Domain 2: Exploring & Analysing Data

Contents

Question 1 [2.1.1 Create a bar chart]

What types of trend lines are available in Tableau?

a) Drag the measure to the columns shelf and the dimension to the row shelf
b) Drag the measure to the rows shelf and the dimension to the column shelf
c) Drag the measure to both the row shelf and the columns shelf
d) Drag the dimension to both the rows shelf and the column shelf

Correct answer: a.
Explanation: In Tableau, bar chart represents data in rectangular bars with the length of the bar proportional to the value of the variable. Tableau automatically produces a Vertical bar chart when you drag a dimension to the Column shelf and measure to the Row shelf. Hence, to flip a vertical bar chart to horizontal bar chart it is needed to draw Measure to Columns and Dimension to Rows.

Question 2 [2.1.3 Create a scatter plot]

What types of trend lines are available in Tableau? [Select All that Apply]

a) logistic
b) Linear
c) Logarithmic
d) Multinomial
e) Polynomial

Correct answer: b, c, e.
Explanation: While creating Scatter Plot in Tableau, to add a trend line we need to go to the Analytics Pane and then select the trend line and drag it to view the available trend line models and drop it. The available trend line models that are used in Tableau are – Linear, Logarithmic, Exponential and Polynomial. However multinomial is not a type of trend line.

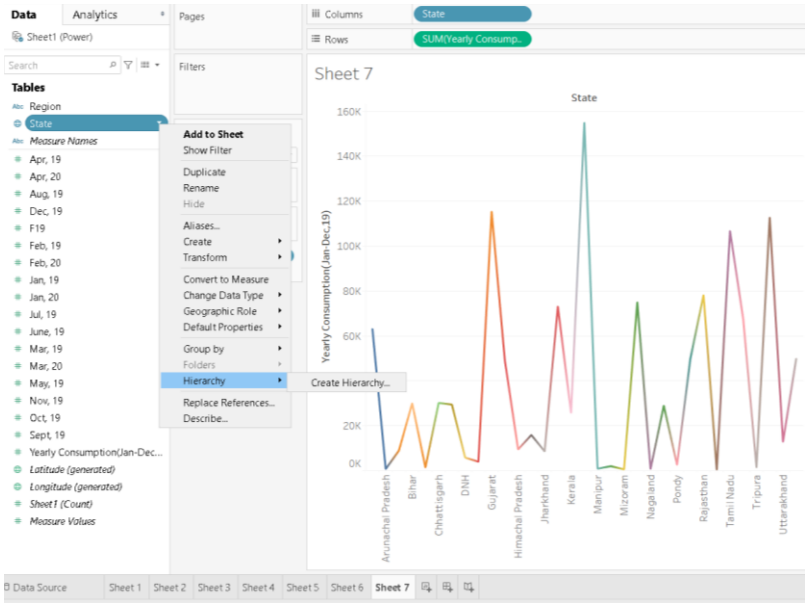
Question 3 [2.1.4 Create a map using geographic data]

What steps should be taken to create a geographical hierarchy?

a) In the Analytics pane right-click the geographic field -> Create Hierarchy
b) In the Analytics pane right-click the create Hierarchy -> Select Hierarchy -> Ok
c) In the Data pane right-click the geographic field-> Hierarchy -> Create Hierarchy
d) In the Data pane right-click the geographic field-> Transform -> select Hierarchy -> Create Hierarchy

Correct answer: c.
Explanation: We can create geographic hierarchies. To create a geographic hierarchy:

In the Data pane, right-click the geographic field, Country, and then select Hierarchy > Create Hierarchy. In the Create Hierarchy dialog box that opens, give the hierarchy a name, such as Mapping Items, and then click OK.



Question 4 [2.1.5 Create a combined axis chart]

What is the difference between a dual axis chart and a combined axis chart?

a) Dual axis and combined axis are different terms but have the same meaning.
b) Dual axis chart creates two independent axes while a combined axis chart merges two or more measures into a single axis.
c) Combined axis chart creates two independent axes while a dual axis chart merges two or more measures into a single axis.
d) Dual axis chart becomes a combined axis chart once two or more measures are combined into a single axis.

Correct answer: b.
Explanation: A combined axis merges two or more measures into a single axis so we can plot as many measures as we like in the same chart. The biggest advantage of this is that we have the option of adding an additional dual axis to this chart later if we need another mark type to reflect another measure. On the other hand, a dual axis chart creates two independent axes (which we can synchronise) that we can plot two separate measures on in the same chart.

