Specialist Practice Exam #2 Solutions

This exam follows the 2021 Specialist exam prep guide shown here: https://www.tableau.com/learn/certification/desktop-specialist

Connecting to & Preparing Data

- 1. While file types preserve connection properties such as file locations and database server addresses? [select two]
 - a. twb
 - b. tds
 - c. tdsx
 - d. hyper

tds files are data source files which do not contain the data, but to include the connection information.

tdsx is a zip file containing the data source file (tds) as well as any extract files and local files

twb stands for tableau workbook. It includes the worksheets and dashboards (if any) but not the connection information.

https://help.tableau.com/current/pro/desktop/en-us/export connection.htm

https://help.tableau.com/current/pro/desktop/en-us/environ filesandfolders.htm

- 2. Which of the following can be configured when creating an extract? [select three]
 - a. Whether to store logical or physical tables
 - b. Whether the extract should be refreshed on a schedule
 - c. Whether to limit the data extracted using filters
 - d. Whether to change the default aggregation for measures
 - e. Whether to aggregate measures for visible dimensions

The options are shown in this menu:



Setting a refresh schedule is done when you publish to Tableau server - https://help.tableau.com/current/pro/desktop/en-us/extracting refresh.htm not when you create the extract.

- 3. Which of the following can have an alias? [select two]
 - a. Parameter
 - b. Measures
 - c. Field names
 - d. Dimensions
 - e. Dates

The Tableau documentation explains, "Aliases can be created for the members of discrete dimensions only." Aliases can be set only for discrete dimensions, not for measures, field names, or dates.

https://help.tableau.com/current/pro/desktop/enus/datafields fieldproperties aliases ex1editing.htm#measures-cant-be-realiased

- 4. Which of the following should be used if, for security purposes, you'd like users to enter their database credentials in order to access the workbook:
 - a. Live connection
 - b. Extract
 - c. Hyper
 - d. Packaged data source

Correct answer is A – "If your organization enforces user-level permissions to databases, use a live connection for workbooks that connect to those databases. That way, users who interact with workbooks and data sources that require authentication will be prompted for credentials." https://onlinehelp.tableau.com/current/guides/everybody-install/en-us/everybody admin data.htm#tradeoffs-live-connection-and-extract

- 5. Which feature will allow you to show more relevant or descriptive dimension values in your view than what the original data provides?
 - a. field renaming
 - b. hierarchy
 - c. alias
 - d. group
- C "Aliasing is the alternative name that you can assign to a value in a dimension field. You can use aliases to rename specific values within a dimension. This can be useful when you want to show more relevant or descriptive dimension values in your view than what the original data provides." https://onlinehelp.tableau.com/current/pro/desktop/en-us/multipleconnections edit primary aliases.htm
 - 6. Which of the following is not a default property which can be set for a measure?
 - a. Number Format
 - b. Color
 - c. Aggregation
 - d. Sort
- D Sort is a default property for dimensions but not for measures.
 - 7. This type of join will include all values from the left table:
 - a. Inner
 - b. Right
 - c. Left
 - d. Blend
- C A left join will include all values from the left table.

https://onlinehelp.tableau.com/current/pro/desktop/en-us/joining_tables.htm#jointypes

- 8. **[Explain when to use a join versus a relationship]** Which of the following are reasons to use a join rather than a relationship?
 - a. To ensure that each worksheet queries only the tables necessary to create the view.
 - b. To combine data at different levels of granularity without introducing duplication
 - c. To specify on table as primary and another as secondary
 - d. To append rows from one table to rows from another table
 - e. To create an extract using the denormalized table

A is not correct because a join queries all the specified tables, regardless of whether fields from those tables are used in the view.

C describes a blend rather than a join, and D describes a union.

