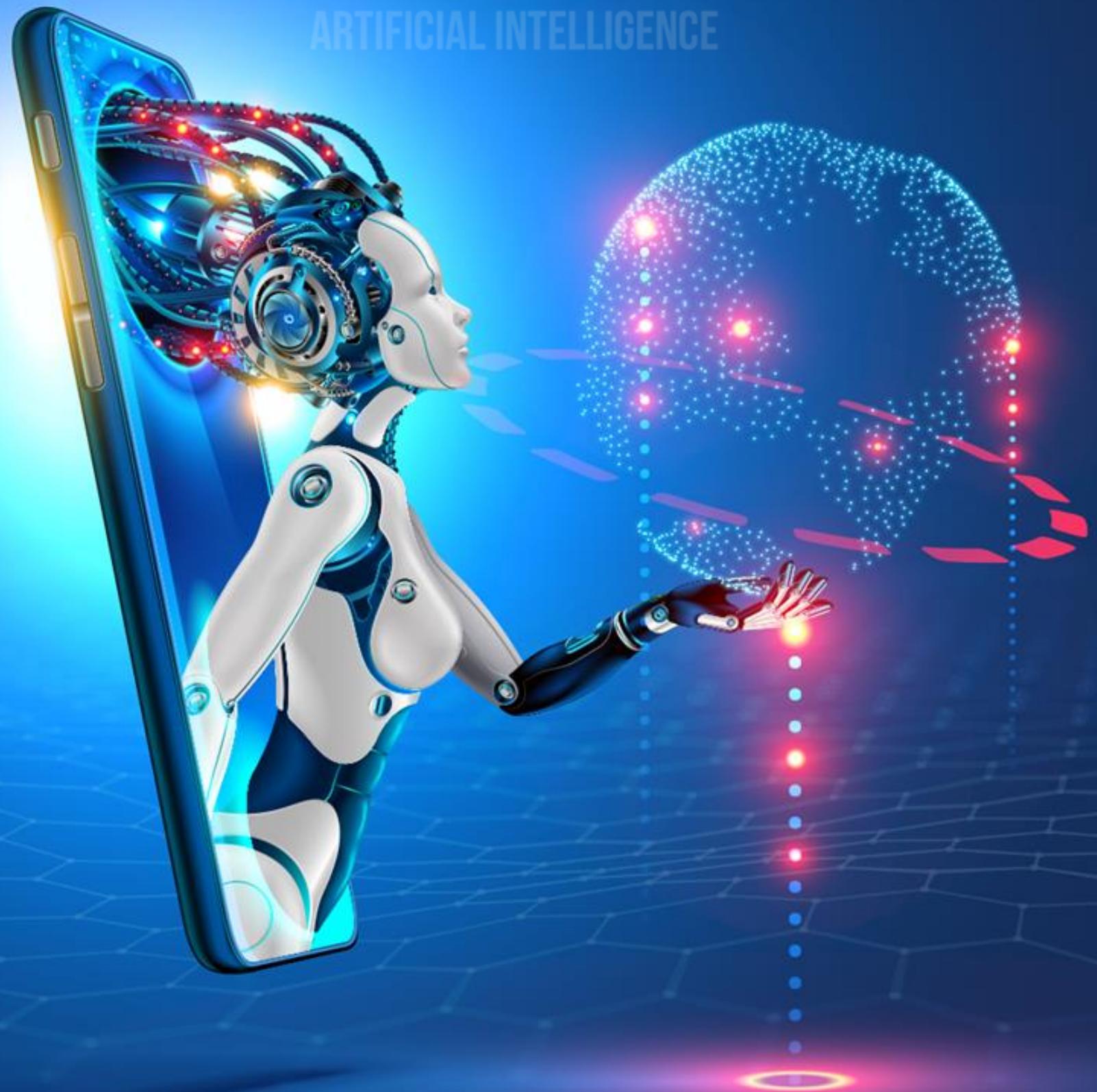
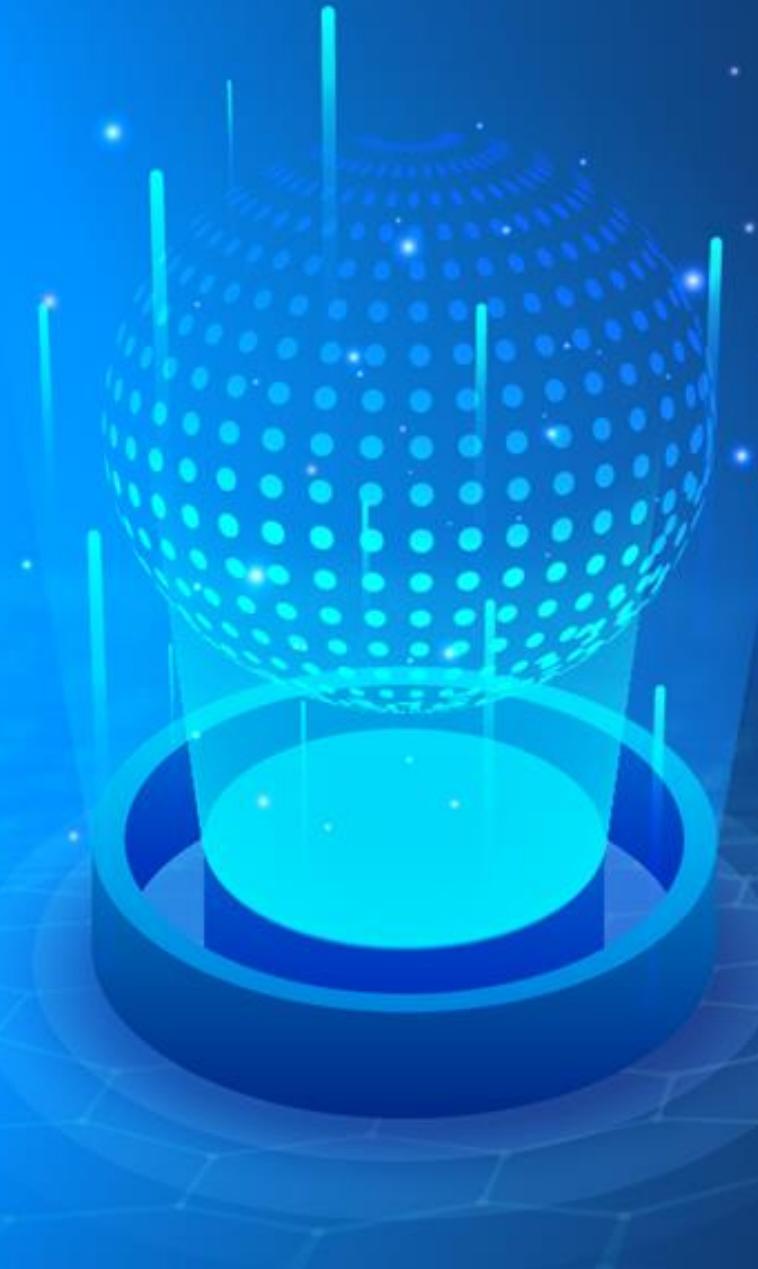


**DATA AND  
ARTIFICIAL INTELLIGENCE**



## Tableau Training

# DATA AND ARTIFICIAL INTELLIGENCE



## Working with Metadata

# Learning Objectives

By the end of this lesson, you will be able to:

- List and describe the various data types
- Rename, hide, unhide, and sort the fields in Tableau
- Analyze the default properties of fields
- Explain the concept of aliases in Tableau



# A Day in the Life of a Data Analyst



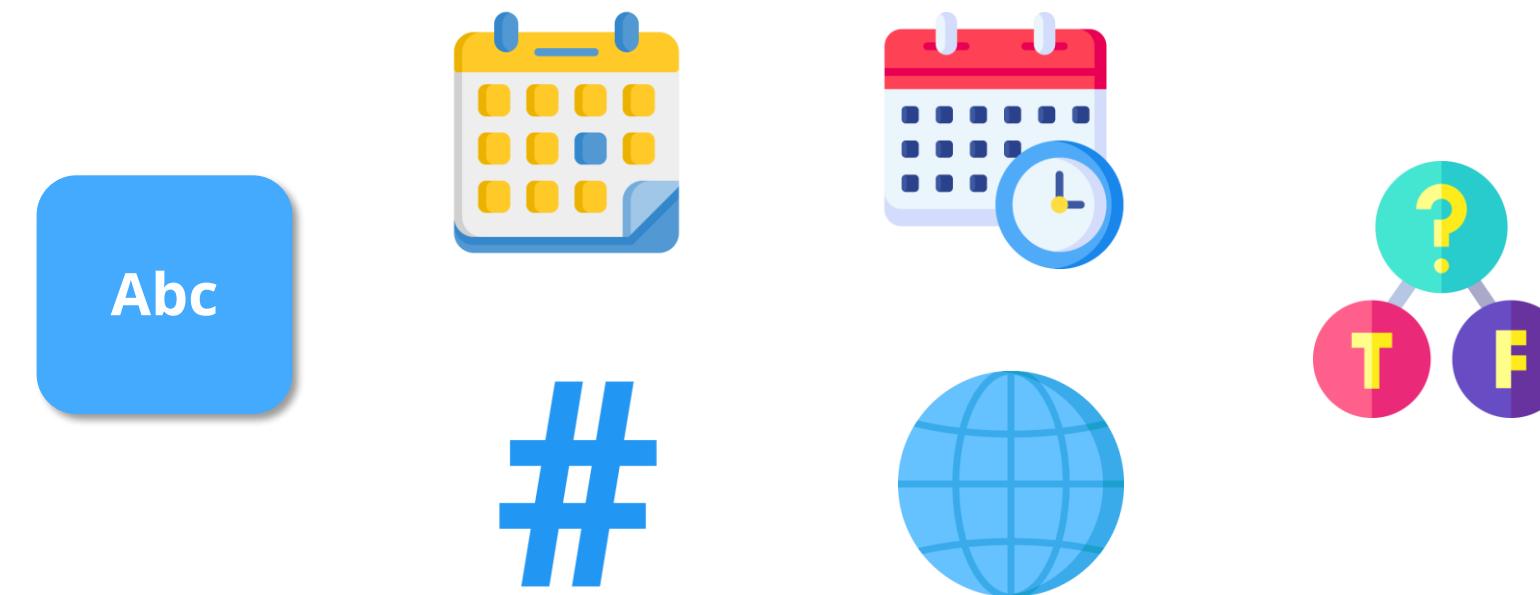
As a Data Analyst of an organization, you are asked to identify the kind of data stored in the data source. You are also asked to rename specific values within a specific dimension.

To achieve these, you must learn a few concepts, such as Data types, Dimensions, and Measures, application of discrete and continuous fields, and creation of aliases that will help find a solution to the given scenario.

## Data Types

# Data Types

All fields in a data source have a data type.



The data type reflects the kind of information stored in a particular field.

# Data Types

Tableau can store the following data types:

**Text values**

**Numerical values**

**Date values**

**Boolean values**

**Date and time values**

**Geographic values**

# Data Types

Tableau can store the following data types:

## Text values

Strings and alphanumeric data are text data types.

**Example:** Books, CA-2013-151654

Abc

## Date values

Strings matching a date format are considered dates.

**Example:** 01/23/2021, Jan 2022



# Data Types

Tableau can store the following data types:



## Date and time values

Fields that contain both date and time information are considered the date and time data types.

**Example:** 01/23/2021 4:54:00 PM

## Numerical values

Fields that contain numeric data are considered numerical data types.

**Example:** 410, 34.56



# Data Types

Tableau can store the following data types:

## Boolean values

Fields that contain true or false, or 0 or 1 as sets are considered Boolean.

**Example:** Current year 2021: True  
Current year 2022: False



## Geographic values

Fields that contain names of cities, states, countries, or latitude and longitude information are considered geographic.

**Example:** Texas, USA



## Data Roles

## Data Roles

Every field in the tableau desktop has two important settings that determine how it behaves when placed on a shelf.

Dimensions vs. Measures

Discrete vs. Continuous

The visualization can vary depending on the role of the data.

## Dimensions vs. Measures

## Dimensions vs. Measures

Data comprises both textual and numerical values.

ABC 123



When data is loaded into Tableau, it automatically segregates the data into dimensions and measures based on the data type.