Question 5 [2.1.6 Create a dual axis chart]

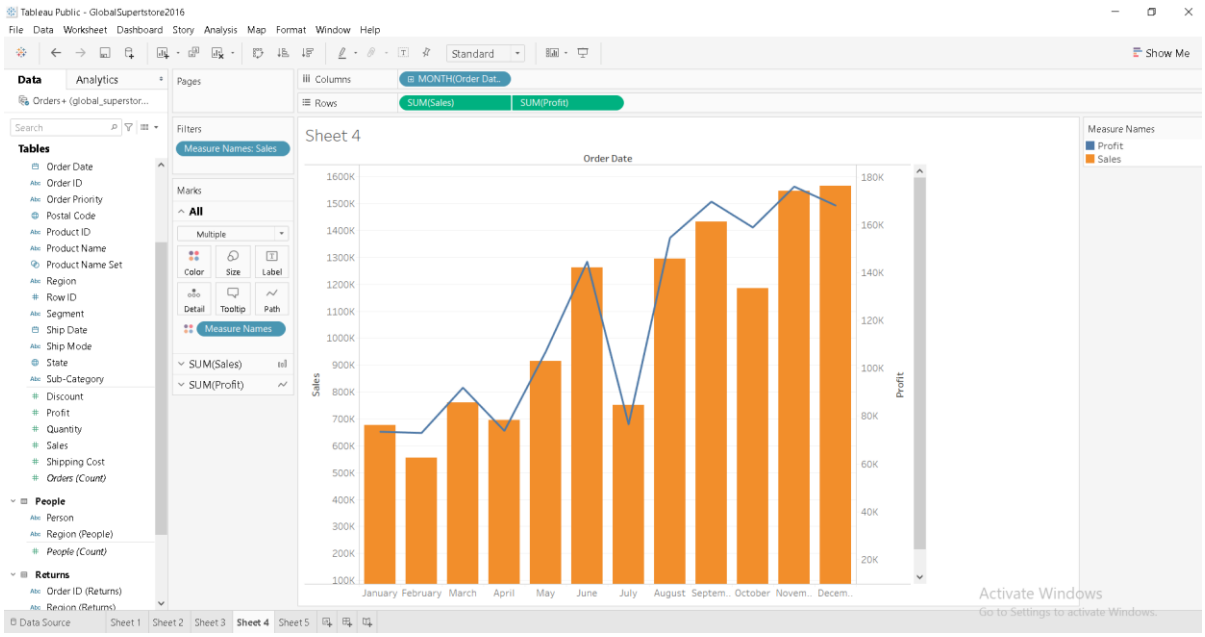
What steps will create a dual axis chart? [Select All that Apply]

a) Drag one dimension to Column and drag two measures to Row -> In the Rows right click any of the measure -> Select Dual axes -> Go to marks type of any of the measure and choose the chart type as Bar
b) Drag two dimensions to Column and drag one measures to Row -> Go to marks type of any of the measure and choose the chart type as Bar
c) Drag one dimension to Column and drag one measures to Row -> drag another measure to the chart itself and as the rectangle shape appears drop it -> Go to marks type of any of the measure and choose the chart type as Bar

d) Drag one dimension to Column and drag one measure to Row -> Go to marks type of any of the measure and choose the chart type as Bar

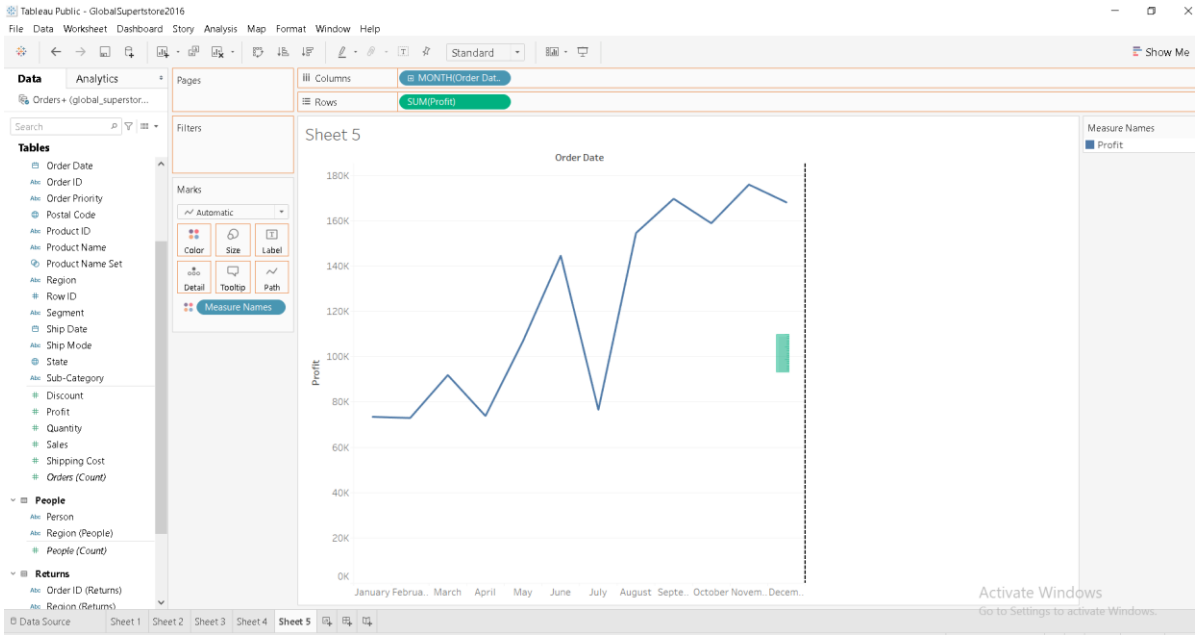
Correct answer: a, c.
Explanation: There are several ways to create a dual axis chart in Tableau. One of them are –