E is correct because when you use the physical table option, the denormalized table resulting from the join is saved. This can improve performance if the join results in a table with fewer rows. Table A with 1000 rows could be joined to Table B with 1 million rows, for a resulting table with only 1000 rows. In that case, creating an extract with the 1000 rows resulting from the join would have much better performance. See this https://help.tableau.com/current/pro/desktop/en-us/extracting_data.htm

Resource:

https://help.tableau.com/current/pro/desktop/en-us/relate_tables.htm#relationships-logical-tables-versus-joins-physical-tables

- 9. [Add joins and unions] Which describes how to create a union of two tables? [select two]
 - a. On the data source page, drag the first table into the canvas. Then drag a second table onto the canvas, below the first table.
 - b. On the data source page, drag the first table into the canvas. Then drag a second table onto the canvas, to the right of the first table.
 - c. On the data source page, drag the first table into the canvas. Double-click the first table to go to the physical layer. Then drag a second table onto the canvas, to the right of the first table.
 - d. On the data source page, double-click the "New Union" icon. A Union menu will appear.

 Drag both tables to the Union menu, then click OK.
- 10. Your data has a column which should be treated as a date, but when you change the data type to date you see a lot of null values or obviously incorrect dates like 12/30/1899. What can you do next since the date conversion did not work?
 - a. Edit your computer's date settings to that they correspond to the format of the date you're trying to use in Tableau
 - b. Instead of setting the field to Date, set to Date & Time
 - c. Set the type back to string, then try date conversion functions like DateParse and Date

d. Switch the metadata grid, then right click the field and select "date format settings"

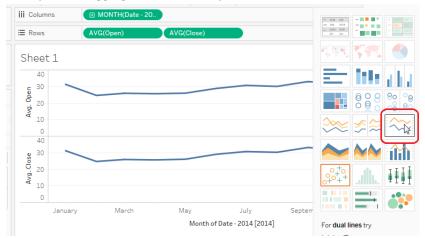
If changing type to date doesn't work, you should change the data type back to string and use a date parse function https://onlinehelp.tableau.com/current/pro/desktop/en-us/data_dateparse.htm

Exploring & Analyzing Data

- 11. You want to create a dual axis chart showing the monthly average "Open" and "Close" values for a stock. The y-axis shows the opening stock price and the x-axis shows the date. What steps should you take?
 - a. Drag and drop the field "Close" to the x-axis.
 - b. Drag and drop the field "Close" to the y-axis.
 - c. Drag the field "Close" to the path mark.
 - d. Drag the field "Close" to the row shelf, then select dual lines on the show me menu. https://kb.tableau.com/articles/howto/dual-axis-bar-chart-multiple-measures

The correct answer is D.

Example of dragging "Close" to the y-axis - Select "Dual Lines" on the show me menu



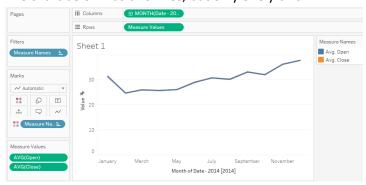
Result: Dual axis chart. You see an axis on the right side as well as the left:



Answer B is not correct because dragging Result to the y-axis will give you a chart with two lines, but not a dual axis chart.



The chart below has two lines, but only one y-axis:



- 12. You would like the person using your dashboard to select the year, and based on the year to adjust the interest rate in some related calculated fields. You will like the year selection to limit the data in the view. What Tableau element should you to let the user select the interest rate?
 - a. Dimension Filter
 - b. Context Filter
 - c. Parameter
 - d. Change Set values Dashboard Action

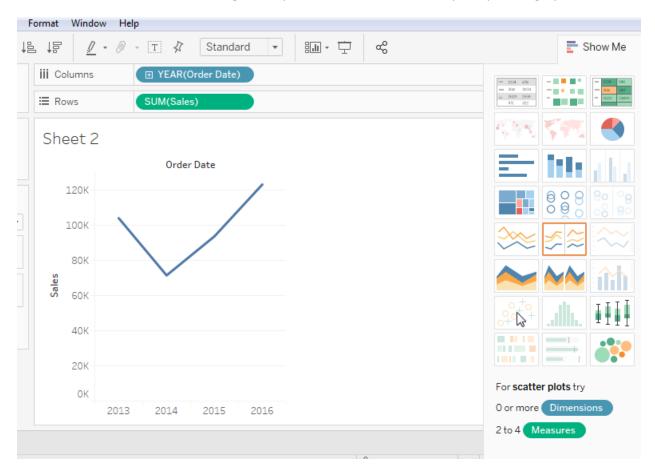
Correct answer is C. A parameter will allow the user to set a value which you can then use in a calculated field. You can also use a parameter in a calculation, and then use that calculated field in a filter to limit the data in the view.

