

### 1. How can you create a calculated field in Tableau?

- A) Go to a worksheet:  
Select the worksheet tab at the bottom of the screen.
- B) In the Data pane, right-click and select "Create Calculated Field":  
In the Data pane on the left side of the screen, right-click in the Drop down, and then choose "Create Calculated Field."
- C) Name your calculated field:  
Enter a name for your calculated field in the "Name" field.

### 2. What is the difference between a dimension and a measure in Tableau?

Characteristic	Dimension	Measure
Type of Data	Dimensions contain categorical data, providing labels or categories.	Measures encompass numeric data, representing quantities or amounts.
Examples	Examples of dimensions include product names, customer names, and dates.	Sales amounts, quantities, and profit margins are common measure examples.
Nature	Dimensions are discrete, representing distinct categories or groups.	Measures are continuous, representing a range of numeric values.
Aggregation	Dimensions are not directly aggregated; they often provide a basis for grouping.	Measures are typically aggregated using functions like SUM or AVG.
Usage	Dimensions are used for grouping, categorization, and segmentation of data.	Measures are employed for quantitative analysis and calculations.
Placement	Dimensions are placed on Rows and Columns shelves to structure the view.	Measures are placed in the Values shelf to provide quantitative data.
Headers	Dimension headers represent categorical labels or groups in visualizations.	Measure headers display quantitative values in visualizations.

### 3. How can you create a dashboard in Tableau?

Creating a dashboard in Tableau involves combining multiple sheets and visualizations into a single layout to provide a comprehensive view of your data. Here are the steps to create a dashboard in Tableau:

- 1. Create Worksheets:
  - Start by creating the individual worksheets that contain your visualizations. Build charts, graphs, and maps based on the analysis you want to showcase.
- 2. Organize Sheets:

- Arrange your sheets in a logical order, as this order will be reflected in your final dashboard.

3. Open a New Dashboard:

- Click on the "New Dashboard" tab at the bottom of the Tableau window.

4. Arrange the Layout:

- In the dashboard workspace, you can adjust the layout by dragging the edges of the dashboard to set its size. You can also specify the number of rows and columns.

5. Drag Sheets to Dashboard:

- In the dashboard, you will see a blank canvas. Drag the individual worksheets from the Sheets tab on the left and drop them onto the dashboard.

6. Organize Objects:

- Arrange the sheets on the dashboard by dragging them into the desired position. You can also add text, images, and web pages to provide context.

7. Create Dashboard Titles:

- Add titles to your dashboard by clicking on the title area and entering a descriptive name.

8. Apply Filters and Actions:

- Use filters and actions to create interactivity between sheets. For example, clicking on a data point in one chart can filter data in another chart.

9. Format and Customize:

- Customize the appearance of your dashboard by adjusting formatting options, colors, and fonts. You can also add a background image if needed.

10. Save and Share:

- Once you are satisfied with your dashboard, save your Tableau workbook. You can then share the workbook or publish it to Tableau Server or Tableau Online for wider distribution.

11. Review and Refine:

Preview your dashboard to ensure that all elements are displayed as expected. Refine the layout and formatting as needed.

#### 4. What is data blending in Tableau?

Data blending in Tableau is a technique used to combine and analyze data from multiple data sources within a single visualization. It allows you to create a unified view of your data when the information you need is spread across different datasets. Data blending is particularly useful when the data sources cannot be easily joined at the database level.

#### 5. What is the purpose of a parameter in Tableau?

A parameter is a dynamic input that allows users to replace a constant value in a calculation, filter, or reference line with a variable that can be easily modified. Parameters provide a way to create more interactive and flexible visualizations, allowing users to change certain aspects of the analysis without modifying the underlying data or calculations.

#### 6. How can you perform data aggregation in Tableau?

Data aggregation is the process of summarizing or combining data to produce a single value or set of values.

- a. Tableau automatically aggregates the measures using default aggregation function, usually SUM. You can change the aggregation function by clicking on the drop-down menu next to the measures in Row or Columns shelf.
- b. Aggregation can be used in Calculated field to create an entire new measure.
- c. Level of Detail (LOD) expressions allow you to control the granularity of aggregation independently of the visualization's level of detail. You can use FIXED, INCLUDE, or EXCLUDE LOD expressions to aggregate data at different levels.

**7. What are the different types of charts available in Tableau?**

- a. Bar charts
- b. Line Charts
- c. Scatter Plots
- d. Map Charts
- e. Pie Charts
- f. Heat Maps
- g. Gantt Charts
- h. Box Plots

**8. How can you share your Tableau workbooks with others?**

Tableau Workbooks can be shared in several ways. Some of them are:

- a. Uploading the workbook to Tableau Public.
- b. Using Tableau Server to publish and share workbooks within your organization.
- c. Export your Tableau workbook as a PDF or an image file. This is a static option and doesn't provide interactivity, but it's useful for sharing a snapshot of your visualization.

**9. What do you mean by context filter?**

A context filter is a type of filter that allows you to improve the performance of your visualization by limiting the amount of data that Tableau retrieves from the data source. Context filters work by creating a temporary subset of the data based on the filter condition, which can significantly reduce the amount of data processed by Tableau when generating the view.