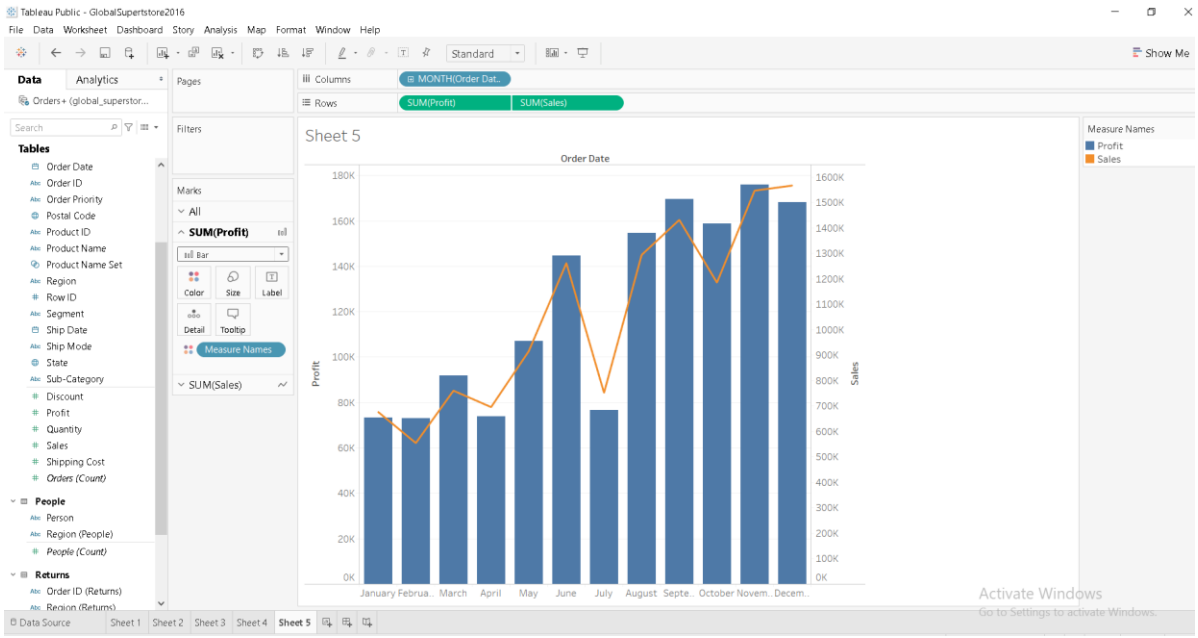
Drag one dimension to Column and drag two measures to Row -> In the Rows right click any of the measure -> Select Dual axes -> Go to marks type of any of the measure and choose the chart type as Bar



Another way to create a dual axis chart is –

Drag one dimension to Column and drag one measures to Row -> drag another measure to the chart itself and as the rectangle shape appears drop it -> Go to marks type of any of the measure and choose the chart type as Bar





Question 6 [2.1.7 Create a stacked bar]

How to create a stacked bar chart while using a separate bar for each measure? – [Select All that Apply]

a) Drag a dimension to Color -> Drag Measure Names to Columns and drag Measure Values to Rows -> On the Columns shelf right-click Measure Names -> select Filter -> select the check boxes for the measures to display -> Ok

b) Drag a dimension to Color -> Drag Measure Names to Rows and also drag Measure Values to Rows -> On the Columns shelf right-click Measure Names -> select Filter -> select the check boxes for

the measures to display -> Ok
c) Drag a dimension to Color -> Drag Measure Names to Columns and drag Measure Values to Rows -> On the Columns shelf right-click Measure Names -> Ok

d) Drag a Measure Values to Color -> Drag Measure Names to Columns and drag Dimension to Rows -> On the Columns shelf right-click Measure Names -> select Filter -> select the check boxes for the measures to display -> Ok