- 13. Which type of visualization is not typically effective in showing change over time?
 - a. Bar Chart
 - b. Line Chart
 - c. Area Chart
 - d. Scatter Plot

According to the tableau visual analysis guidebook, "Some of the best visualizations for showing trends over time are line charts, area charts, and bar charts." A scatter plot does not show change over time as

effectively. See the visual analysis guidebook https://www.tableau.com/learn/whitepapers/tableau-visual-guidebook.

Also, here I have a line chart showing sales by order date and the scatter plot option is grayed out:



- 14. Which types of plots are most often used to visualize the distribution of a single continuous measure? (select all that apply)
 - a. Scatter Plot
 - b. Tree Maps
 - c. Box Plot
 - d. Histogram

Correct answer is C & D - The box plot and histogram visualize the distribution of a continuous measure.

"A histogram is a chart that displays the shape of a distribution. A histogram looks like a bar chart but groups values for a continuous measure into ranges, or bins." https://onlinehelp.tableau.com/current/pro/desktop/en-gb/buildexamples histogram.htm

"Use box plots, also known as box-and-whisker plots, to show the distribution of values along an axis." https://onlinehelp.tableau.com/current/pro/desktop/en-us/buildexamples_boxplot.htm

Scatter plots are used to understand the relationship between two or more variables rather than a single measure.

- 15. A bullet chart combines a bar chart with:
 - a. Scatter plot
 - b. Filled bubbles
 - c. Reference lines
 - d. Circle views

Correct answer is C – a bullet chart combines a bar chart with a reference line

- 16. Which of the following will result in an error
 - a. A calculation that includes more than one aggregation
 - b. Aggregation on a field that is already aggregated
 - c. A table calculation on a field that is already aggregated
 - d. An aggregation on a level of detail expression

Correct answer is B. If you try to aggregate an aggregated field, you will get the error message saying that an aggregate cannot be further aggregated.

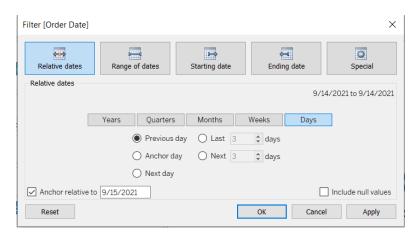
17. [Use a quick table calculation] A worksheet has a line graph showing sales by month. How could this be modified to show total sales to date for each month?



- a. Right-click Sales, then select the Quick Table calculation menu option, then select YTD
- b. Right-click Sales, hover over Measure(Sum) and then change the aggregation to cumulative sum

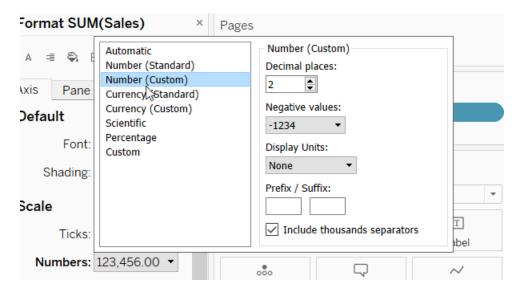
- c. Right-click Sales, hover over Measure(Sum) and then change the aggregation to running total
- d. Right-click Sales, then select the Quick Table calculation menu option, then select cumulative sum
- e. Right-click Sales, then select the Quick Table calculation menu option, then select running total
- 18. [Explain when to use a parameter] Which of the following could best be accomplished using a parameter? [choose two]
 - a. In a view with a date range filter, allow the viewer to select the anchor date
 - b. Combining related values of a dimension
 - c. In a view showing the top customers, allow the user to show how many customers to show
 - d. Allow the worksheet view to adjust the number of decimals displayed for a measure
 - e. Allow the worksheet viewer to adjust the bin size for a histogram

A is not correct because there is no option to use a parameter as an anchor date



B is incorrect because combining related values can best be done with a group or set.