# Dimensions vs. Measures

## Dimensions

- Dimensions usually produce a header when added to a row or column shelves in the view.
- Tableau treats any field containing categorical data as a dimension.

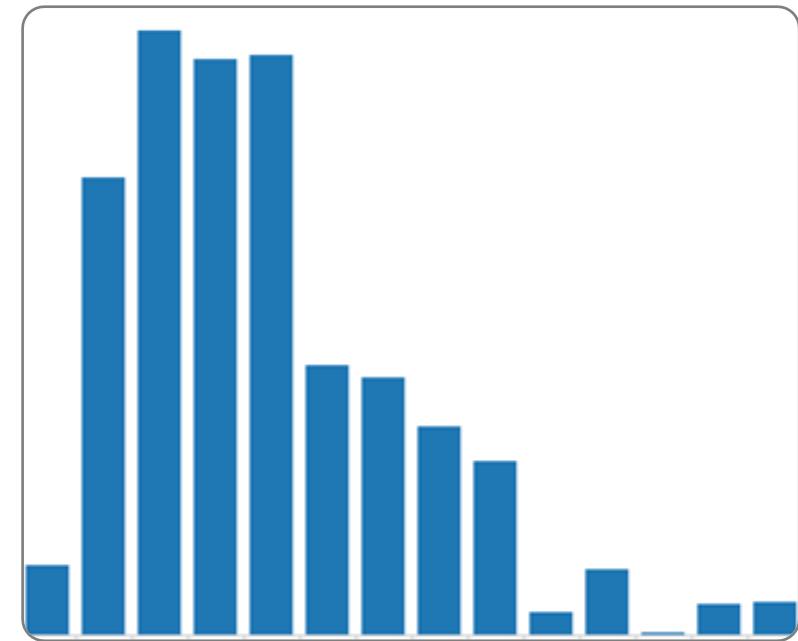
## Measures

- Measures typically produce axes when added to a row or column shelves in the view.
- Tableau treats any field containing numeric information as a measure.

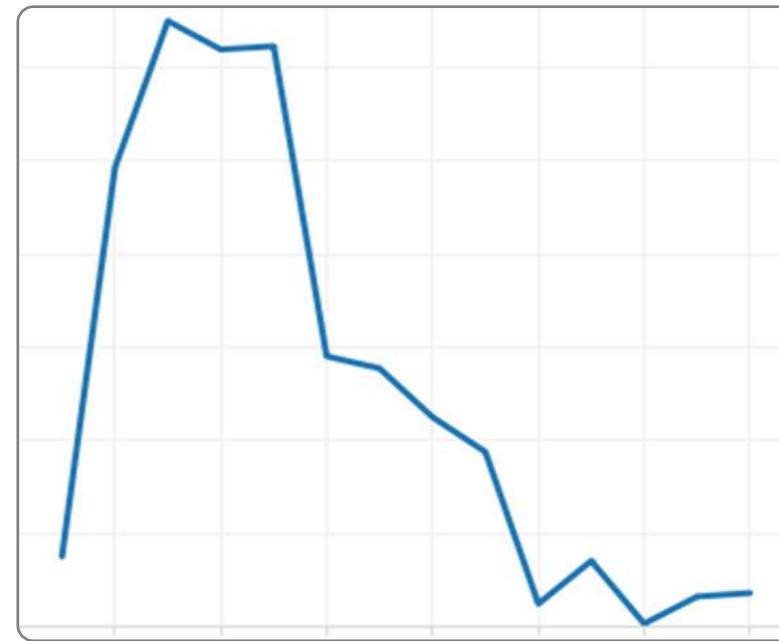
## Discrete vs. Continuous

## Discrete vs. Continuous

In addition to dimensions and measures, every field in a tableau is categorized as either discrete or continuous.



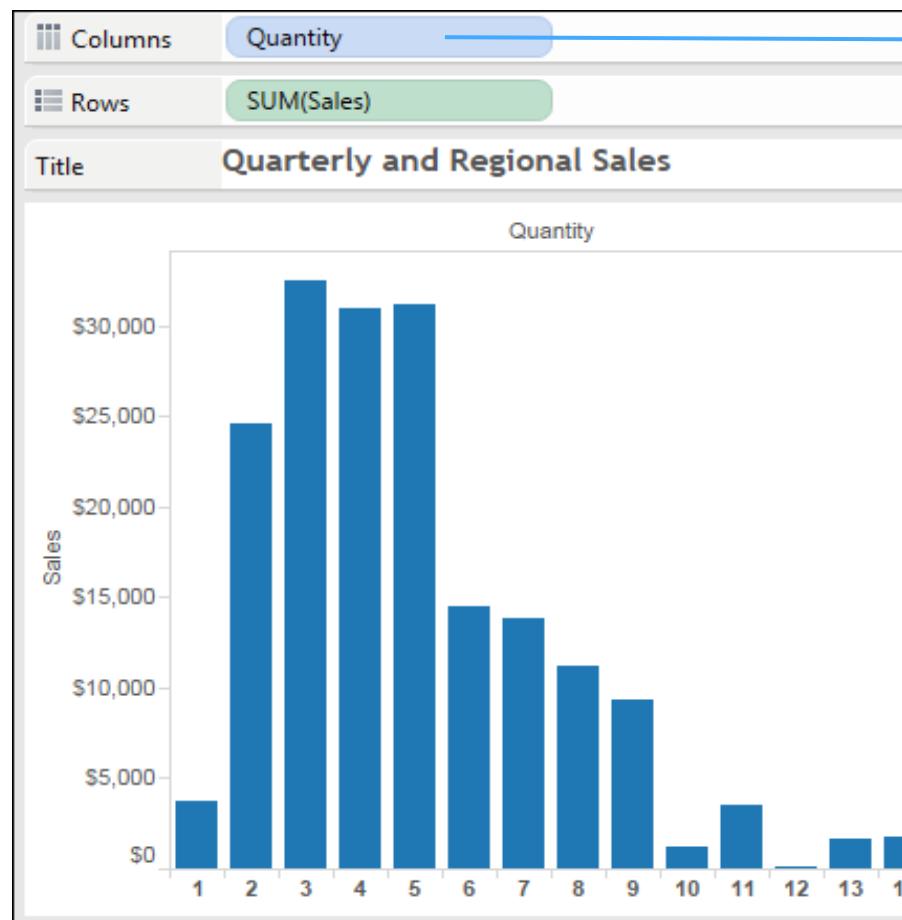
Discrete



Continuous

# Discrete vs. Continuous

The graph below illustrates a discrete data role:



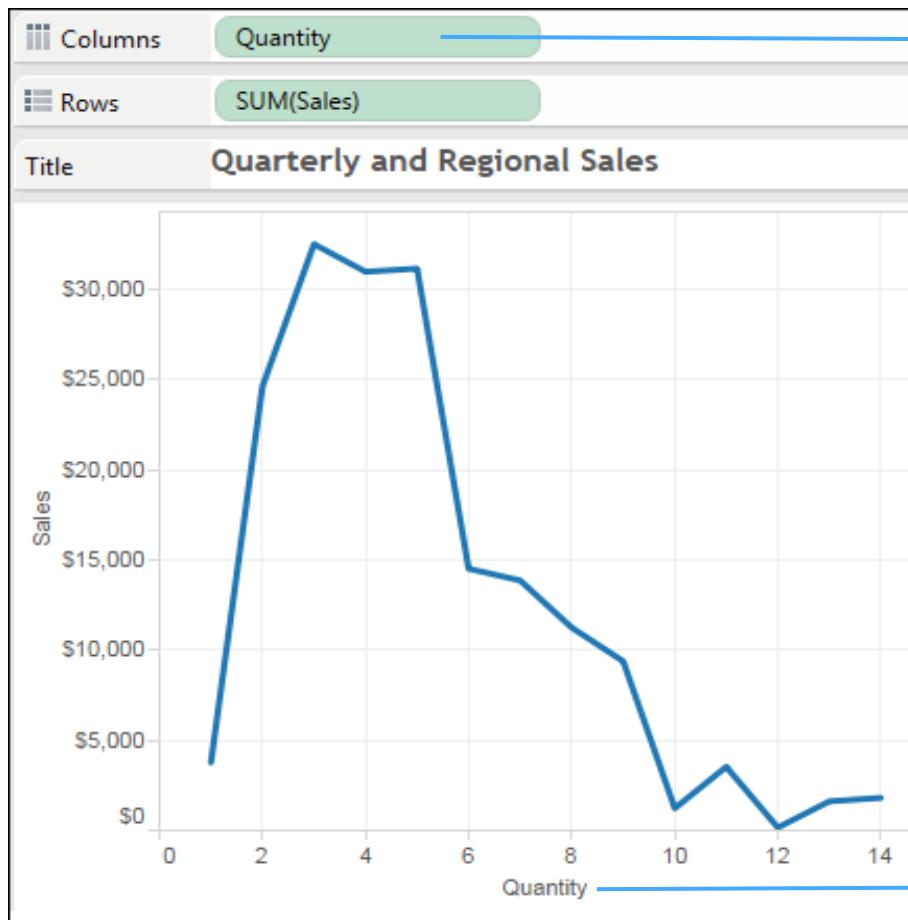
**Quantity as a discrete measure**

The **quantity** field is **blue** on the **columns** shelf.

Each distinct quantity appears as a header at the bottom of the bar chart.

# Discrete vs. Continuous

The graph below illustrates a continuous data role:



The **quantity** field is **green** on the **columns** shelf.

The quantity values are shown in a continuous axis along the bottom of the chart.

**Quantity as a continuous measure**

## **Application of Discrete and Continuous Fields**

# Application of Discrete and Continuous Fields

Discrete fields are used to categorize data, whereas continuous fields are used for aggregation.