Correct answer: a.
Explanation: To create a stacked bar chart while using a separate bar for each measure we need to follow the steps - Drag a dimension to Color -> Drag Measure Names to Columns and drag Measure Values to Rows -> On the Columns shelf right-click Measure Names -> select Filter -> select the check boxes for the measures to display -> Ok

Question 7 [2.1.8 Create a density map]

Which of the following applies for Density map in Tableau – [Select All that Apply]

a) To create a density map, the data source should contain Latitude and Longitude coordinates or location names

b) Tableau cannot recognize location names and create a density map using the point locations assigned to Tableau geocoding locations
c) Density maps are most effective when the location data is very precise, such as location coordinates in a limited space

d) Density marks work best where the specific locations change continuously and smoothly across space, rather than values constrained to discrete locations like borough or neighbourhood.

Correct answer: a, c, d.
Explanation: In Tableau to create a density map, the data source should contain Latitude and Longitude coordinates or location names .Tableau can recognize location names and create a density map using the point locations assigned to Tableau geocoding locations, but density maps are most effective when the location data is very precise, such as location coordinates in a limited space. Density marks work best where the specific locations change continuously and smoothly across space, rather than values constrained to discrete locations like borough or neighbourhood.

Question 8 [2.1.9 Create a chart to show specific values (crosstab, highlight table)]

How to create Highlight Table or Heat Map in Tableau –

a) Drag one or more dimensions on the Columns shelf and one or more dimensions on the Rows shelf -> place a measure of interest on the Colour shelf -> Select Square as the mark type

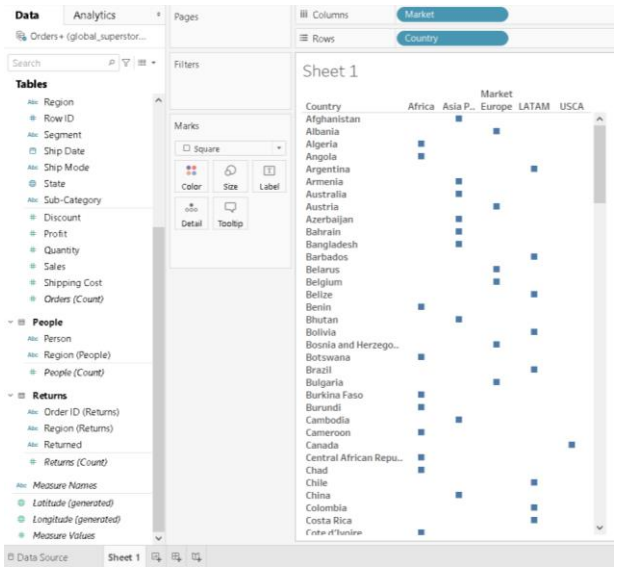
b) Drag one or more dimensions on the Columns shelf -> Select Square as the mark type -> place a measure of interest on the Colour shelf.

c) Drag one or more dimensions on the Rows shelf-> Select Square as the mark type -> place a measure of interest on the Colour shelf.

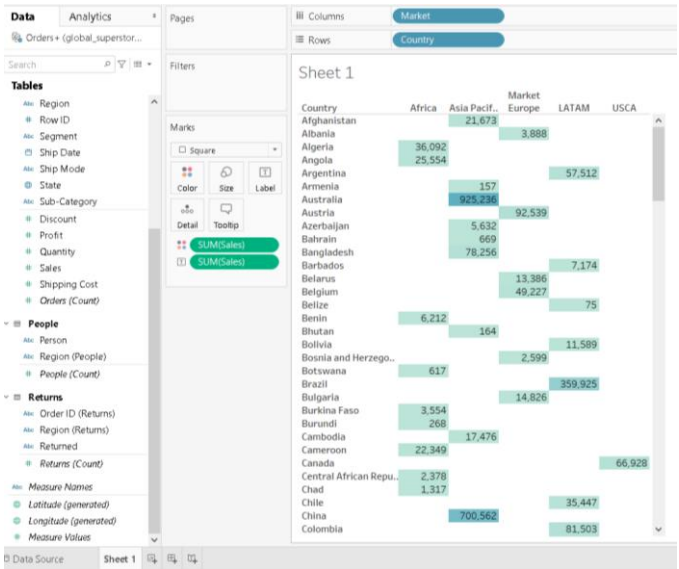
d) Drag one dimension on the Columns shelf and one measure on the Rows shelf -> place a measure of interest on the Colour shelf.

Correct answer: a.
Explanation: In Tableau, we create a highlight table by placing one or more dimensions on the Columns shelf and one or more dimensions on the Rows shelf. We then select Square as the mark type and place a measure of interest on the Colour shelf.

