

## Tableau MCQ Questions and Answers

### Question 1

**Scenario:** Emma, a data scientist at an online gaming company, wants to analyze player behavior based on the time they are on the platform. She has timestamped the data of when each player logs in and logs out to understand when they are active. She decides to create a heat map showing the number of players active at different hours of the day. How can she transform her timestamp data to achieve this in Tableau?

**Options:**

1. By using the parameter feature
2. By creating sets
3. By creating hierarchies
4. By applying the date part function

**Answer:** Option 4 - By applying the date part function

**Explanation:** Emma wants to understand the activity of players at different hours of the day. Since this is time-related, the date part function is the appropriate choice. By applying the date part function, we can extract different parts of the date like hour, day, month, or year. In this case, she needs the hour, so she can use the date part function with "hour" parameter on the login time and logout time fields.

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### Question 2

**Scenario:** Michael, a data scientist, is using Tableau to visualize time series data of monthly sales. He notices the date field is characterized as a measure instead of a dimension. What could be the possible reason for this misclassification?

**Options:**

1. The date field is full of null values
2. The date field contains numerical data
3. The date field is formatted as a string
4. The date field has been incorrectly parsed during import

**Answer:** Option 4 - The date field has been incorrectly parsed during import

**Explanation:** During import, date fields may not be in the correct format (e.g., DD-MM-YYYY, YYYY-MM-DD, with dashes or slashes, 2-digit or 4-digit year). If the date format is not recognized correctly during import, Tableau may misclassify it as a measure instead of a dimension.

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### Question 3

**Scenario:** Amelia is analyzing a large dataset related to customer behavior. She applies a context filter to reduce the size of the data and then uses a set filter to focus on a particular group of customers. However, she finds the output is not as expected. Why could this be the case?

**Options:**

1. The set filter operates first
2. The context filter operates first
3. Both filters operate simultaneously
4. The filters do not influence each other

**Answer:** Option 2 - The context filter operates first

**Explanation:** In Tableau, there is a specific order of operations for filters. Context filters are applied before set filters. Understanding the order of operations is crucial:

1. Extract filters
2. Data source filters
3. Context filters
4. Dimension filters
5. Measure filters
6. Table calculation filters

Since context filters operate before set filters, this affects how the data is filtered and can lead to unexpected results if not properly accounted for.

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#### Question 4

(Note: Question 4 appears to be missing from the transcript. The numbering jumps from Question 3 to Question 5)

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#### Question 5

**Scenario:** Mara is working on a project that requires analyzing a hypothetical company's profit and sales data region-wise for different years. The dataset she is working with has separate sheets for each year. How should Mara structure the data to generate a single visualization of this multi-layered analysis?

**Options:**

1. Data Blending
2. Data Union
3. Data Join
4. Data Aggregation

**Answer:** Option 2 - Data Union

**Explanation:**

- **Data Blending** combines data from multiple data sources based on a common dimension, but it won't append the data from separate sheets.

- **Data Union** is the most appropriate option because it combines data from multiple sheets or tables into a single table, appending data from each year's sheets, which helps create a single visualization.
  - **Data Join** can combine data from multiple tables based on a common value, but it requires a shared key, which is not mentioned in this scenario.
  - **Data Aggregation** groups and summarizes data but doesn't combine data from separate sheets.
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### Question 6

**Scenario:** John wants to evaluate the total sales for each product, taking into account the customer segments in the view. Which LOD expression best serves his purpose?

**Options:**

1. {FIXED [Product Name]: SUM([Sales])}
2. {INCLUDE [Product Name]: SUM([Sales])}
3. (Other options mentioned but not fully detailed)
4. {FIXED [Segment]: ...}

**Answer:** Option 1 - {FIXED [Product Name]: SUM([Sales])}

**Explanation:**

- John wants total sales for each product while considering customer segments in the view.
  - **FIXED [Product Name]** is correct because it fixes the calculation to the product name level, and other dimensions like segments will be automatically excluded.
  - **INCLUDE [Product Name]** would add an additional dimension which is not needed and could return incorrect results if extra segments exist.
  - Fixing at the segment level would not provide values for each product.
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### Question 7

**Scenario:** Kate is studying the quarterly sales of her company and wants to create a field that represents each sale quarter's last day. Which Tableau feature helps her obtain this information most accurately?