D is incorrect because there is no option to use a parameter to determine the number of decimals displayed

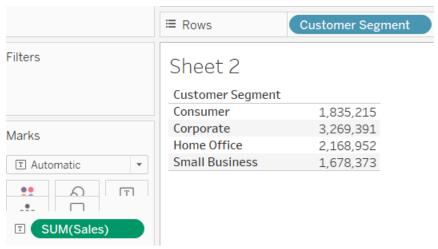


Resources

https://public.tableau.com/views/12UseCasesforParameters/Overview?:embed=y&:display_count=yes&:showTabs=y

https://interworks.com/blog/rcurtis/2016/04/20/tableau-deep-dive-parameters-parameter-overview/

19. [Display totals on a worksheet] How would you add the overall sales for all segments to the text table shown below?



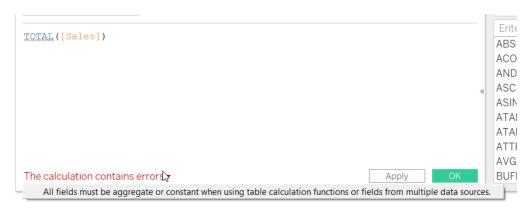
- a. Right click the Sales pill, select Quick Table Calculation, then select Grand Total
- b. Select Analysis on the toolbar, select Totals, then show Row Grand Totals
- c. Select Analysis on the toolbar, select Totals, then show Column Grand Totals
- d. Select Analysis on the toolbar, select Totals, then show All Grand Totals
- e. Select Analysis on the toolbar, select Create Calculated field, enter TOTAL([Sales]) as the calculation, then double click the new calculation to add it to the view.

A is incorrect beucause there is no Grand Total calcuaiton

B is incorrect each row has only a single value. You need to total four values in the column, so C is correct – Column Grand Totals.

D is incorrect because there is no Show All Grand Totals option

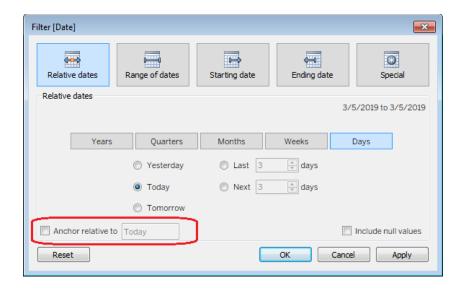
Total([Sales]) is invalid. It should be Total(Sum[Sales]))



- 20. Which type of filter usually works best with date fields?
 - a. Slider filters
 - b. List filters
 - c. Checkboxes
 - d. Text search

The Visual Analysis Best Practices explains, "Remember that slider filters are great for date and numerical values—while list filters are better for categorical data."

- 21. A relative date filter works relative to:
 - a. A parameter or field you select when creating the filter
 - b. The anchor date
 - c. The data the workbook was created or updated
 - d. The current date when the workbook is viewed
 - B Relative date filters work relative to the anchor date. By default this will be the current date, but this can be changed:



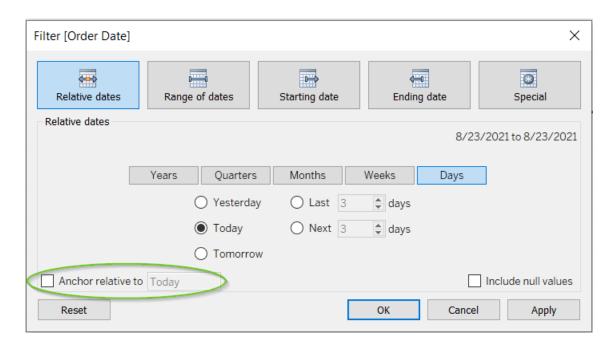
If you keep the default option, "Anchor relative to Today" then the relative date will work relative to the date when the workbook is viewed (answer D) but this can be changed.