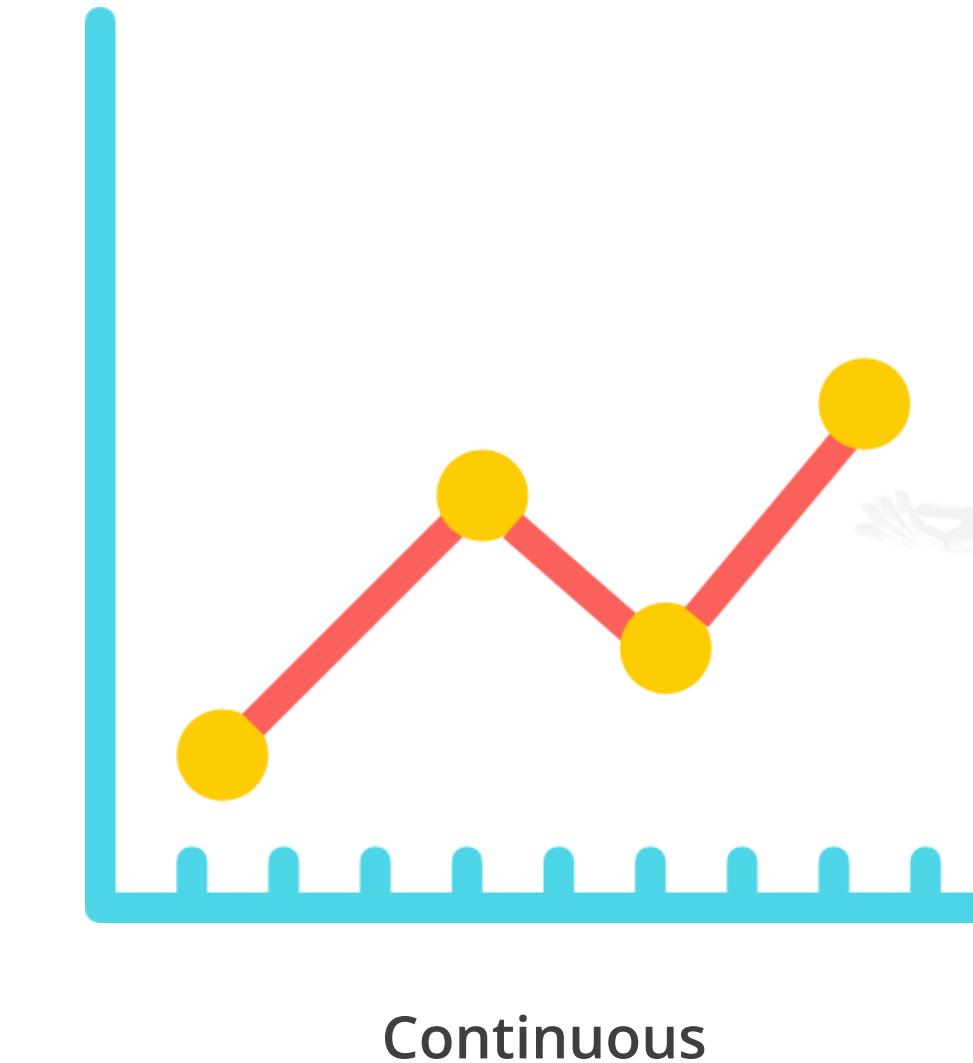
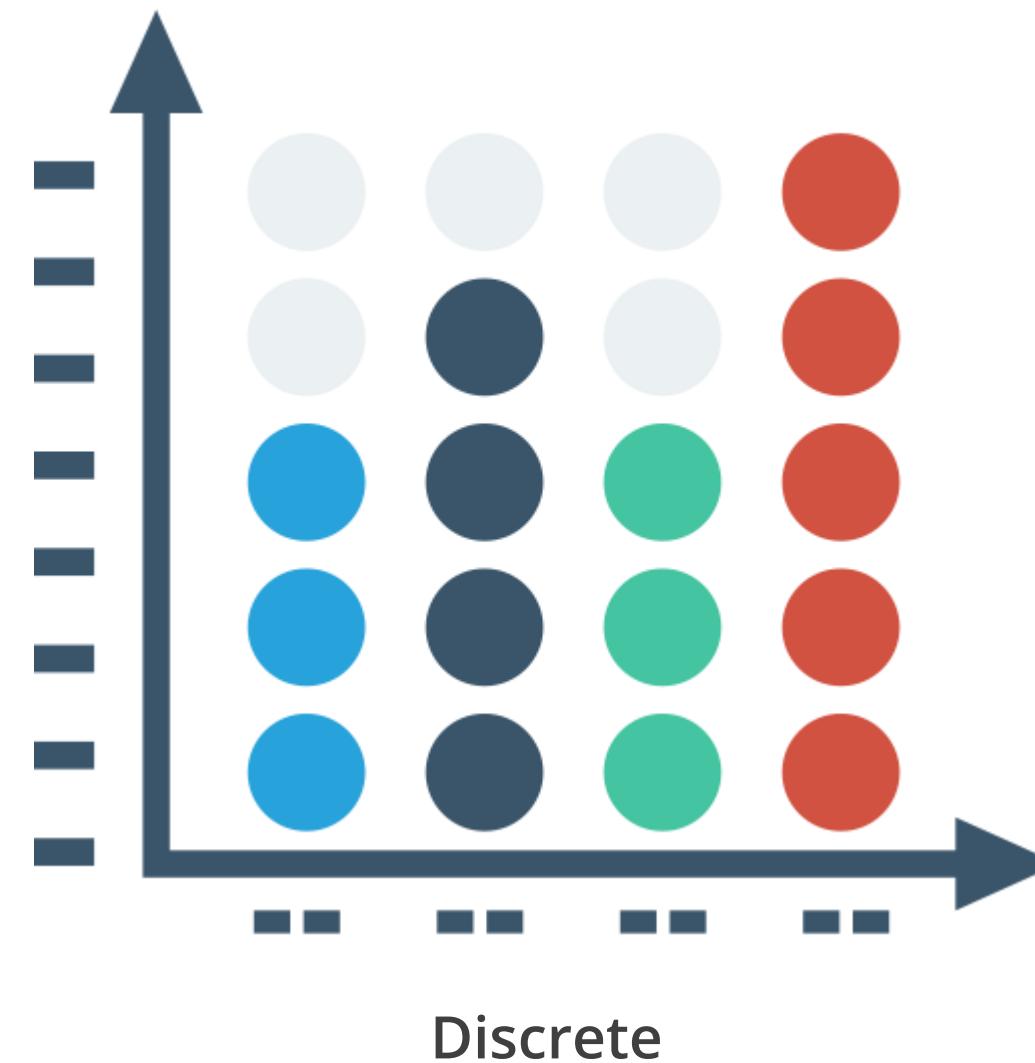
When discrete values are added to the color card, the visual shows individual colors.



When continuous values are added to the color card, the visual shows a single gradient color.

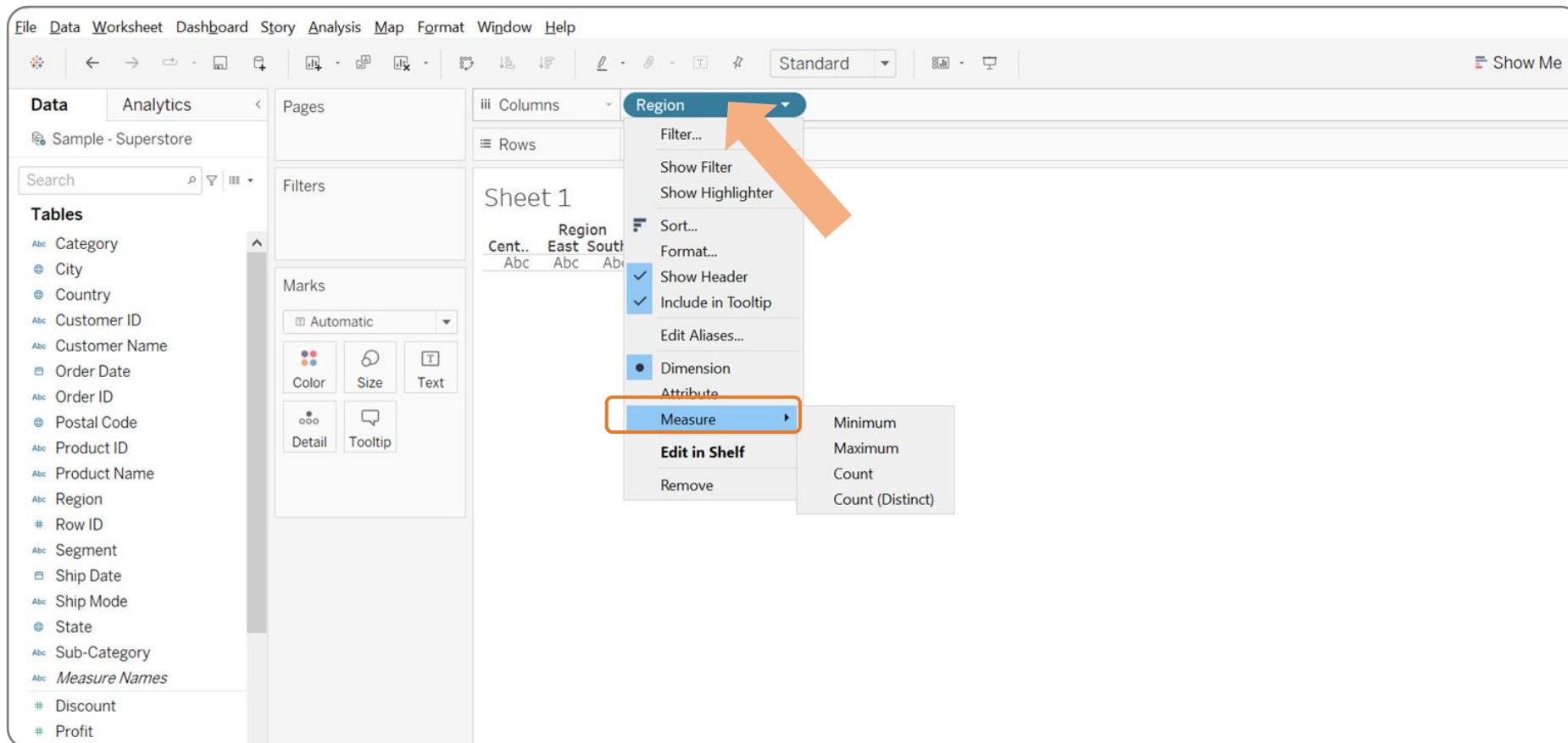
# Application of Discrete and Continuous Fields

Date dimensions, numeric dimensions, and measures can be discrete or continuous.



# Application of Discrete and Continuous Fields

To change a dimension to measure:

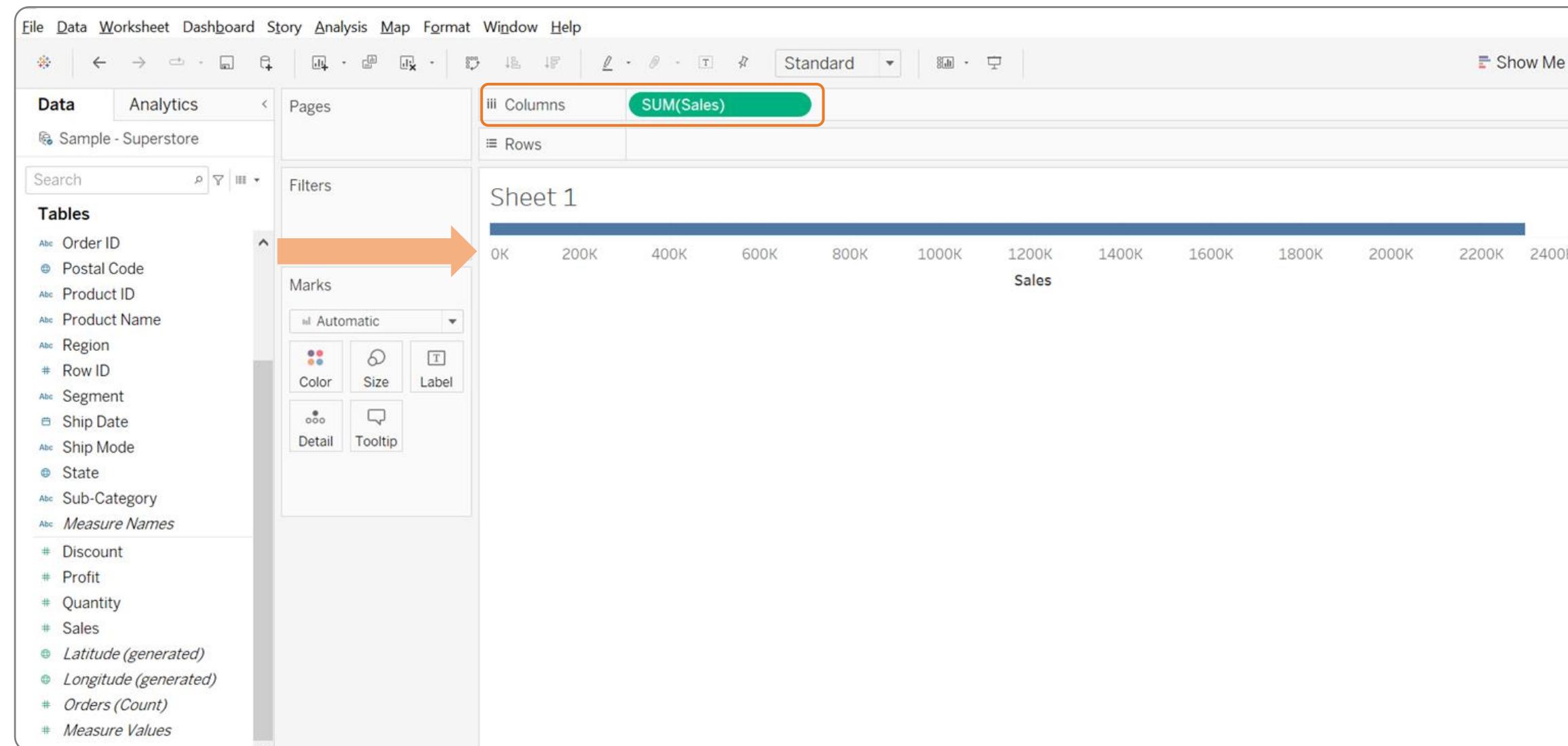


**Step 01:** Click on the field

**Step 02:** Select Measure

# Application of Discrete and Continuous Fields

The continuous field in the **Columns** shelf displays an axis.



# Application of Discrete and Continuous Fields

The discrete item in the **Rows** shelf creates a header.