Dragging one or more measures to Columns and Rows shelf



Placing a measure on the Colour shelf and selecting Square as the mark type



Question 9 [2.2.1 Create groups by using marks, headers, and the data pane]

How to create a group from a field in the Data pane? –

a) In the Data pane right-click a field -> select Create -> In the Create Group dialog box select the members that needs to be grouped -> Group -> Ok.

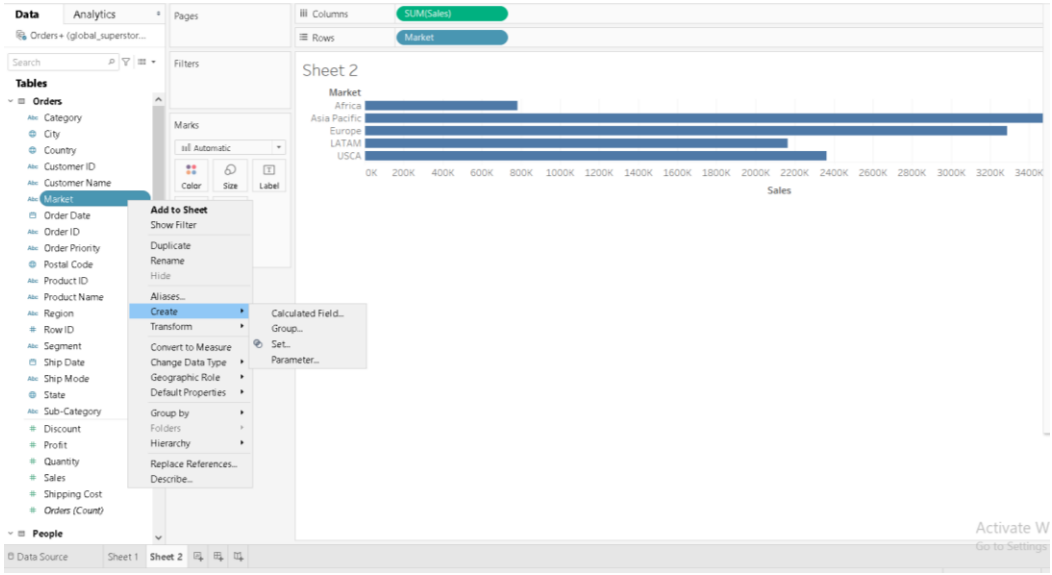
b) In the Data pane right-click a field -> select Group.
c) In the Data pane right-click a field -> Group

d) In the Analytics pane right-click a field -> select Group -> Ok.

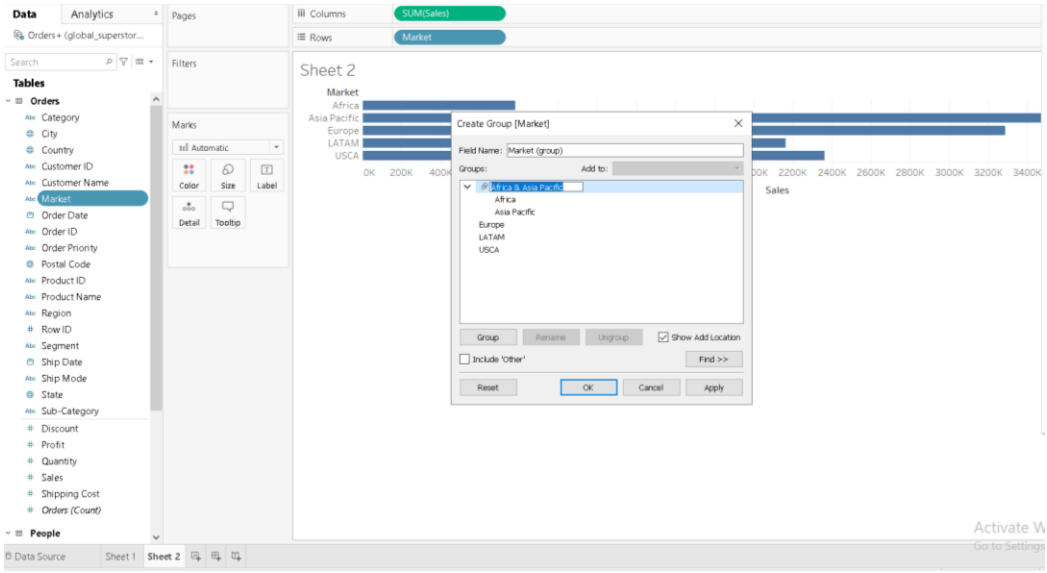
Correct answer: a, b.
Explanation: In Tableau to create a group from a field in the Data pane - in the Data pane, right-click a field and select Create > Group and then in the Create Group dialog box, select several members that you want to group, and then click Group.

The selected members are combined into a single group. A default name is created using the combined member names.