**Options:**

1. DATEPART
2. DATETRUNC
3. NOW
4. DATEPARSE

**Answer:** Option 2 - DATETRUNC

**Explanation:**

- **DATEPART** gives a specific part of a date (day, quarter, month) but won't give the last day of the quarter.
  - **NOW** returns the current date and time, which is not relevant to this requirement.
  - **DATEPARSE** converts a string into a date format, which is not relevant here.
  - **DATETRUNC** is the correct answer because it can extract the quarter and help determine the last day of that quarter.
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### Question 8

**Scenario:** Brian, a senior researcher at Tech Gen Innovations, is analyzing trends in cryptocurrency markets using data visualization techniques. He wants to go beyond simple price trends and uncover complex interactions and dependencies among various crypto assets and external factors such as traditional market indices. Which advanced visualization technique would offer the most comprehensive and insightful analysis?

**Options:**

1. Force-directed Network Graphs
2. Parallel Sets
3. Hierarchical Edge Bundling
4. Tree Maps

**Answer:** Option 1 - Force-directed Network Graphs

**Explanation:** Force-directed Network Graphs are the most ideal choice for Brian's requirement because they:

- Visualize relationships between multiple assets and factors
  - Help in identifying clusters, communities, and key influencers
  - Use nodes to represent entities
  - Use edge thickness and color to represent relationship strength and direction
  - Are excellent for uncovering complex interactions and dependencies
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### Question 9

**Scenario:** Jane has a dataset containing customer details, including a field called "Age." She wants to create age groups (18-25, 26-35, etc.) to visualize the customer distribution in these groups. Which field type should she set Age to and why?

**Options:**

1. Measure
2. Dimension
3. Date
4. Geography

**Answer:** Option 2 - Dimension

**Explanation:**

- **Date** and **Geography** are not relevant for age data.
  - **Dimension** is correct because age groups represent categorical data used for grouping, filtering, and segmenting.
  - **Measure** is not correct because age groups are categories, not numeric data that would be aggregated.
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#### Question 10

**Scenario:** Mary must find out the maximum discount given for each shipping mode, excluding the individual states information in the view. What kind of LOD expression should she use?

**Options:**

1. {FIXED [Shipping Mode]: MAX([Discount])}
2. {INCLUDE [Shipping Mode]: MAX([Discount])}
3. {EXCLUDE [State]: MAX([Discount])}
4. {FIXED [State]: ...}

**Answer:** Option 1 - {FIXED [Shipping Mode]: MAX([Discount])}

**Explanation:**

- **{FIXED [State]}** cannot be used because we want to eliminate states, not fix to them.
  - **{INCLUDE [Shipping Mode]}** would not be appropriate for this requirement.
  - **{EXCLUDE [State]}** might seem correct, but the better option is FIXED.
  - **{FIXED [Shipping Mode]: MAX([Discount])}** is correct because the FIXED expression locks the calculation to the shipping mode level only, and other dimensions like State will be automatically excluded.
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#### Question 11

**Scenario:** Lisa, an analyst at a news agency, has data on the daily viewership of different programs. She wants to calculate the running total of viewership for each program to understand their popularity over time. Which Tableau feature should she use?

**Options:**

1. Quick Table Calculation
2. Set
3. LOD Expression
4. Data Axis

**Answer:** Option 1 - Quick Table Calculation

**Explanation:**

- **Data Axis** is not relevant for calculating running totals.
  - **LOD Expression** would add too much complexity for this straightforward requirement.
  - **Set** is not the appropriate feature for running totals.
  - **Quick Table Calculation** is the most appropriate option because it provides an easy way to calculate running totals, and this is exactly what Lisa needs to track cumulative viewership over time.
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*End of Questions*

**Tableau MCQ Questions and Answers - Part 2****Question 12**

Emma is analyzing a dataset for a year-long marketing campaign evaluation at Retail Corp. The dataset includes detailed customer reviews consisting of text, numerical ratings, and timestamps. To assess the campaign's impact on customer sentiment over various phases, she aims to visualize how sentiment trends evolve over time. Considering the complexity of correlating textual feedback with specific campaign milestones, which data preparation task is most crucial for enabling this analysis?