The screenshot shows the Tableau Data Editor interface. The top menu bar includes File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Window, and Help. The left sidebar displays the 'Data' tab selected, showing the 'Sample - Superstore' data source. Below the sidebar is a search bar and a 'Tables' section listing various dimensions and measures. The main workspace is titled 'Sheet 1' and contains a single data view. The data is organized by 'Sub-Category' (the discrete field) and 'Category' (the continuous field). An orange arrow points from the 'Tables' section towards the 'Rows' shelf in the upper right, which is highlighted with an orange border. The 'Rows' shelf contains the 'Sub-Category' field, which is highlighted with a teal background. The 'Columns' shelf is also visible, containing the 'Sub-Catego...' field. The 'Marks' shelf is open, showing options for Automatic, Color, Size, Text, Detail, and Tooltip.

Sub-Catego..	Category
Accessories	Abc
Appliances	Abc
Art	Abc
Binders	Abc
Bookcases	Abc
Chairs	Abc
Copiers	Abc
Envelopes	Abc
Fasteners	Abc
Furnishings	Abc
Labels	Abc
Machines	Abc
Paper	Abc
Phones	Abc
Storage	Abc
Supplies	Abc
Tables	Abc

## Rename, Hide, Unhide, and Sort Columns

# Metadata

Some of the most frequently used metadata options are:



**Rename**

**Hide**

**Unhide**

**Sort**

# Metadata: Rename

To rename the name on the top:

The screenshot shows the Power BI desktop application. On the left, the 'Connections' pane displays 'Emp Details Microsoft Excel'. The 'Sheets' pane shows 'Sheet1'. The main area displays a table with the following data:

#	Abc	Sheet1	Abc	T/F	#
Sheet1	Sheet1	Sheet1	Sheet1	Sheet1	Sheet1
Emp ID	Emp Name	Date of Birth	Location	Validated?	Avg Sal
1	Robert	9/12/1998	INDIA	True	90,000
2	Sam	7/7/1988	SINGAPORE	False	39,000
3	Rita	6/2/1900	MALAYSIA	True	20,100
4	Samuel	1/1/2001	VIETNAM	True	28,900
5	Manuel	2/11/2019	AUSTRALIA	False	44,000
6	Mike	5/10/2000	IRAN	True	70,000
7	Ram	3/11/1996	RWANDA	True	85,000

Click on the field and enter  
**Employee Details**

# Metadata: Rename

The field named **Sheet 1** is renamed to **Employee Details**.

The screenshot shows the Power BI desktop application interface. On the left, the 'Connections' pane displays 'Emp Details Microsoft Excel'. The 'Sheets' pane shows 'Sheet1'. The main area features a table titled 'Employee Details' with the following data:

#	Emp ID	Emp Name	Date of Birth	Location	Validated?	#
Sheet1	Sheet1	Sheet1	Sheet1	Sheet1	Sheet1	Sheet1
1	Robert	9/12/1998	INDIA	True	90,000	
2	Sam	7/7/1988	SINGAPORE	False	39,000	
3	Rita	6/2/1900	MALAYSIA	True	20,100	
4	Samuel	1/1/2001	VIETNAM	True	28,900	
5	Manuel	2/11/2019	AUSTRALIA	False	44,000	
6	Mike	5/10/2000	IRAN	True	70,000	
7	Ram	3/11/1996	RWANDA	True	85,000	

The 'Table Details' pane on the left shows the columns: #, Emp ID, Emp Name, Date of Birth, Location, Validated?, and #. The table has 7 rows.

# Metadata: Rename

To rename **Location** to **Country**:

Employee Details

Sheet1

Need more data?

Sheet1 6 fields 7 rows 7 rows

#	Abc	Abc	Abc	T F	#
Emp ID	Sheet1	Sheet1	Sheet1	Sheet1	Sheet1
1	Robert	9/12/1998	INDIA	True	90,000
2	Sam	7/7/1988	SINGAPORE	False	39,000
3	Rita	6/2/1900	MALAYSIA	True	20,100
4	Samuel	1/1/2001	VIETNAM	True	28,900
5	Manuel	2/11/2019	AUSTRALIA	False	44,000
6	Mike	5/10/2000	IRAN	True	70,000
7	Ram	3/11/1996	RWANDA	True	85,000

Double-click on **Location** and type **Country**

# Metadata: Rename

The field named **Location** is changed to **Country**.

Employee Details

Sheet1

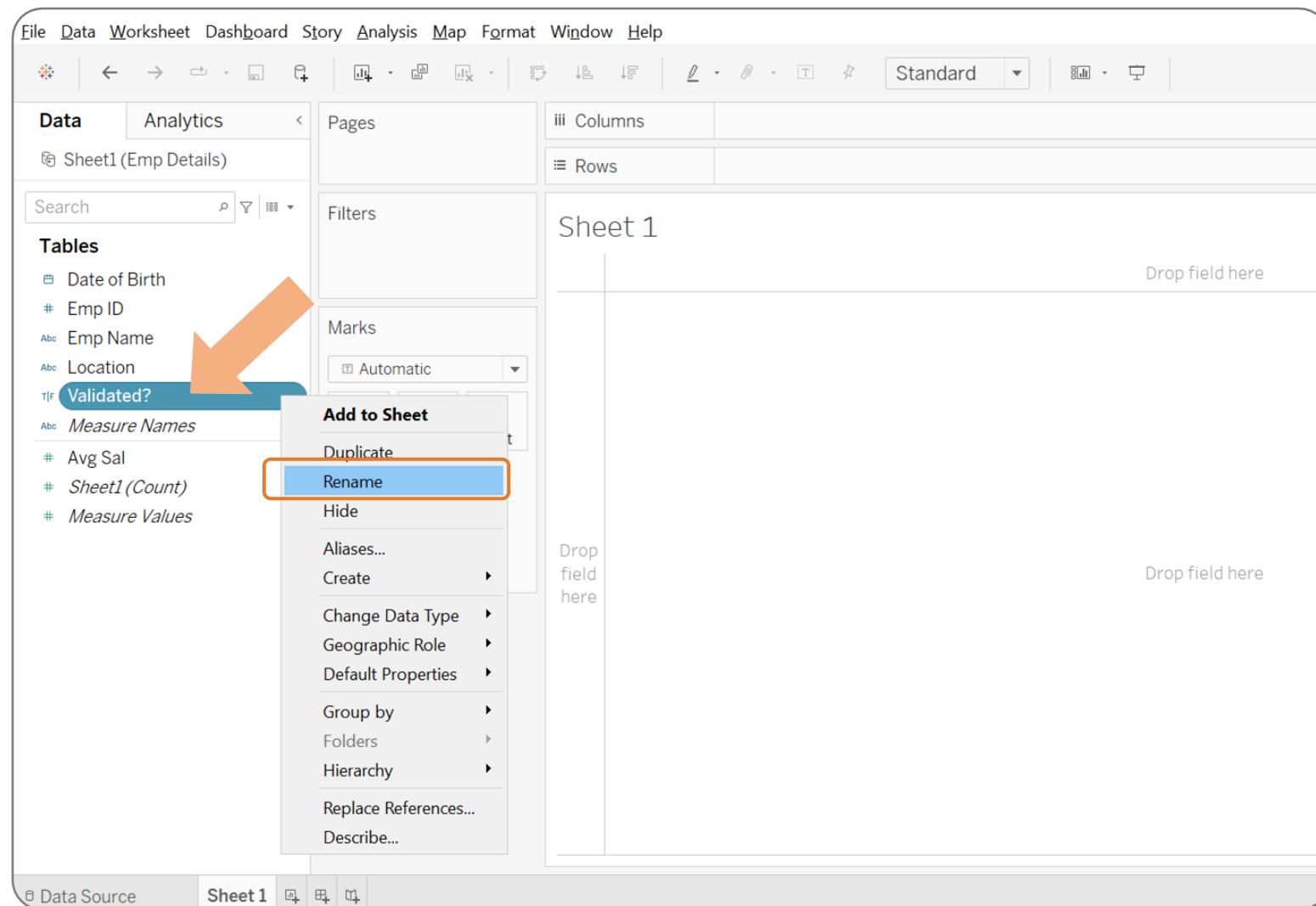
Need more data?

Sheet1 6 fields 7 rows 7 rows

Table Details >	# Sheet1	Abc Sheet1	Sheet1	Abc Sheet1	T F Sheet1	# Sheet1	
	Emp ID	Emp Name	Date of Birth	Country	Validated?	Avg Sal	
1	Robert		9/12/1998	INDIA	True	90,000	
2	Sam		7/7/1988	SINGAPORE	False	39,000	
3	Rita		6/2/1900	MALAYSIA	True	20,100	
4	Samuel		1/1/2001	VIETNAM	True	28,900	
5	Manuel		2/11/2019	AUSTRALIA	False	44,000	
6	Mike		5/10/2000	IRAN	True	70,000	
7	Ram		3/11/1996	RWANDA	True	85,000	

# Metadata: Rename

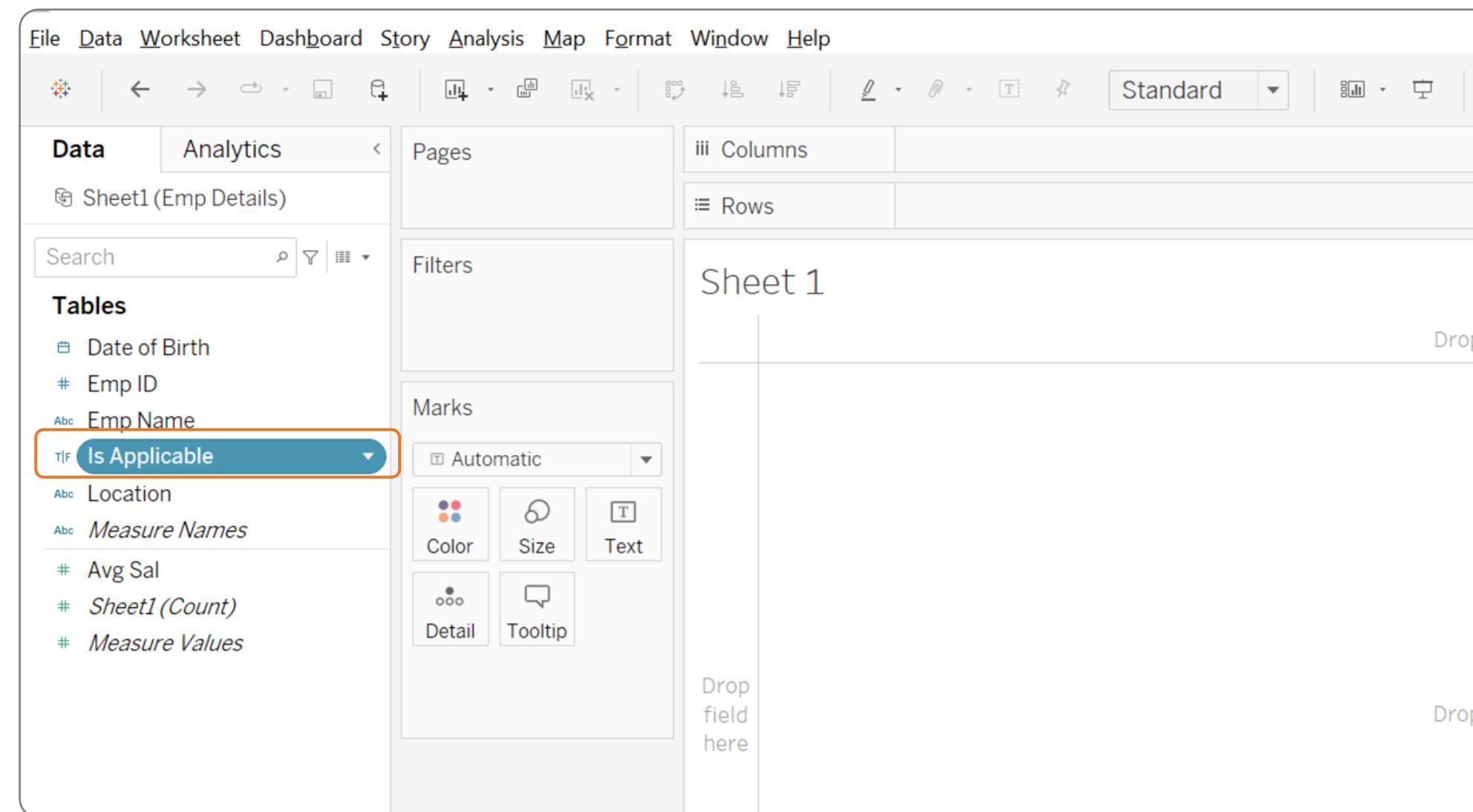
To rename the field **Validated?** to **Is Applicable**:



- Right-click on **Validated?**
- Select **Rename** and enter **Is Applicable**

# Metadata: Rename

The field named **Validated?** is renamed to **Is Applicable**.