**10. What Are the different Joins in Tableau? Explain each of them with an example.**

Here are the main types of joins in Tableau, along with explanations and examples:

Inner Join:

An inner join returns only the rows that have matching values in both tables. Rows with non-matching values in the specified join condition are excluded from the result.

**Example:** Suppose you have two tables - one with sales data and another with customer information. An inner join on the "Customer ID" field would return only the rows where the customer IDs match in both tables.

Left Join (Left Outer Join):

A left join returns all the rows from the left (first) table and the matching rows from the right (second) table. If there is no match in the right table, null values are returned.

**Example:** Using the same sales and customer tables, a left join would return all sales data and include customer information where available.

Right Join (Right Outer Join):

A right join returns all the rows from the right (second) table and the matching rows from the left (first) table. If there is no match in the left table, null values are returned.

**Example:** Continuing with the sales and customer tables, a right join would return all customer information and include sales data where available.

Full Outer Join:

A full outer join returns all rows when there is a match in either the left or right table. It includes all rows from both tables, filling in null values where there is no match.

**Example:** Using the sales and customer tables, a full outer join would return all sales data and customer information, combining them where there are matches and filling in nulls where there are no matches.

Self-Join:

A self-join is a join where a table is joined with itself. This can be useful when you have hierarchical data or when you need to compare rows within the same table.

**Example:** If you have an "Employees" table with a "ManagerID" field pointing to the "EmployeeID" in the same table, a self-join can be used to find employees and their managers.

## 11. What is the difference Between Joining and Blending?

Characteristic	Joining	Blending
Usage	Used within a single data source.	Used when combining data from multiple sources.
Data Source	Combines tables within the same data source.	Combines data from different data sources.
Relationship	Establishes direct relationships between tables based on common fields.	Does not establish direct relationships between tables; linking.
Operations	Performs operations like inner join, left join, right join, or full outer join.	Utilizes aggregated data from the secondary data source.
Flexibility	Provides flexibility in defining complex relationships and handling various types of join conditions.	Limited flexibility compared to joining. More straightforward.
Common Field	Requires common fields between tables for joining.	Requires a common field in both data sources for linking.
Relationship Type	One-to-One, Many-to-One, Many-to-Many (based on join type).	No direct relationship types; relies on aggregated linking.

## 12. What is the use of the Dual axis? How Do You Create One?

The dual-axis feature in Tableau allows you to combine two different measures (or one measure and one axis of another type, such as a reference line or trendline) on the same chart. This is useful when you want to compare two measures that have different scales or units of

measurement. The dual-axis feature enables you to create a more informative and visually appealing visualization by overlaying multiple sets of data.

- A. **Create a Chart:** Start by creating a chart with at least one measure on the Rows or Columns shelf.
- B. **Duplicate the Axis:** Right-click on the axis of the measure you want to duplicate (usually on the left or right side of the chart) and select "Dual Axis." This duplicates the axis.
- C. **Synchronize Axes (Optional):** Tableau might automatically synchronize the axes, ensuring both measures are using the same scale. However, depending on your visualization, you may choose to synchronize or unsynchronize the axes. Right-click on either axis and select "Synchronize Axis" or "Show Header" to toggle synchronization.
- D. **Adjust Marks:** Tableau will place the second set of marks (from the second measure) on top of the existing marks. You can now customize the marks for the second axis by changing the mark type, color, size, etc.
- E. **Label the Axes:** Ensure that the axes are appropriately labeled. You can right-click on the axis and choose "Edit Axis" to modify the title, format, and other settings.
- F. **Adjust Tooltip (Optional):** You may want to customize the tooltip for the second set of marks. You can do this by editing the tooltip in the Marks card.
- G. **Format as Needed:** Format the entire chart as needed, including titles, colors, labels, and other elements to make the dual-axis visualization clear and visually appealing.

### 13. What's the difference between the .twb file and .twbx extension?

The main difference is that .twb files are lightweight and contain metadata without the actual data, while .twbx files are packaged workbooks that include both the metadata and the data. The choice between the two depends on your sharing and collaboration needs. If you want to share a workbook along with the data, use .twbx. If the data is stored separately and users have access to the data source, .twb may be sufficient.

### 14. What are LOD expressions in Tableau?

Level of Detail (LOD) expressions in Tableau allow users to control the granularity at which aggregations are computed, providing a flexible way to perform calculations at different levels within a visualization. LOD expressions enable you to specify the scope of your analysis, whether it's at the overall data level, a specific dimension, or a combination of dimensions.

There are three types of LOD expressions in Tableau:

**Fixed LOD Expression:** {FIXED [expression1] : aggregation(expression2) }

Computes the aggregation of expression2 at the specified level of detail, regardless of the visualization's level of detail. It allows you to "fix" the calculation to a particular dimension or set of dimensions.

**Include LOD Expression:** {INCLUDE [dimension] : aggregation(expression) }

Computes the aggregation of the specified expression at the level of detail defined by the included dimension. It allows you to include a specific dimension in the calculation, affecting the aggregation.

**Exclude LOD Expression:** {EXCLUDE [dimension] : aggregation(expression) }

Computes the aggregation of the specified expression, excluding the specified dimension from the calculation. It allows you to exclude a particular dimension from affecting the aggregation.