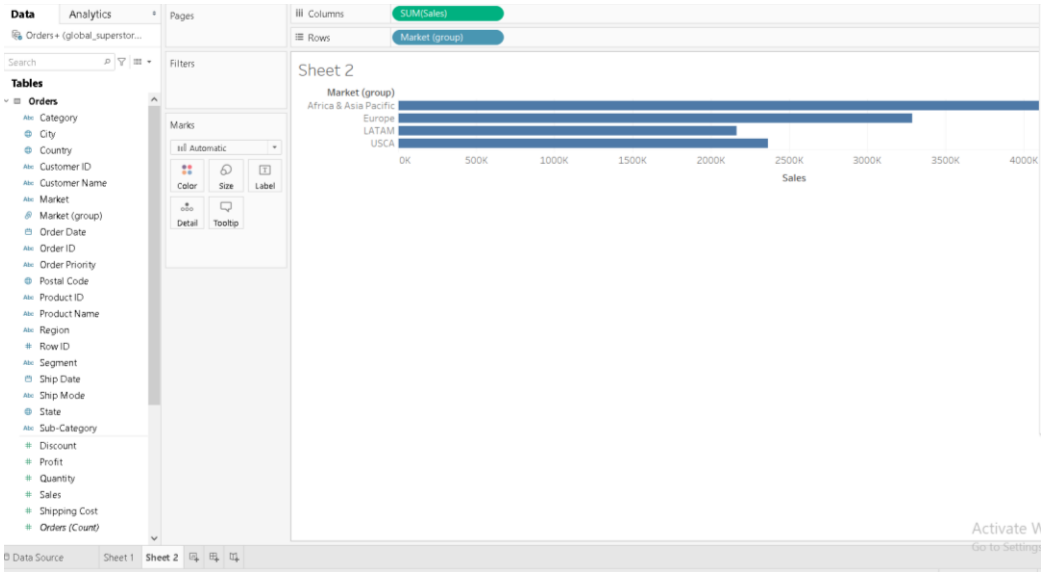
Step 1: Right clicking on a field in data pane and selecting create



Step 2: Select the necessary members to group and select ok



Step 3: Final Result



Question 10 [2.2.2 Create sets by using marks and the data pane]

Which of the following are the types of sets in Tableau? – [Select All that Apply]