The screenshot shows the Tableau Data Editor interface. The top menu bar includes File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Window, and Help. The toolbar contains various icons for data management and visualization. On the left, the 'Data' pane shows 'Analytics' and 'Sheet1 (Emp Details)'. Below it is a search bar and a 'Tables' section. The 'Tables' section lists several fields: Date of Birth, Emp ID, Emp Name, Is Applicable, Location, Measure Names, Avg Sal, Sheet1 (Count), and Measure Values. The 'Is Applicable' field is highlighted with an orange border. To the right of the tables are sections for 'Pages', 'Filters', and 'Marks'. The 'Marks' section includes options for Automatic, Color, Size, Text, Detail, and Tooltip. The main workspace is labeled 'Sheet 1'.

# Metadata: Hide

The **Hide** option hides a column in the dataset.

A screenshot of a dataset interface. The table has columns: #, Emp ID, Emp Name, Date of Birth, Location, and Is Applicable. The 'Is Applicable' column contains values like True and False. A dropdown menu is open over the last cell of this column (containing 'True'). The menu options include: Duplicate, Rename, Reset Name, Copy Values, Hide (which is highlighted with an orange rectangle), Aliases..., Create, Pivot (select multiple fields), Change Data Type, Geographic Role, and Describe... An orange arrow points from the text above to the 'Hide' option in the menu.

#	Abc Sheet1	Abc Sheet1	Sheet1	Abc Sheet1	T F Sheet1
Emp ID	Emp Name	Date of Birth	Location	Is Applicable	
1	Robert	9/12/1998	INDIA	True	
2	Sam	7/7/1988	SINGAPORE	False	
3	Rita	6/2/1900	MALAYSIA	True	
4	Samuel	1/1/2001	VIETNAM	True	
5	Manuel	2/11/2019	AUSTRALIA	False	
6	Mike	5/10/2000	IRAN	True	
7	Ram	3/11/1996	RWANDA	True	

To hide the column **Is Applicable**:

- Click on the dropdown list
- Select **Hide**

# Metadata: Hide

The field **Is Applicable** is hidden from the dataset.

The screenshot shows the Tableau Data Editor interface. The top menu bar includes File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Window, and Help. The left sidebar has tabs for Data and Analytics, with Sheet1 (Emp Details) selected. The 'Tables' shelf on the left lists several fields: Date of Birth, Emp ID, Emp Name, Location, Measure Names, Avg Sal, Sheet1 (Count), and Measure Values. The 'Emp Name' field is currently selected. The 'Marks' shelf on the right contains options for Automatic, Color, Size, Text, Detail, and Tooltip. The main workspace is titled 'Sheet 1' and features three 'Drop field here' placeholder boxes. The bottom navigation bar includes Data Source, Sheet 1, and other sheet icons.

# Metadata: Hide

To view all the hidden fields:

The screenshot shows a data visualization interface with a table titled "Sheet1". The table has 7 rows and 5 columns. The columns are labeled: "#", "Emp ID", "Emp Name", "Date of Birth", "Location", and "#". The data in the table is as follows:

#	Emp ID	Emp Name	Date of Birth	Location	#
1	Robert	9/12/1998	INDIA	90,000	Sheet1
2	Sam	7/7/1988	SINGAPORE	39,000	Sheet1
3	Rita	6/2/1900	MALAYSIA	20,100	Sheet1
4	Samuel	1/1/2001	VIETNAM	28,900	Sheet1
5	Manuel	2/11/2019	AUSTRALIA	44,000	Sheet1
6	Mike	5/10/2000	IRAN	70,000	Sheet1
7	Ram	3/11/1996	RWANDA	85,000	Sheet1

On the right side of the table, there is a context menu with the following options:

- Show aliases
- Show hidden fields** (highlighted with an orange arrow)
- Sort Fields:
  - ✓ Data source order
  - A to Z ascending
  - Z to A descending
  - A to Z ascending per table
  - Z to A descending per table

Click on the **Show hidden fields**

# Metadata: Hide

All the hidden fields appear on the screen.

#	Sheet1	#	Sheet1	T F	Abc
Avg Sal	Date of Birth	Emp ID	Emp Name	Is Applicable	Sheet1
90,000	9/12/1998	1	Robert	True	INDIA
39,000	7/7/1988	2	Sam	False	SINGAPORE
20,100	6/2/1900	3	Rita	True	MALAYSIA
28,900	1/1/2001	4	Samuel	True	VIETNAM
44,000	2/11/2019	5	Manuel	False	AUSTRALIA
70,000	5/10/2000	6	Mike	True	IRAN
85,000	3/11/1996	7	Ram	True	RWANDA

## Default Properties of Fields

## Default Properties of Fields

The following are the default properties:

- To modify the aggregate field
- To add comments to the fields
- To modify the number type
- To modify the fiscal year

Properties are modified under a given condition.

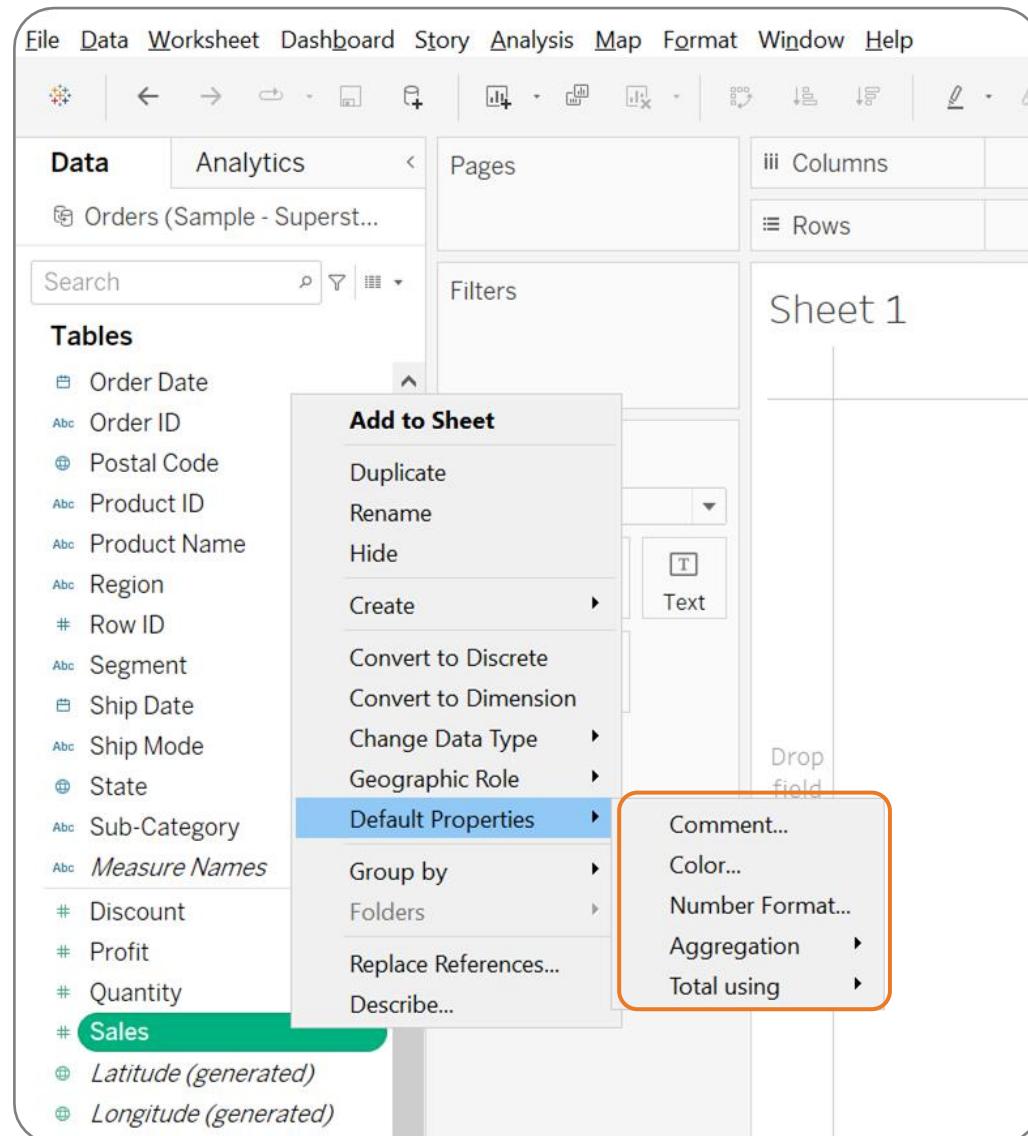
# Default Properties of Fields

Let's perform the default properties using a **Sample - Superstore** dataset in Tableau.

The screenshot shows the Tableau Data Editor interface. On the left, the 'Data' tab is selected, displaying a list of fields under 'Tables'. The 'Orders (Sample - Superstore)' field is highlighted with an orange border. The 'Analytics' tab is also visible above the data list. To the right, the 'Sheets' pane shows 'Sheet 1' with a blank canvas and a placeholder text 'Drop field here'. The 'Marks' shelf on the far right includes options for Automatic, Color, Size, Text, Detail, and Tooltip.

# Default Properties of Fields

To access default properties:



Step 01: Right-click on the field **Sales**

Step 02: Navigate to **Default Properties**

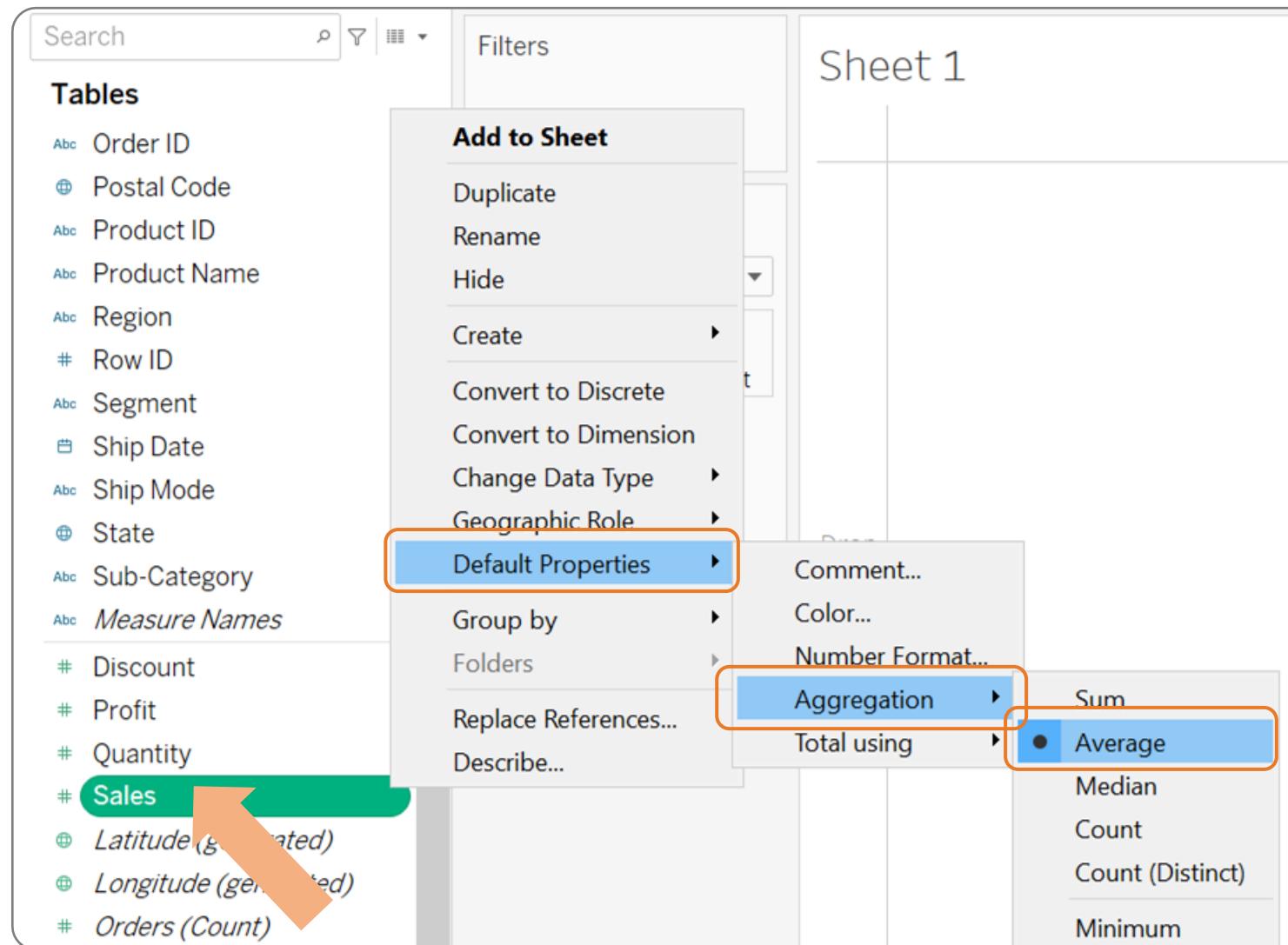
# Default Properties of Fields

The default aggregation of a numerical column is **SUM**

The screenshot shows the Tableau Data Prep interface. On the left, the 'Tables' pane lists various fields: Order Date, Order ID, Postal Code, Product ID, Product Name, Region, Row ID, Segment, Ship Date, Ship Mode, State, Sub-Category, Measure Names, Discount, Profit, Quantity, and Sales. The 'Sales' field is highlighted with a green box. In the center, the 'Marks' pane shows the aggregation type for the Sales field is set to 'SUM(Sales)'. The right side of the interface displays the 'Sheet 1' results, which show a count of 2,297,201.

# Default Properties of Fields

To change the default aggregation:



Step 01: Right-click on **Sales**

Step 02: Select **Default Properties**

Step 03: Select **Aggregation**

Step 04: Select **Average**

# Default Properties of Fields

The default aggregation is changed to **AVG**

The screenshot shows the Tableau Data Prep interface. On the left, the 'Tables' pane lists various fields: Order ID, Postal Code, Product ID, Product Name, Region, Row ID, Segment, Ship Date, Ship Mode, State, Sub-Category, Measure Names, Discount, Profit, Quantity, Sales, and Latitude (generated). On the right, the 'Marks' shelf is open, showing options for Automatic, Color, Size, Text, Detail, and Tooltip. The 'AVG(Sales)' option is highlighted with an orange border. The main workspace displays 'Sheet 1' with the value '229.9'.

# Default Properties of Fields

The **Comment** option shows a notification about the **Profit** field.

A screenshot of a data analysis interface, likely Tableau. The top navigation bar shows 'Data' and 'Analytics'. Below it, a sidebar lists various fields under 'Tables': Order ID, Postal Code, Product ID, Product Name, Region, Row ID, Segment, Ship Date, Ship Mode, State, Sub-Category, Measure Names, Discount, Profit, Quantity, and Sales. The 'Profit' field is highlighted with a green arrow pointing to it. A context menu is open over the 'Profit' field, with the 'Add to Sheet' section visible. The 'Default Properties' and 'Comment...' options are highlighted with orange boxes. Other menu items include Duplicate, Rename, Hide, Create, Convert to Discrete, Convert to Dimension, Change Data Type, Geographic Role, Group by, Folders, Replace References..., and Describe... .

To add a **Comment**:

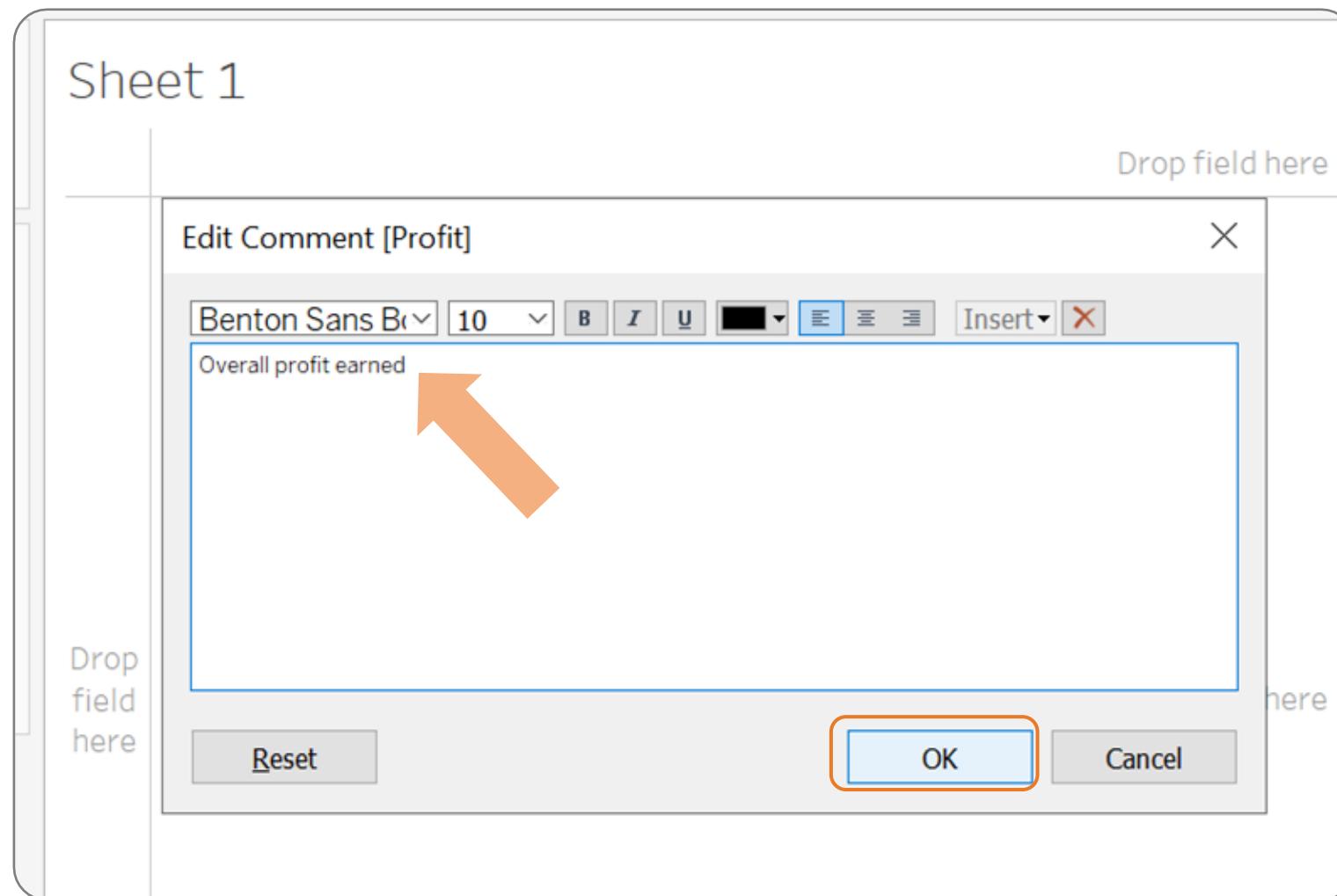
Step 01: Right-click on **Profit**

Step 02: Select **Default Properties**

Step 03: Select **Comment**

# Default Properties of Fields

The **Comment** option shows a notification about the field.



Step 04: Add the comment

Step 05: Click **OK**

When the cursor is placed on **Profit**, it displays a tooltip giving information about the field.

# Default Properties of Fields

The **Number Format** option is used to change a number from a decimal to a whole number.

The screenshot shows the Tableau Data Editor interface. On the left, the 'Tables' shelf lists various dimensions and measures. In the center, the 'Marks' shelf shows a 'SUM(Profit)' pill selected. On the right, the 'Sheet 1' view displays a list of products and their profits. Two specific elements are highlighted with orange boxes: 'Sub-Category' in the 'Rows' section of the top shelf, and 'SUM(Profit)' in the 'Text' section of the Marks shelf. A faint watermark of a person wearing a hard hat and holding a tablet is visible on the right side of the screen.

Sub-Catego..	Profit
Accessories	41,936.64
Appliances	18,138.01
Art	6,536.72
Binders	30,221.76
Bookcases	-3,509.57
Chairs	26,376.48
Copiers	55,617.82
Envelopes	6,964.18
Fasteners	949.52
Furnishings	13,054.87
Labels	5,546.28
Machines	3,384.76
Paper	34,053.57
Phones	44,436.92
Storage	21,285.21
Supplies	-1,189.10
Tables	-17,334.55

To change the format:

Step 01: Drag **Sub-Category** into **Rows**

Step 02: Drag **Profit** into **Text**

# Default Properties of Fields

Steps to change a number from a decimal to a whole number:

The screenshot shows the Microsoft Power BI Data view. On the left, there's a list of tables and measures. The 'Profit' measure is highlighted with a green bar and has an orange arrow pointing to it from the bottom-left. A context menu is open over the 'Profit' item. The menu items are: Add to Sheet, Show Filter, Duplicate, Rename, Hide, Create, Convert to Discrete, Convert to Dimension, Change Data Type, Geographic Role, Default Properties, Group by, Folders, Replace References..., and Describe... . The 'Default Properties' and 'Number Format...' items are highlighted with blue boxes and have orange arrows pointing to them from the bottom-right. To the right of the menu, there's a table titled 'Sheet 1' with columns 'Sub-Catego..' and 'Profit'. The data includes rows for Accessories, Appliances, Art, Binders, Bookcases, Chairs, Copiers, Envelopes, Fasteners, Furnishings, and Tables.

Sub-Catego..	Profit
Accessories	41,936.64
Appliances	18,138.01
Art	6,536.72
Binders	30,221.76
Bookcases	-3,509.57
Chairs	26,376.48
Copiers	55,617.82
Envelopes	6,964.18
Fasteners	949.52
Furnishings	13,054.87
	5,546.28
	3,384.76
	34,053.57
	44,436.92
	21,285.21
	-1,189.10
Tables	-17,334.55

Step 03: Right-click on **Profit**

Step 04: Select **Default Properties**

Step 05: Select **Number Format**

# Default Properties of Fields

Steps to change a number from a decimal to a whole number:

The screenshot shows the Tableau Data Prep interface. On the left, the 'Tables' pane lists various fields like Order ID, Postal Code, Product ID, etc., with 'Profit' highlighted in green. In the center, a data grid titled 'Sheet 1' shows a list of products and their profit values. A context menu is open over the 'Profit' column, specifically over the value '41,937'. The menu is titled 'Default Number Format [Profit]' and contains options like Automatic, Number (Standard), and Number (Custom). The 'Number (Custom)' option is selected and highlighted with a red box. To the right of the menu, settings for 'Decimal places' (set to 0), 'Negative values' (-1234), 'Display Units' (None), and 'Prefix / Suffix' are visible. A checkbox for 'Include thousands separators' is checked. At the bottom of the menu are 'Clear', 'OK', and 'Cancel' buttons, with 'OK' also highlighted with a red box.