Documentation on relative dates: https://onlinehelp.tableau.com/current/pro/desktop/en-us/qs relative dates.htm

- 22. Which of the following can use anchor dates?
 - a. The DATEPART function
 - b. Filters
 - c. Sets
 - d. Reference lines
 - e. Parameters

Anchor dates can be used for relative date filters.

https://help.tableau.com/current/pro/desktop/en-us/filtering.htm#filter-dates

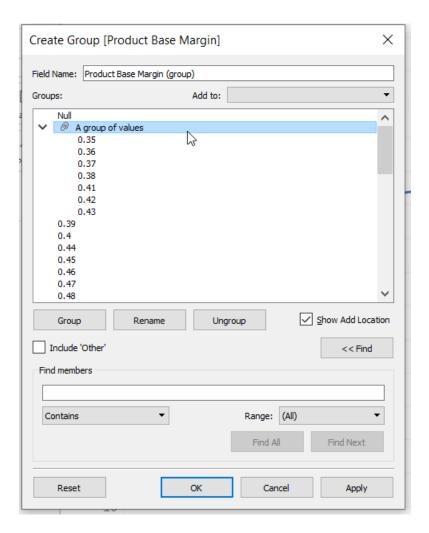


- 23. Groups are best described by which of the following? [select two]
 - a. A method for organizing multiple dimensions based on higher and lower levels
 - b. A method for combining values of a measure
 - c. A method for combining values of a dimension
 - d. A method for concatenating existing fields to create a new field
 - e. A method for determining which values of a dimension are in the Top N or Bottom N based on a related measure

Hierarchies organize multiple dimensions based on higher and lower levels. Groups do not do this.

Sets determine which values of a dimension are in the Top N or Bottom N based on a related measure

Groups can be created on measures and dimensions. Here is an example of a group being used with measures

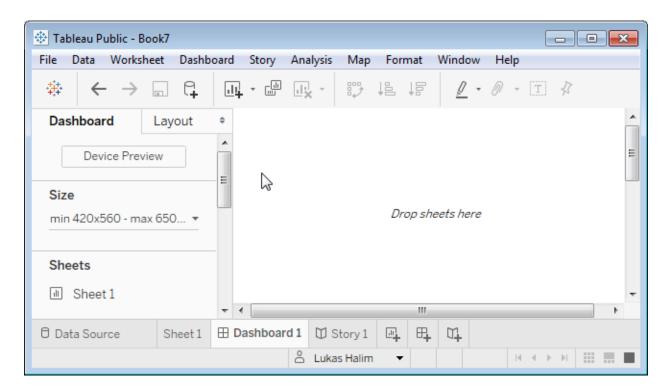


Groups do not concatenate values from existing fields.

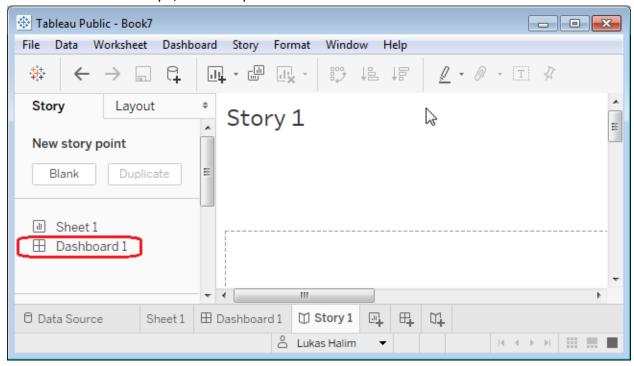
Sharing Insights

- 24. Which of the following is true?
 - a. A dashboard cannot include a story, but a story can include a dashboard
 - b. A dashboard can include a story, but a story cannot include a dashboard
 - c. A dashboard can include a story, and a story can include a dashboard
 - d. A dashboard cannot include a story, and a story cannot include a dashboard

Here is a workbook with a dashboard and a story. On the dashboard, I do not see the option to add my story:



But when I switch to Story 1, I see the option to add Dashboard 1



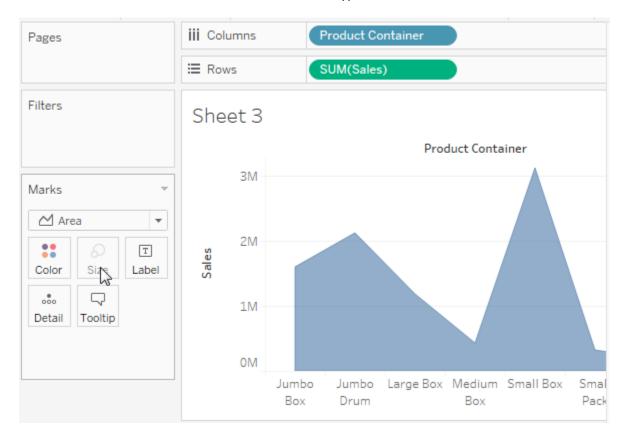
- 25. Which of the following will create a dashboard action?
 - a. Click the "More Options" arrow on the worksheet included in the dashboard layout, then select "use as filter"
 - b. Click the "More Options" arrow on the worksheet included in the dashboard layout, then select "Filter" and the field you wish to use in the filter action