a) Singleton set

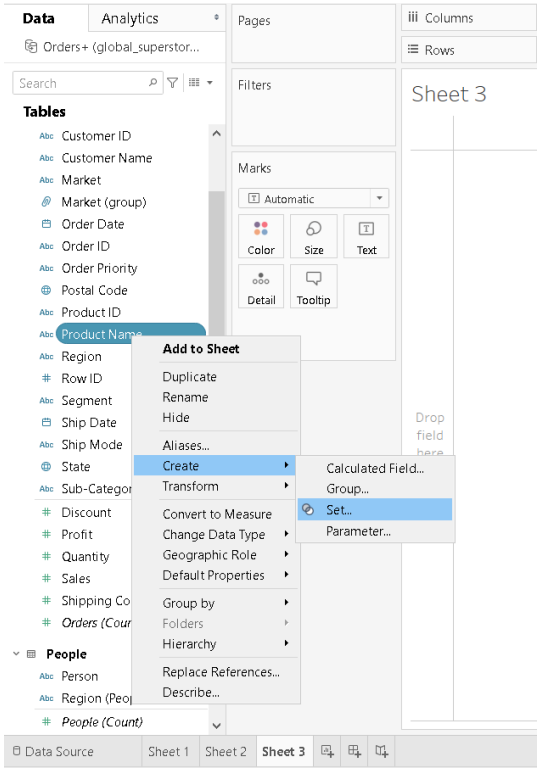
b) Dynamic set

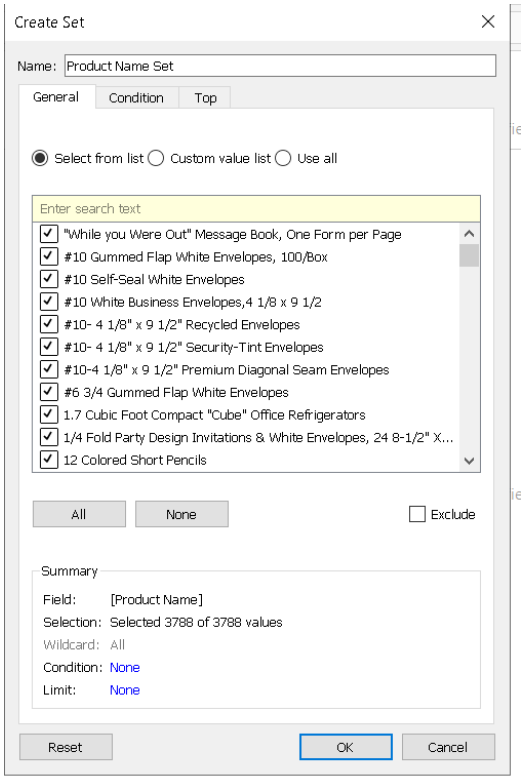
c) Fixed set

d) Equal set

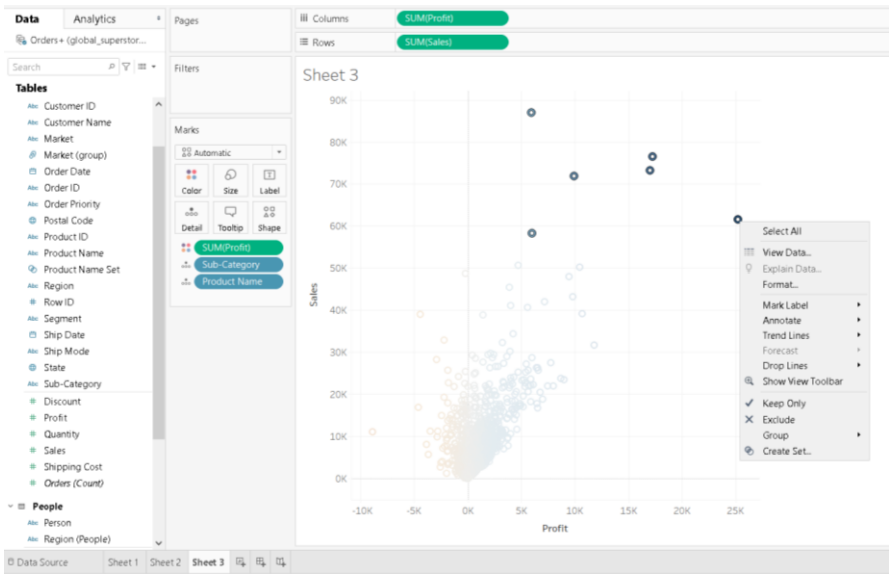
Correct answer: b, c.
Explanation: There are two types of sets: dynamic sets and fixed sets. The members of a dynamic set change when the underlying data changes. Dynamic sets can only be based on a single dimension. Singleton and Equal sets are used in mathematical calculations not in Tableau.

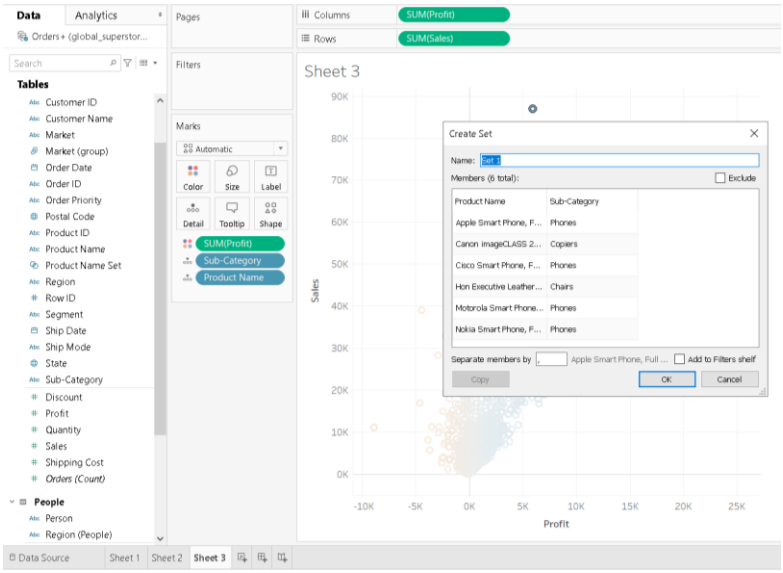
Creating a Dynamic Set:





Creating a Fixed Set:





Question 11 [2.2.3 Organize dimensions into a hierarchy]

How to create a Hierarchy in Tableau? –

a) In Data pane drag a field and drop on top of another field -> enter a name of the hierarchy -> ok

b) Right click on a field -> Create Hierarchy -> Choose the fields -> ok

c) Right click on a field -> Create Hierarchy -> ok

d) Right click on a field -> Choose the fields -> Create Hierarchy -> ok

Correct answer: a
Explanation: To create a hierarchy: In the Data pane, drag a field and drop it directly on top of another field and then, enter a name for the hierarchy and click OK.

Question 12 [2.2.4 Add a filter to a view]

Filter dialog box offers the following tabs for filtering – [Select all that Apply]

a) Report

b) Wildcard

c) Condition

d) Top

Correct answer: b, c, d.
Explanation: When we drag a discrete dimension to the Filters shelf, the Filter dialog box offers four tabs for filtering: General, Wildcard, Condition, and Top. Whereas report is a level of filter in Power BI.