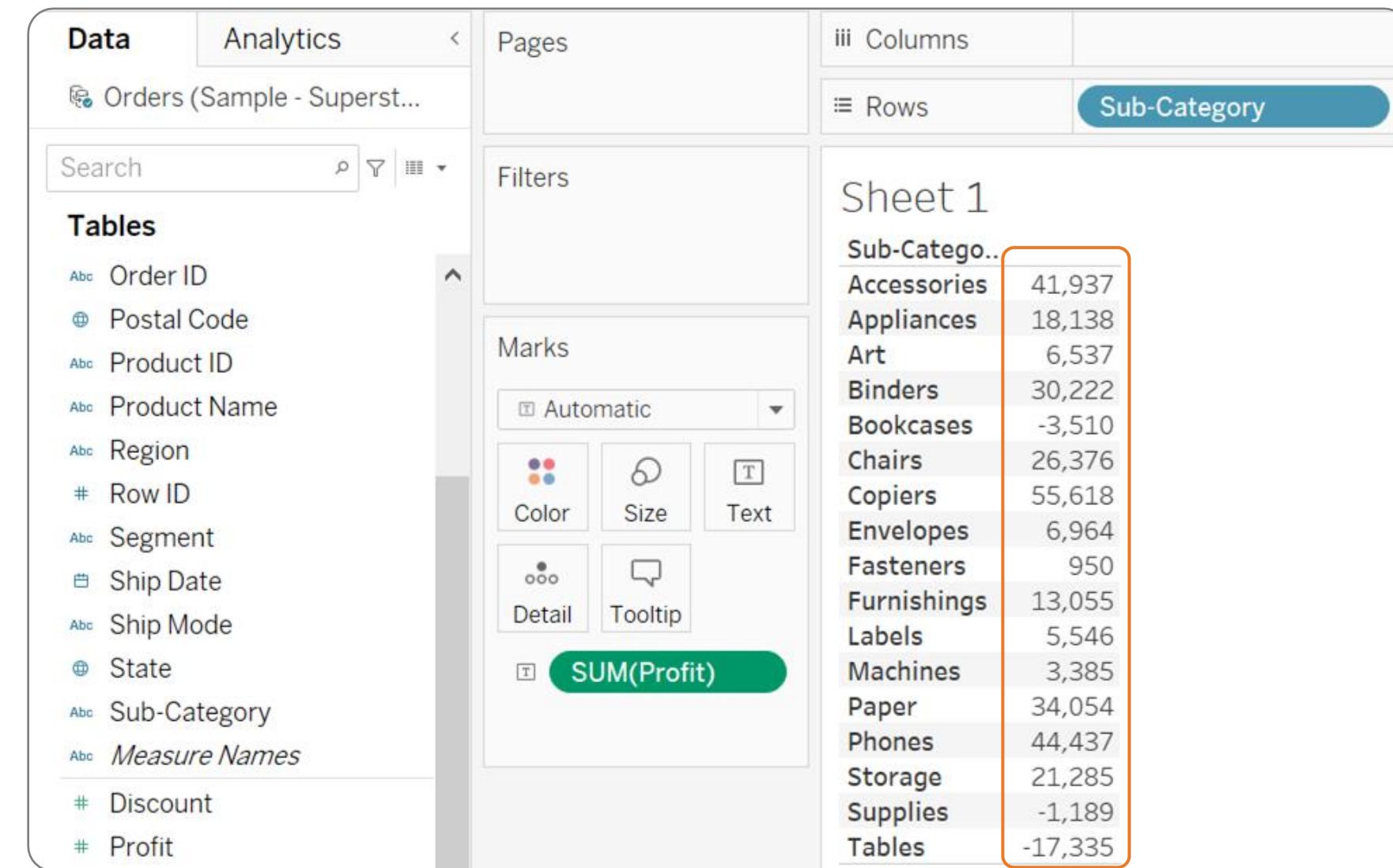
Step 06: Select **Number (Custom)**

Step 07: Set **Decimal Place** to zero

Step 08: Click **OK**

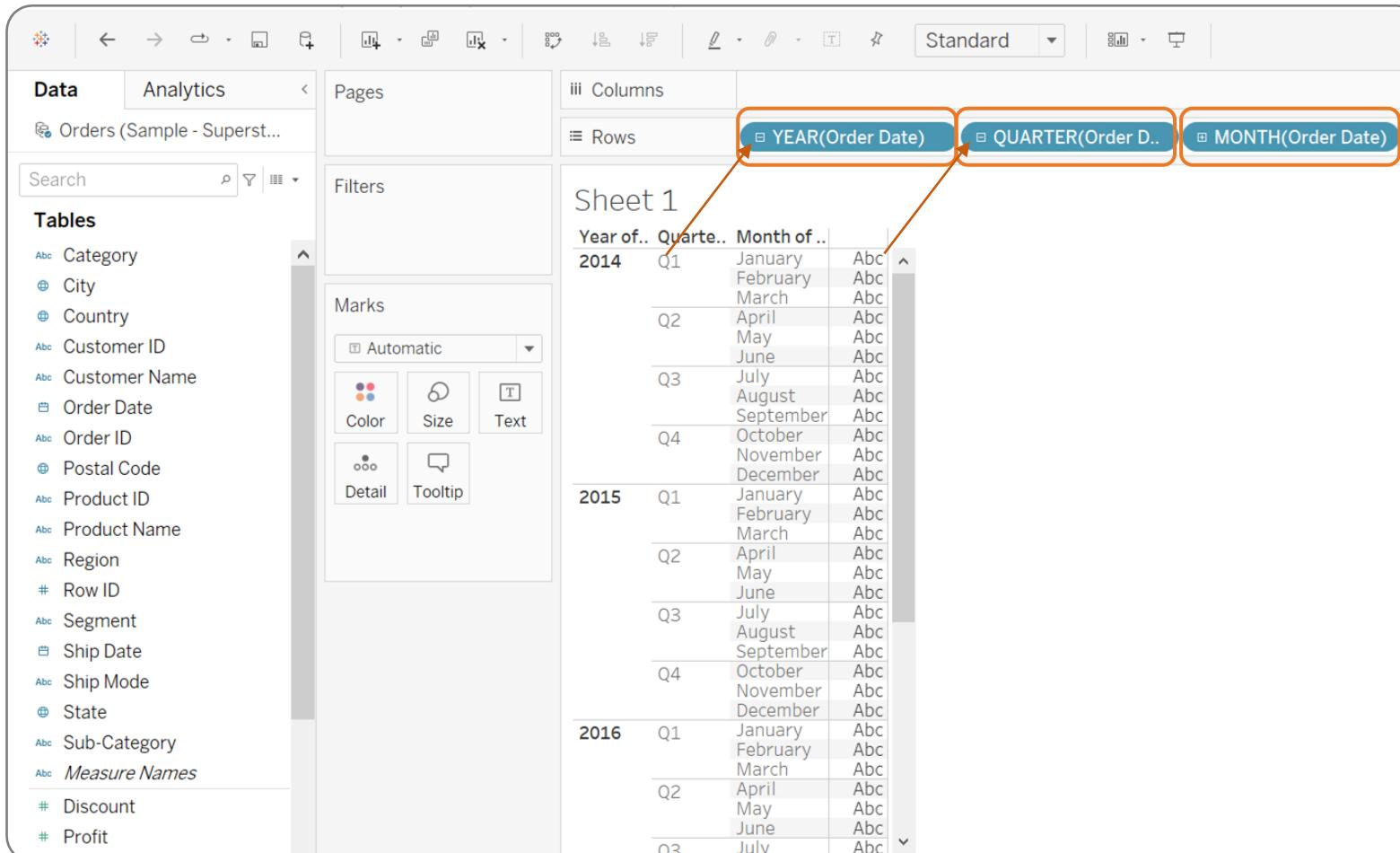
# Default Properties of Fields

Decimals are changed to whole numbers.



# Default Properties of Fields

The **Fiscal Year Start** option changes the fiscal year.



Steps to change the fiscal year:

Step 01: Drag **Order Date** into **Rows**

Step 02: Click on + to get a quarter of the **Order Date**

Step 03: Click on + again to get a month of the **Order Date**

# Default Properties of Fields

Here, quarter 1 starts in January and quarter 2 in April.

The screenshot shows a Tableau Data Explorer interface with the following details:

- Rows:** YEAR(Order Date), QUARTER(Order D..), MONTH(Order Date)
- Filters:** None
- Marks:** Automatic, with options for Color, Size, Text, Detail, and Tooltip.
- Sheet 1:** Displays a calendar table with the following data structure:

Year of..	Quarte..	Month of ..	Detail
2014	Q1	January	Abc
		February	Abc
		March	Abc
	Q2	April	Abc
		May	Abc
		June	Abc
	Q3	July	Abc
		August	Abc
		September	Abc
	Q4	October	Abc
		November	Abc
		December	Abc
2015	Q1	January	Abc
		February	Abc
		March	Abc
	Q2	April	Abc
		May	Abc
		June	Abc
	Q3	July	Abc
		August	Abc
		September	Abc
	Q4	October	Abc
		November	Abc
		December	Abc
2016	Q1	January	Abc
		February	Abc
		March	Abc
	Q2	April	Abc
		May	Abc
		June	Abc

# Default Properties of Fields

To change the fiscal year from January to April:

The screenshot shows a Microsoft Power BI interface with a data grid titled 'Sheet 1'. The grid displays data for years 2014 and 2015, broken down by quarter (Q1, Q2, Q3, Q4) and month (January through August). On the left, there's a 'Tables' pane listing various fields like Customer ID, Customer Name, Order Date, etc. A context menu is open over the 'Order Date' field in the grid. The menu items include 'Add to Sheet', 'Show Filter', 'Duplicate', 'Rename', 'Hide', 'Create', 'Convert to Continuous', 'Change Data Type', 'Default Properties' (which is highlighted with an orange box), 'Comment...', 'Color...', 'Shape...', 'Date Format...', 'Sort...', and 'Fiscal Year Start' (which is also highlighted with an orange box). An orange arrow points from the text 'Step 04: Right-click on Order Date' to the 'Order Date' field in the grid. Another orange arrow points from the text 'Step 07: Select April' to the 'April' option in the 'Fiscal Year Start' dropdown menu.

Step 04: Right-click on **Order Date**

Step 05: Select **Default Properties**

Step 06: Select **Fiscal Year Start**

Step 07: Select **April**

# Default Properties of Fields

FY 2015 Q1, FY 2016 Q1, and FY 2017 Q1 start in April.

The screenshot shows a Tableau Data Explorer interface with the following components:

- Pages:** Shows "iii Columns" and "Rows".
- Filters:** Shows "Year of..", "Quarte..", and "Month of ..".
- Marks:** Set to "Automatic". Options include Color, Size, Text, Detail, and Tooltip.
- Sheet 1:** Displays a hierarchy of fiscal years and quarters. The hierarchy is:
  - FY 2014 Q4 (January, February, March)
  - FY 2015 Q1 (April, May, June)
    - Q2 (July, August, September)
    - Q3 (October, November, December)
    - Q4 (January, February, March)
  - FY 2016 Q1 (April, May, June)
    - Q2 (July, August, September)
    - Q3 (October, November, December)
    - Q4 (January, February, March)
  - FY 2017 Q1 (April, May, June)
    - Q2 (July, August, September)

Three specific rows are highlighted with orange boxes: "FY 2015 Q1", "FY 2016 Q1", and "FY 2017 Q1".

# Assisted Practice: Using Measure Names and Measure Values



Duration: 20 minutes

## Problem statement:

A multinational retail chain is planning to launch its retail store. The chairman needs to analyze products currently being sold by the company. He should be able to quickly filter the data to examine various aspects of Product sales. Create a highlight table with the year, subcategory, and all the measures.

ASSISTED PRACTICE

# Assisted Practice Guidelines



## Steps to follow:

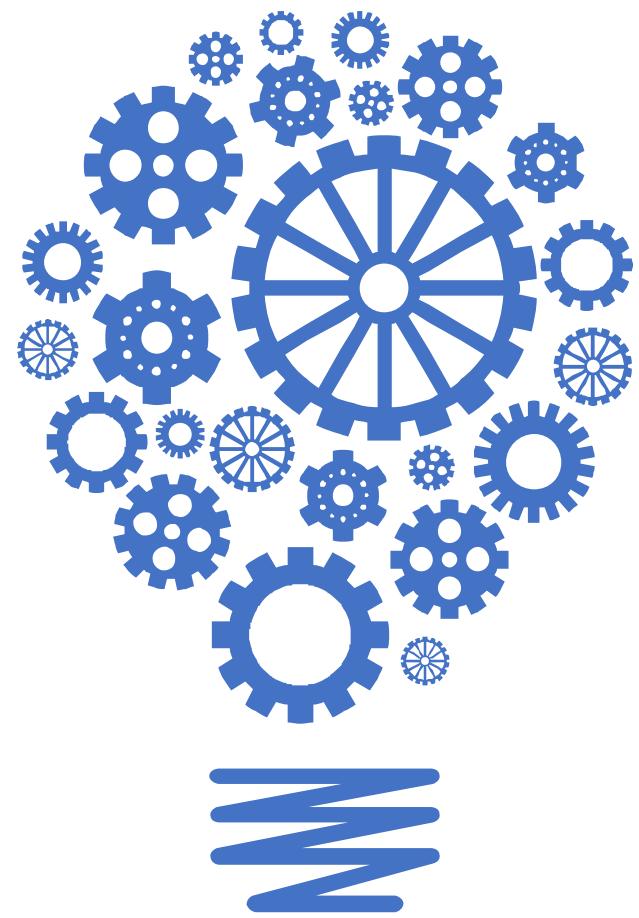
- Step 1: Create a highlight table with year, subcategory, and all the measures
- Step 2: Enable color legends per measure
- Step 3: Apply a quick filter on measure names

ASSISTED PRACTICE

## Creating Aliases

# Aliases

Aliases are alternate names provided to the values and headers to display in visualizations.



