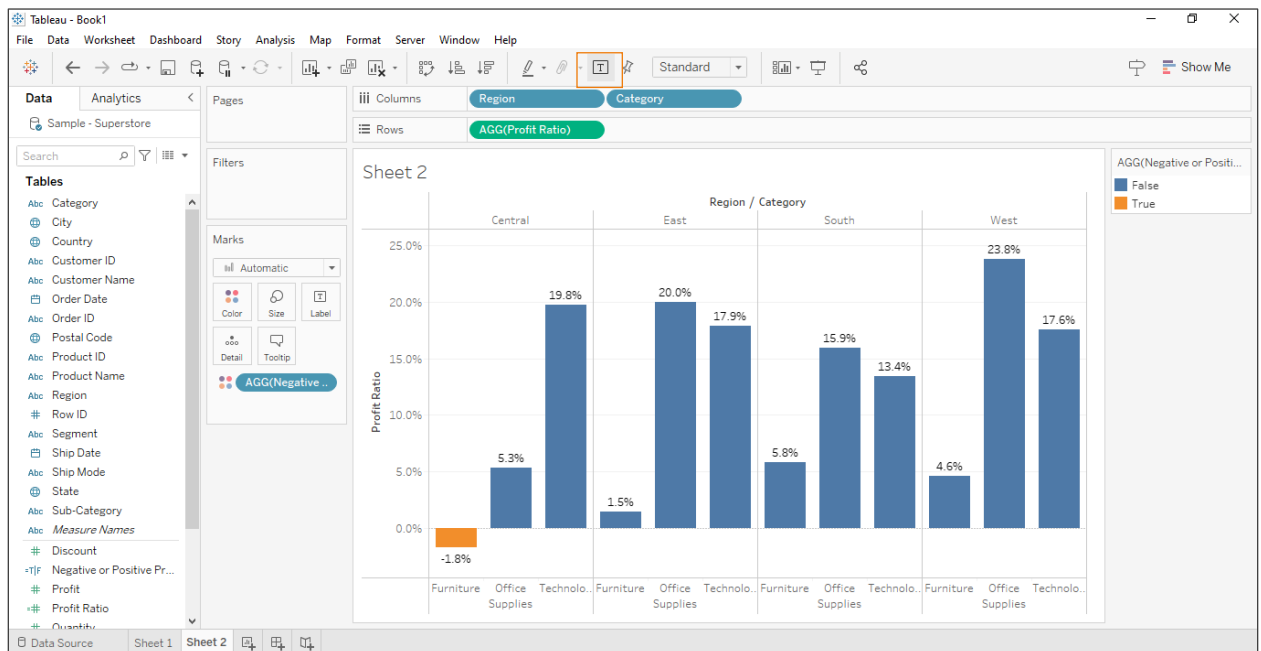
5.2    Follow Step 3 to open a new calculated field and name it as **Negative or Positive Profit**. Then, add the calculation **[Profit Ratio]<0.**
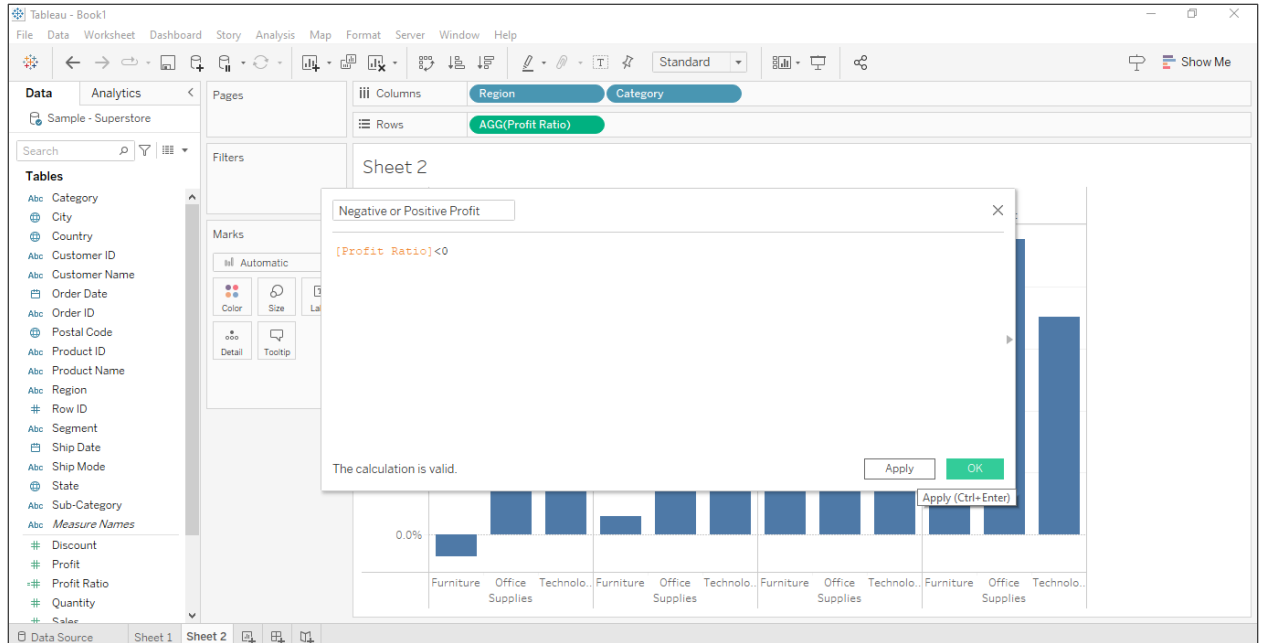
5.3	Drag **Negative or Positive Profit** onto the **Color** tile in the **Marks** card. Now, the chart will appear as shown