**Options:**

1. Removing duplicate reviews to avoid skewing the sentiment analysis
2. Converting text reviews into numerical sentiment scores for analysis
3. Normalizing timestamps to a standard format for accurate trend visualization
4. Filling in missing ratings with the average value to ensure completeness

**Answer:** Option 2 - Converting text reviews into numerical sentiment scores for analysis

**Explanation:** To visualize sentiment trends over time and correlate textual feedback with campaign milestones, the most crucial step is converting the qualitative text reviews into quantitative numerical sentiment scores that can be analyzed and visualized effectively.

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**Question 13**

Alice is working with a large dataset that includes customer IDs, order dates, and order amounts. When she drags the order date field onto the column shelf, it shows as a blue pill. She wants to create a line chart that shows order amounts over time. What should she do to facilitate that?

**Options:**

1. Convert order amount to a geographical field
2. Convert order date to a string field
3. Convert order amount to a dimension
4. Convert order date to a continuous date field

**Answer:** Option 4 - Convert order date to a continuous date field

**Explanation:**

- Geographical field is not relevant for date data
  - String field would lose the date functionality needed for time series
  - Dimension for order amount is incorrect as amounts should remain as measures
  - Continuous date field is correct because it will change the blue pill (discrete) to a green pill (continuous), which is necessary for creating proper time-based line charts
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#### Question 14

Jennifer, a lead data scientist at Geno Health Solutions, is analyzing genomic data to identify genetic markers associated with rare diseases. This is a complex dataset where she needs to compare multiple variables at once to find patterns in how they relate. Which visualization technique should she consider to effectively visualize the relationships between genes and phenotypes?

**Options:**

1. Heat Maps
2. Parallel Coordinate Plots
3. Sankey Diagrams
4. Venn Plots

**Answer:** Option 2 - Parallel Coordinate Plots

**Explanation:**

- Heat Maps show intensity but not multi-variable relationships effectively
  - Parallel Coordinate Plots are ideal for comparing multiple variables simultaneously and finding patterns in complex relationships. Each variable is represented on a separate axis, and lines connect values across variables, making it easy to identify patterns and correlations
  - Sankey Diagrams are primarily used to show flow between data points
  - Venn Plots show set overlaps but don't effectively handle multiple continuous variables
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#### Question 15

Victoria is analyzing survey data where respondents rated their agreement with various statements on a scale of 1 to 5. She wants to visualize the distribution of responses to quickly identify any outlier statements that might have significantly different ratings than the others. What type of chart should she use?

**Options:**

1. Pie Chart
2. Histogram
3. Box and Whisker Plot

#### 4. Scatter Plot

**Answer:** Option 3 - Box and Whisker Plot

**Explanation:** Box and Whisker Plots are specifically designed to visualize data distribution and identify outliers. They show the median, quartiles, and outliers clearly, making them the most appropriate choice for Victoria's requirement to see distribution and quickly spot outliers.

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#### Question 16

Sam is creating a Tableau visualization for his company's sales data. He wants to calculate the total sales for each category regardless of any other filters applied on the dashboard. Which type of LOD expression should he use?

**Options:**

1. FIXED
2. INCLUDE
3. EXCLUDE
4. CONTAINS

**Answer:** Option 1 - FIXED

**Explanation:**

- CONTAINS is not an LOD expression; it's used for searching within data fields
  - INCLUDE and EXCLUDE are affected by filters on the dashboard
  - FIXED is correct because it locks the calculation to the specified dimension (category) and is not affected by other filters on the dashboard, ensuring the total sales calculation remains constant regardless of user interactions
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#### Question 17

James drags the "Region" column onto the column shelf in Tableau and notices the field is green. What does this indicate about the Region field?