# Creating Aliases

Steps to create alias for values:

A screenshot of a data visualization interface, likely Tableau. A context menu is open over a column labeled 'Ship Mode'. The menu items are: Rename, Copy Values, Hide, Aliases..., Create Calculated Field..., Create Group..., Split, Custom Split..., Pivot (select multiple fields), and Describe... . The 'Aliases...' option is highlighted with an orange rectangle.

Abc		
Orders		
Ship Mode		
Second Class		
Second Class		
Second Class		
Standard Class		
Standard Class		
Standard Class		
Standard Class	BH-11710	Brosina H
Standard Class	BH-11710	Brosina H
Standard Class	BH-11710	Brosina H

## Step 01

Right-click on any column  
and select **Aliases**

# Creating Aliases

Steps to create alias for values:

Edit Aliases [Ship Mode]

Member	Has Alias	Value (Alias)
First Class	*	FC
Same Day	*	SD
Second Class	*	Second Class
Standard Class		Standard Class

OK Cancel Clear Aliases

Step 02

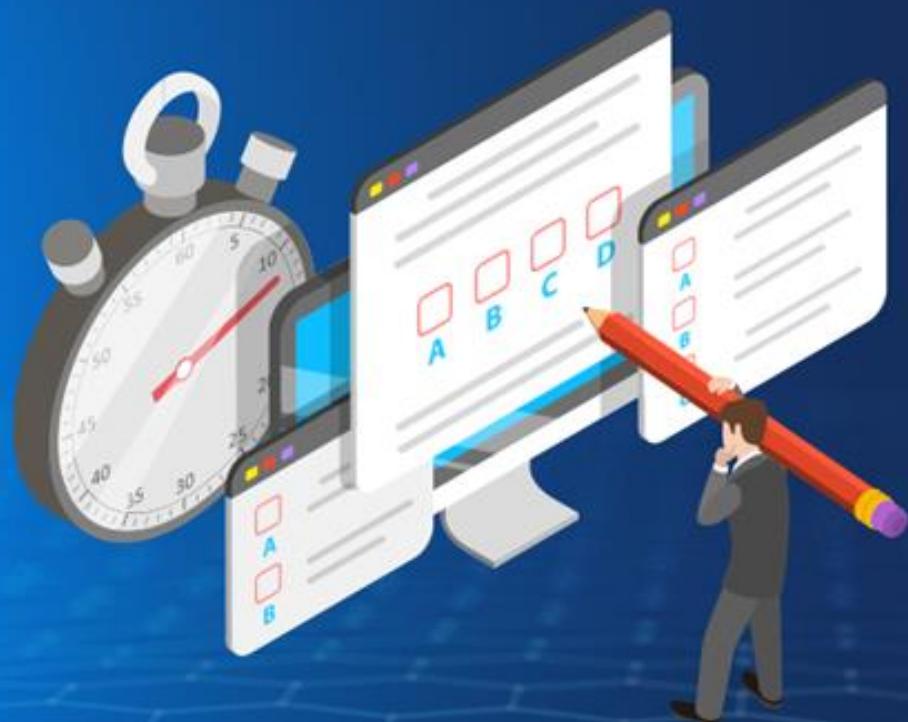
Update the alias name and click **OK**

No two values can have the same aliases.

## Key Takeaways

- The data type reflects the kind of information stored in a particular field.
- Dimensions and measures produce headers and axes when added to a row or column shelves in the view.
- Discrete fields are used to categorize data, whereas continuous fields are used for aggregation.
- Aliases are alternate names provided to the values and headers to display in visualizations.





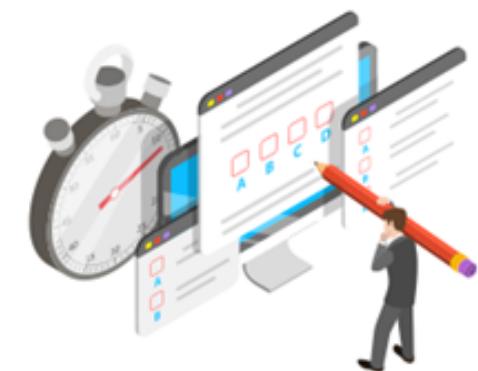
## Knowledge Check

**Knowledge  
Check**

1

**Which of the following is true about dimensions and measures?**

- A. Dimensions are quantitative, and measures are qualitative
- B. Dimensions are qualitative, and measures are quantitative
- C. Both A and B
- D. None of these

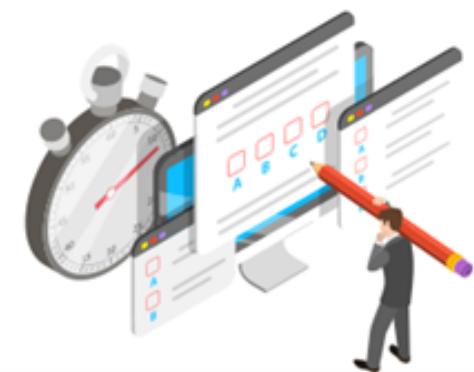


**Knowledge  
Check**

**1**

**Which of the following is true about dimensions and measures?**

- A. Dimensions are quantitative, and measures are qualitative
- B. Dimensions are qualitative, and measures are quantitative
- C. Both A and B
- D. None of these



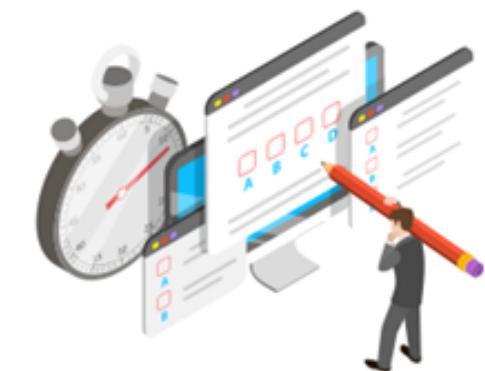
The correct answer is **B**

**Dimensions contain qualitative information, such as names, dates, or geographical coordinates, whereas measures contain numerical information.**

**Knowledge  
Check**  
**2**

**Which of the following is NOT a data type in Tableau?**

- A. Text
- B. Date
- C. Geographic
- D. Statistic



**Knowledge  
Check  
2**

**Which of the following is NOT a data type in Tableau?**

- A. Text
- B. Date
- C. Geographic
- D. Statistic



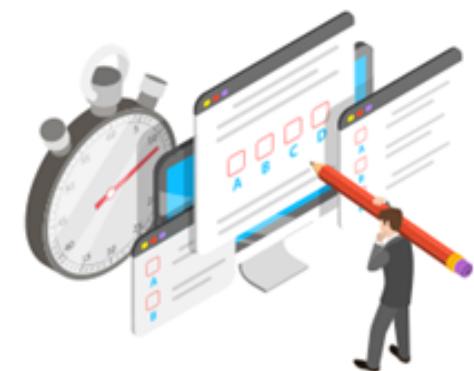
The correct answer is **D**

**Statistic is not a data type in Tableau.**

**Knowledge  
Check**  
**3**

**Which of the following happens when a dimension is dropped in rows?**

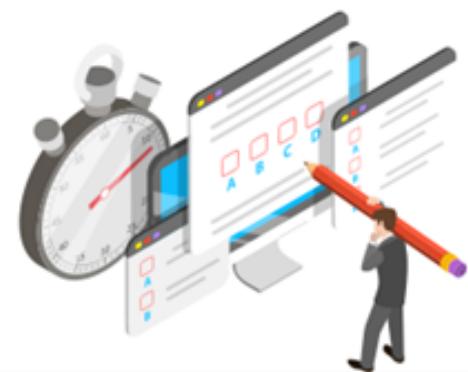
- A. Create headers in a single column
- B. Create headers in a single row
- C. Create a vertical bar
- D. Create a horizontal bar



**Knowledge  
Check  
3**

**Which of the following happens when a dimension is dropped in rows?**

- A. Create headers in a single column
- B. Create headers in a single row
- C. Create a vertical bar
- D. Create a horizontal bar



The correct answer is **A**

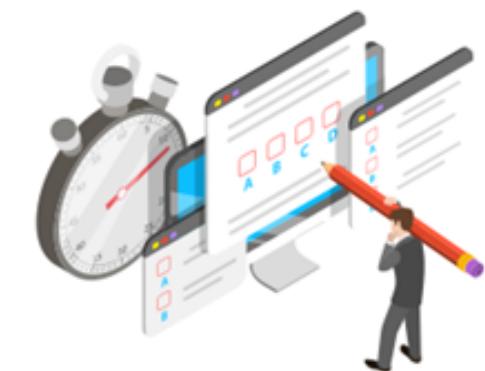
**Dimensions, by default, create headers in a single column.**

## Knowledge Check

4

**Which of the following are the most frequently used metadata options?**

- A. Rename, hide, and sort
- B. Hide and sort
- C. Rename, hide, unhide, and sort
- D. Unhide, hide, and sort

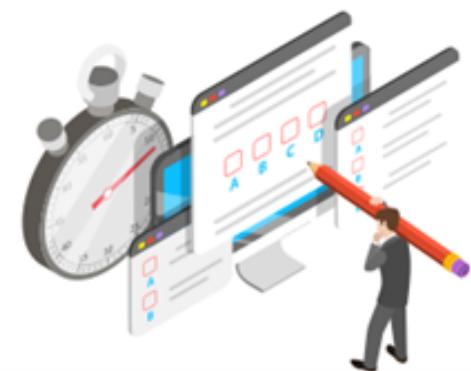


**Knowledge  
Check**

**4**

**Which of the following are the most frequently used metadata options?**

- A. Rename, hide, and sort
- B. Hide and sort
- C. Rename, hide, unhide, and sort
- D. Unhide, hide, and sort



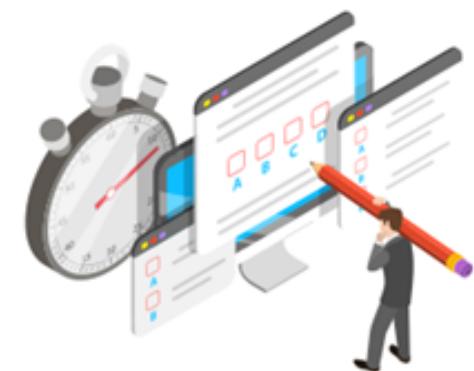
The correct answer is **C**

**The most frequently used metadata options are rename, hide, unhide, and sort.**

**Knowledge  
Check**  
**5**

**Which of the following is NOT recognized by the geographic data type in Tableau?**

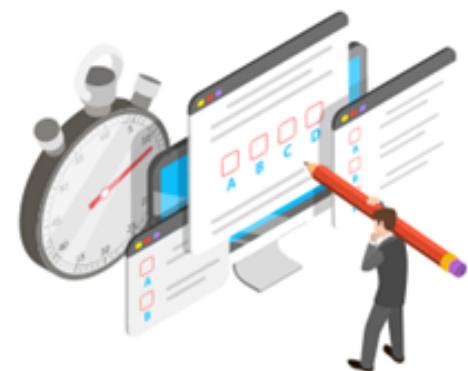
- A. Pin code
- B. Country name
- C. Airport code
- D. Street name



**Knowledge  
Check  
5**

**Which of the following is NOT recognized by the geographic data type in Tableau?**

- A. Pin code
- B. Country name
- C. Airport code
- D. Street name



The correct answer is **D**

**Street names usually don't have specific latitudes and longitudes and are not readily recognizable by Tableau.**