below. The negative bars are highlighted in different colors.
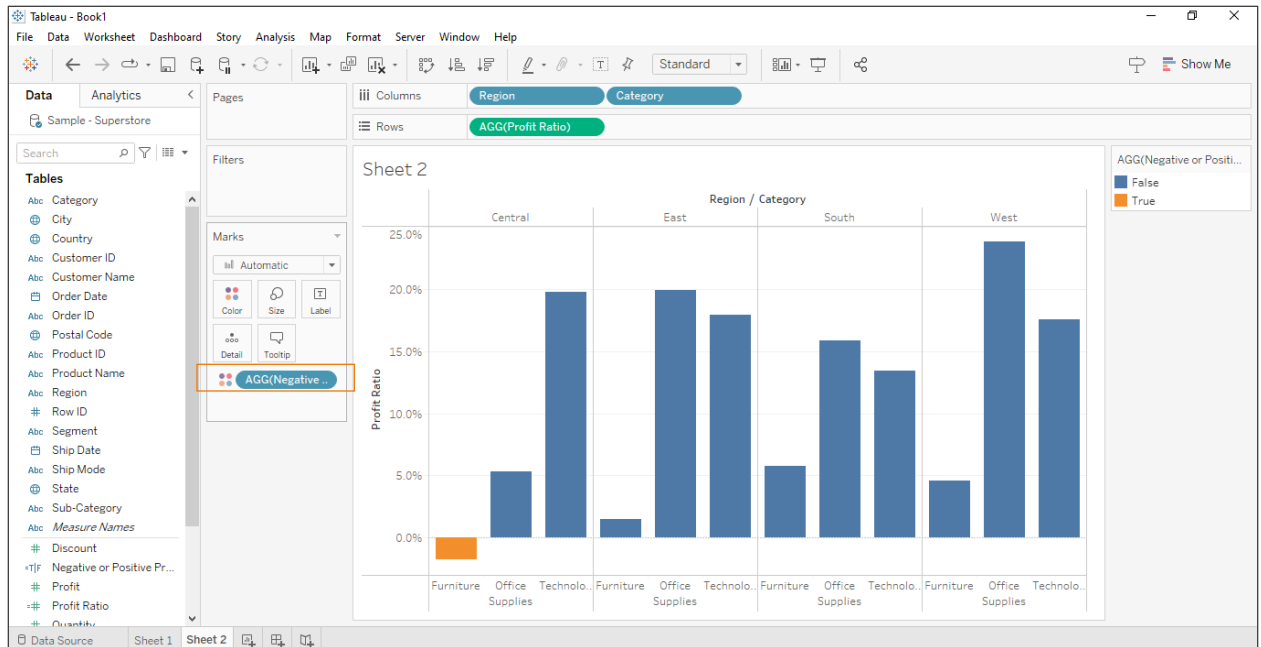


5.4	Click on **Show Mark Labels** on the menu to add labels

With all these steps, you will be able to create a calculated field for the profit ratio and use the field to show profit ratio for different segments, regions, and categories and sub-categories.