**Options:**

1. It's a measure or numerical field
2. It's a discrete or categorical field
3. It's a continuous or sequential field
4. It's an aggregate field

**Answer:** Option 3 - It's a continuous or sequential field

**Explanation:**

- Discrete or categorical field would be blue, not green
- Aggregate field alone doesn't cause a field to become green



- Measure or numerical field - Region data is not usually numeric
  - Continuous or sequential field is correct because green pills indicate continuous fields in Tableau
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### Question 18

Julia, a data analyst, is working with a dataset that contains a list of cities and their corresponding temperatures recorded. She realizes there are repeated entries for some cities and wants to present an average temperature for each city in a bar chart. Which Tableau feature should Julia use to achieve this?

#### Options:

1. Grouping
2. Aggregation
3. Joining
4. Blending

**Answer:** Option 2 - Aggregation

#### Explanation:

- Grouping combines similar items but doesn't calculate averages
  - Aggregation is correct because it allows calculation of average temperature for repeated entries (SUM, AVG, MIN, MAX, etc.)
  - Joining combines data from different tables based on common values
  - Blending combines data from different data sources
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### Question 19

Jack, a data scientist working on a health data project, wants to create bins of age data to organize patients into "Young," "Middle-aged," and "Old" categories. Which Tableau feature should he use?

#### Options:

1. Parameter
2. Group
3. Bin
4. Hierarchy

**Answer:** Option 2 - Group

#### Explanation:

- Parameter is used for user-defined inputs, not for categorizing data
- Group is correct because it allows custom definition of categories with specific age ranges (e.g., Young: 0-25, Middle-aged: 26-55, Old: 56+) with custom labels

- Bin creates fixed-size intervals (e.g., 0-5, 5-10) but doesn't allow custom category names like "Young" or "Old"
  - Hierarchy creates parent-child relationships, not categories
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### Question 20

A team recently produced a Tableau visualization of sales data and wishes to showcase the name of sales representatives as a title. Which function should be used?

**Options:**

1. UPPER
2. INT
3. YEAR
4. IFNULL

**Answer:** Option 4 - IFNULL

**Explanation:**

- UPPER converts text to uppercase letters
  - INT converts strings to integers
  - YEAR extracts the year from a date field
  - IFNULL is correct because it can display the sales representative's name, and if the value is null, it can show an alternative message like "Name not available"
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### Question 21

Melissa, a data analyst, must generate insights on customer purchasing trends in different regions. She uses a dimension filter to select a region and then applies a Top 10 filter to identify the top 10 selling items. However, she notices the visualization does not reflect the intended output. Why could this be the case?

**Options:**

1. The Top 10 filter operates before the dimension filter
2. The dimension filter operates before the Top 10 filter
3. Both filters operate simultaneously
4. The filters do not influence each other

**Answer:** Option 2 - The dimension filter operates before the Top 10 filter

**Explanation:** According to Tableau's order of operations, dimension filters are applied before measure filters (including Top N filters). This sequence affects the final output because the dimension filter reduces the dataset first, and then the Top 10 filter is applied to the already-filtered data.

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### Question 22

Michael has a dataset with profit and sales for each transaction. He wants to create a scatter plot in Tableau to compare the profit and sales for each transaction. How should he set the field types for profit and sales?

#### Options:

1. Profit as a measure and Sales as a measure
2. Profit as a dimension and Sales as a measure
3. Profit as a measure and Sales as a dimension
4. Profit as a dimension and Sales as a dimension

**Answer:** Option 1 - Profit as a measure and Sales as a measure

**Explanation:** Both profit and sales are numerical data that should be aggregated or plotted as continuous values. For a scatter plot, both axes typically contain measures. The transaction can be placed as a dimension (in rows), while profit and sales should both be measures (in columns).

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### Question 23

A Tableau beginner has a dataset containing Sales, Profit, and Region columns. He wants to visualize sales and profit based on the region. What should he classify "Region" as in this scenario?