- c. Right-click on a header value shown in the worksheet in the dashboard layout and select "exclude" or "keep only"
- d. Click the "More Options" arrow on the worksheet included in the dashboard layout, then select "action," add action, and Filter

Correct answer is A. B will add a quick filter to the dashboard, but not a filter action. C will create a context filter, not a filter action. C will filter the current worksheet, but will not create a dashboard action. D is not the right choice because there is no action option in the "More Options" menu.

- 26. Which of the following mark types cannot be adjusted using the Size slider?
 - a. Line
 - b. Pie
 - c. Bar
 - d. Area

The Size of Marks button is disabled when the marks type is Area:

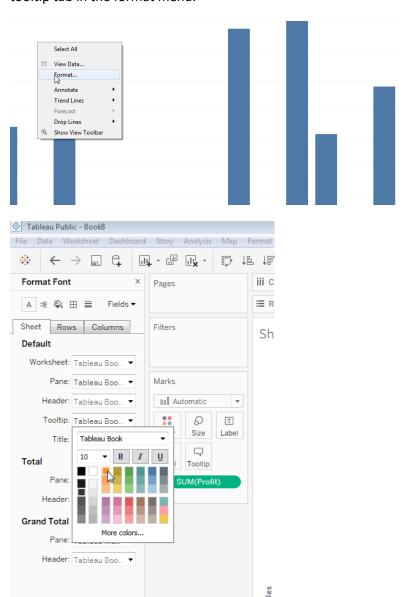


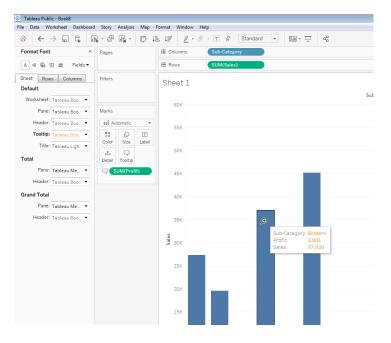
https://onlinehelp.tableau.com/current/pro/desktop/enus/viewparts marks markproperties.htm#SizeProp

- 27. How would you change the font color of the tooltip? (Select all that apply)
 - a. Click on "color" in the marks area, select "tooltip" in the dropdown, and select the desired color.

- b. Right-click on the view, select "Format" and select the dropdown next to tooltip. Then select the color.
- c. Click on the tooltip button in the Marks area, highlight the text, and select the desired color using the dropdown
- d. Right-click on the view, select "Format" and you will see several tabs in the formatting menu "Sheets," "Rows," Columns" and "Tooltip." Select the tootip tab and then use the formatting menu to select the color.

Answers are B & C. The color button in the marks area will not show you a tooltip option, and there is no tooltip tab in the format menu.





- 28. Which of the following action types can be used to create proportional brushing?
 - a. URL Action
 - b. Filter Action
 - c. Set Action
 - d. Sheet Action

Answer is C. See https://onlinehelp.tableau.com/current/pro/desktop/en-us/actions sets.htm#Examples and https://www.tableau.com/about/blog/2018/8/how-do-proportional-highlighting-set-actions-latest-tableau-beta-92168 for a demonstration of how a set action can use used to achieve proportional brushing.

Understanding Tableau Concepts

- 29. Which of the following describes the Measure Names field (select all that apply)
 - a. It is a Measure automatically created by Tableau
 - b. When you create a view with multiple measures on a single continuous axis, Tableau will automatically add Measure Names to the view.
 - c. When you add *Measure Names* to a view, all of the measure names appear as row or column headers in the view. The headers include each measure name. This feature becomes useful when you are working with a text table that shows multiple measures.
 - d. Measure Names is a system generated field that contains the names of all the measures in your Tableau workbook, including the system generated measures such as *Latitude* and *Longitude*.