Question 13 [2.2.5 Add a date filter]

How to create Relative Date Filters–

a) Drag a date field to the filter shelf -> Ok

b) Drag a date field to the filter shelf -> Select a time unit -> Ok

c) Drag a date field to the filter shelf -> Select a time unit -> Define the date period -> Ok

d) Drag a date field to the filter shelf -> Define the date period -> Ok

Correct answer: c.
Explanation: In Tableau to create Relative Date Filters we need to drag a date field to the filter shelf -> Select a time unit -> Define the date period -> Ok.

Question 14 [2.3.1 Add a manual or a computed sort]

Which of the following are applicable for nested sort in Tableau? – [Select all that Apply]

a) Nested sort considers each pane independently and sorts the rows per pane

b) Nested sorts look correct within the context of the pane, but don't convey the aggregated information about how the values compare overall

c) Sorting from an axis does not give a nested sort by default

d) While creating a nested sort, the sort is inherited when we drill down through the dimensions

Correct answer: a, b, d.
Explanation: In Tableau a nested sort considers each pane independently and sorts the rows per pane. Nested sorts look correct within the context of the pane, but don't convey the aggregated information about how the values compare overall. Also, sorting from an axis gives a nested sort by default. When creating a nested sort, the sort is inherited when you drill down through the dimensions. For example, a nested sort on Hue will apply to Colour.

Question 15 [2.3.3 Use a quick table calculation]

Which of the following quick table calculations are available in Tableau? – [Select all that Apply]

a) Z-score

b) Percent of total

c) Rank

d) Percentile

Correct answer: b, c, d.
Explanation: The following quick table calculations are available in Tableau for you to use:

Running total, Difference, Percent difference, Percent of total, Rank, Percentile, Moving average, YTD total, Compound growth rate, Year of year growth, YTD growth.

Z-score option is not available in the quick table calculation of Tableau (however manually it can be performed).

Question 16 [2.3.4 Use bins and histograms]

How do you create a Binned Dimension in Tableau? –

a) In the Data pane right-click a measure -> select Create > Bins -> Create Bins dialog box accept the proposed New field name or specify a different name for the new field -> Mention the size of bins -> Ok.

b) In the Data pane right-click a measure -> Create Bins dialog box accept the proposed new field name or specify a different name for the new field -> Mention the size of bins -> Ok.

c) In the Data pane right-click a measure -> select Create bins > Ok.

d) Select Create > Bins -> Create Bins dialog box accept the proposed New field name or specify a different name for the new field -> Mention the size of bins -> Ok.

Correct answer: a.
Explanation: To create a Binned Dimension in Tableau - In the Data pane right-click a measure -> select Create > Bins -> Create Bins dialog box accept the proposed New field name or specify a different name for the new field -> Mention the size of bins -> Ok.

Question 17 [2.3.5 Create a calculated field (e.g. string, date, simple arithmetic)]

The main types of calculations you can use to create calculated fields in Tableau: –

a) Basic calculations

b) Level of Detail (LOD) expressions

c) Statistic Calculations

d) Table calculations

Correct answer: a, b, d.
Explanation: There are three main types of calculations you can use to create calculated fields in Tableau - Basic calculations, Level of Detail (LOD) expressions, Table calculations. There is no such option of Statistic Calculations in Tableau for calculated field.

Question 18 [2.3.6 Explain when to use a parameter]

Which of the following can prevent a refresh for a refreshable list of parameter values? [select all that apply]

a) The default field returns null.

b) The default field does not return a single value.

c) The default field is in a data source that’s not yet connected.

d) The user cancels the query to the data source while Tableau is attempting to connect.

Correct answer: a, c, d.
Explanation: As explained here, https://help.tableau.com/current/pro/desktop/en-us/parameters_create.htm#when-the-parameter-value-or-list-of-values-can%E2%80%99t-refresh will cause the list to fail to refresh. A single value is required when setting the parameters default value, but not when dynamically setting a list of possible values for the parameter.

Question 19 [2.3.7 Display totals on a worksheet]

How to show subtotals in a visualization in Tableau –

a) Click the Analytics pane -> In the Analytics pane under Summarize drag Totals into the Add Totals dialog -> drop it over Subtotals

b) Click the Analytics pane -> Click the Subtotals

c) Click the Data pane -> In the Data pane under Summarize drag Totals into the Add Totals dialog -> drop it over Subtotals

d) Click the Data pane -> Click the Subtotals

Correct answer: a.
Explanation: To show subtotals in a visualization: Click the Analytics pane and in the Analytics pane, under Summarize, drag Totals into the Add Totals dialog, and drop it over Subtotals