#### Options:

1. Measure
2. Dimension
3. Date
4. Geography

**Answer:** Option 2 - Dimension

**Explanation:** Region is categorical data used for grouping, filtering, and segmenting. Dimensions are used for classification purposes, while measures are used for aggregation (sum, average, etc.). Therefore, Region should be classified as a dimension.

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### Question 24

When working with a dataset in Tableau, Ben notices every time he drags the Sales field to rows or columns, it always shows as a green pill. He wants to view individual sales records. What should he do to make the Sales field appear as a blue pill?

#### Options:

1. Convert Sales to a string field
2. Convert Sales to a dimension
3. Convert Sales to a geography field
4. Convert Sales to a date field

**Answer:** Option 2 - Convert Sales to a dimension

**Explanation:**

- Date field is not relevant for sales data
  - Geography field is not applicable to sales values
  - String field might not convert to a blue pill and won't show individual records properly
  - Dimension is correct because converting Sales from a measure (green, continuous) to a dimension (blue, discrete) will show individual sales records rather than aggregated values
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### Question 25

Lily is using Tableau to analyze sales data for a chain of grocery stores. She has monthly sales data for each store and wishes to compare the sales performance over a year. She also wants to highlight the months in which each store had the highest sales. Which chart type should she use?

**Options:**

1. Geographic Map
2. Bar Chart
3. Line Chart with Markers
4. Histogram

**Answer:** Option 3 - Line Chart with Markers

**Explanation:**

- Geographic Map is not suitable for showing trends over time
  - Bar Chart can visualize data but cannot consistently show performance over time with specific month highlights
  - Line Chart with Markers is ideal because it shows trends over time (months/years), and the markers help highlight specific data points (highest sales months)
  - Histogram is used for distribution, not time series
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### Question 26

Allen has a field in his Tableau data that comprises mixed numbers and non-number characters. To distinguish the numeric values from the rest, he wants to check if a field value is a number. Which function helps him make this distinction?

**Options:**

1. ISNUMBER
2. ROUND
3. INT
4. COS

**Answer:** Option 1 - ISNUMBER

**Explanation:**

- ISNUMBER checks if a value is numeric and returns TRUE or FALSE
  - ROUND rounds off decimal numbers (e.g., 14.96 to 15)
  - INT converts values to integers
  - COS is a trigonometric function that returns the cosine value
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### Question 27

Ethan is analyzing a dataset in Tableau with a date field. When he drags it to the column shelf, the date field is green. He must compare sales on a quarterly basis, so he changes the field from day to quarter. However, it remains green. What is the reason for that?

**Options:**

1. Because the date field contains null values
2. Because the date field is a numerical field
3. Because the quarter function doesn't change the field type
4. Because the date field is a calculated field

**Answer:** Option 3 - Because the quarter function doesn't change the field type

**Explanation:** Changing the date granularity from day to quarter doesn't change whether the field is continuous (green) or discrete (blue). The field remains continuous unless explicitly converted to discrete by right-clicking and selecting "Discrete" from the context menu.

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### Question 28

A developer wants to create a visualization showing states of the United States in different shades of color according to the ratio of their population. Which visualization will show the correct solution?

**Options:**

1. Symbol Map
2. Density Map
3. Choropleth Map
4. Tree Map

**Answer:** Option 3 - Choropleth Map

**Explanation:**

- Symbol Map uses symbols/markers of different sizes
- Density Map shows concentration/density with colors but not by defined geographic boundaries

- Choropleth Map is correct because it displays geographic regions (like states) filled with different shades of color based on data values (population ratio)
  - Tree Map is not a geographical visualization
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### Question 29

A developer working on Tableau wants to load data that can be identified by default. Which of the following options can be used for this?

#### Options:

1. Z to A descending order
2. A to Z ascending order
3. No specific order
4. Data source order

**Answer:** Option 4 - Data source order

**Explanation:** By default, Tableau loads data in the same order as it appears in the source. This is known as "Data source order," which maintains the original sequence from the data file or database.

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### Question 30

Polly wants to use a file format containing data used in a TWB file in a highly compressed columnar data format. Identify the file format that can be used for this.

**Answer:** Hyper

**Explanation:** Hyper (.hyper) is Tableau's proprietary file format that stores data in a highly compressed columnar format, providing fast query performance and efficient storage for Tableau extracts.

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### Question 31

As a developer working on Tableau, Henry wants to create a dataset. What is the maximum number of columns possible in Tableau?

#### Options:

1. 32 columns
2. 255 columns
3. 256 columns
4. 1,024 columns

**Answer:** Approximately 50 columns (Note: This answer varies by Tableau version)

#### Explanation:

- Before 2019: Maximum of 16 columns

- From 2020-2021 onwards: Increased to 50 columns
  - The options provided (32, 255, 256, 1,024) are not technically correct based on official Tableau documentation
  - Note: The exact limit may vary depending on your Tableau version. Users of Tableau 2023-2024 should verify the current limit in their version.
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### Question 32

As a data analyst, you want to measure the duration of an employee in the office. You have "In Time" and "Out Time" (punch in time and punch out time). How can you calculate the duration in hours?

#### Options:

1. DATEDIFF(hr, [In Time], [Out Time])
2. DATEDIFF(hour, [In Time], [Out Time])
3. DATE([In Time], [Out Time])
4. DIFF([In Time], [Out Time])

**Answer:** Option 2 - DATEDIFF(hour, [In Time], [Out Time])

#### Explanation:

- DIFF is not a valid Tableau function
  - DATE function is not for calculating differences between times
  - DATEDIFF with "hr" is incorrect syntax
  - DATEDIFF with "hour" is correct because it calculates the difference between two datetime values in hours. The correct syntax is: DATEDIFF(datepart, startdate, enddate)
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### Question 33

As a developer, you want to create a visualization such that the profit and sales of different products should be in a single visualization. Which of the following charts can you use?

#### Options:

1. Scatter Plot
2. Tree Map
3. Dual Axis Chart
4. Histogram

**Answer:** Option 3 - Dual Axis Chart

#### Explanation:

- Scatter Plot compares two measures but doesn't clearly show both profit and sales trends
- Tree Map shows hierarchical data but cannot effectively display both profit and sales simultaneously

- Dual Axis Chart is correct because it allows two measures (profit and sales) to be plotted on the same chart with separate Y-axes, while showing different products on the X-axis
  - Histogram shows distribution, not comparison of multiple measures
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#### Question 34

A developer has created a dashboard using four worksheets: filled map, color combo chart, parameters, and table calculation rank. How can you ensure that when the user clicks on a data element on a chart, it is also filtered with that data element across all sheets?

##### Options:

1. Use as Group property in a chart
2. Use as Set property in a chart
3. Use as Parameter property in a chart
4. Use as Filter property in a chart

**Answer:** Option 4 - Use as Filter property in a chart

**Explanation:** To create interactive filtering across multiple sheets in a dashboard, you need to use the "Use as Filter" action. When you right-click on a sheet in the dashboard and select "Use as Filter," clicking on any data element in that sheet will filter all other sheets in the dashboard accordingly.

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#### Question 35

A user wants to display various colors in a bar chart based on the following conditions:

- If profit is greater than \$10,000, the bar will be green
- If profit is less than \$10,000, the bar will be red

Which of the following features can be used for this?

##### Options:

1. `SUM(Profit) > 10000 THEN "Green" ELSEIF SUM(Profit) = 10000 THEN "Red"`
2. `IF SUM([Profit]) > 10000 THEN "Green" ELSE "Red" END`
3. `IF SUM(Profit) > 10000 THEN Color = "Green"`
4. Create a parameter and then create a calculated field based on the parameter

**Answer:** Option 2 - `IF SUM([Profit]) > 10000 THEN "Green" ELSE "Red" END`

##### Explanation:

- Option 1 has incorrect syntax
- Option 2 is correct because it follows proper Tableau calculated field syntax with IF-THEN-ELSE-END structure
- Option 3 has incorrect syntax (Color = "Green" is not valid)
- Option 4 is unnecessarily complex for this simple conditional formatting requirement



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*End of Questions - Part 2*