A is incorrect because *Measure Name* is a Dimension, not a value.

D is incorrect because *Measure Names* does not include Latitude and Longitude.

Explanation of *Measure Names* - https://onlinehelp.tableau.com/current/pro/desktop/en-us/datafields understanddatawindow meavalues.htm#AboutMN

- 30. You add two fields to your Tableau view, "Profit" and "Average Profit." When you add Profit to the view, you see a pill with the label, "SUM(Profit)" but when you add Average Profit to the view, you see a pill with the label, "AGG(Average Profit)." Why does one field have SUM and another AGG?
 - a. Each field has default properties, including default aggregation. Profit had SUM set as its default aggregation, while Average Profit had AGG set as its default.
 - b. AGG is applied by default to discrete fields, while SUM is applied to continuous fields. Average Profit was set to discrete, while Profit was set to continuous.
 - c. AGG is applied by default to dimensions, while SUM is applied to measures. Average Profit is a dimension, while Profit is a measure.
 - d. AGG indicates that the "Average Profit" already includes some type of aggregation.

 "Profit" does not include aggregation, so an aggregate function is applied when the field is added to the view.

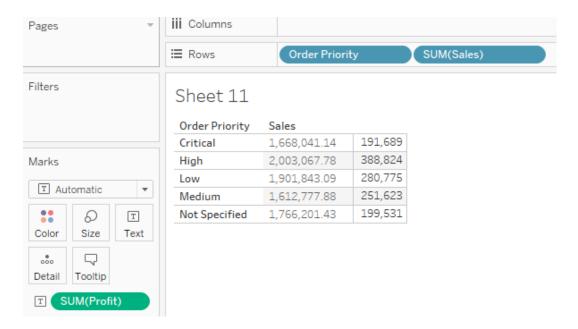
The correct answer is D. When a calculated field which already includes aggregation is added to a view with aggregated measures, AGG indicates that the field already includes aggregation. Measures without aggregation will be aggregated when they are added to the view.

- 31. Which of the following field types will create a color palette?
 - a. Measure
 - b. Dimension
 - c. Continuous
 - d. Discrete

A continuous field will create a color gradient, while a discrete field will create a color palette.

https://onlinehelp.tableau.com/current/pro/desktop/enus/viewparts marks markproperties color.htm#Categorical Palettes

32. Examine the following view and describe the most likely field type for Order Priority and Sum(Sales)



- a. Order Priority is a discrete measure, and Sum(Sales) is a discrete dimension.
- b. Order Priority is a discrete measure, and Sum(Sales) is a continuous measure.
- c. Order Priority is a discrete dimension, and Sum(Sales) is a continuous dimension.
- d. Order Priority is a discrete dimension, and Sum(Sales) is a discrete measure.

Correct answer is D – Order priority and SUM(Sales) both create headers, so both are discrete. SUM(Sales) is a measure, since you cannot take the sum of a dimension. Order Priority is a string, so it must be a dimension.

- 33. You connect Tableau to an Excel file which includes a column that has mostly numeric data, but has a few date and text values mixed in. Tableau set the data type for this field as Number.

 What happens to the date and text values when the data is imported to Tableau?
 - a. The date and text values are both set to null
 - b. The date and text values are both set to zero
 - c. The date values are set to the number of days since 1/1/1900 and the text value is set to null.
 - d. The date values are set to the number of days since 1/1/1900 and the text value is set to zero.

The correct answer is C: when the data type is mapped as numbers, text is treated as null while dates are treated as the number of days since 1/1/1900. See the section titled, "Mixed data types in data from files" here: https://onlinehelp.tableau.com/current/pro/desktop/en-us/datafields_typesandroles_datatypes.htm

- 34. Which field types are more common?
 - a. Discrete dimension, continuous measure
 - b. Continuous dimension, continuous measure

- c. Discrete dimension, discrete measure
- d. Continuous dimension, discrete measure

In Tableau, it is more common to have discrete dimensions and continuous measures, although fields can also be set as continuous dimensions and discrete measure.

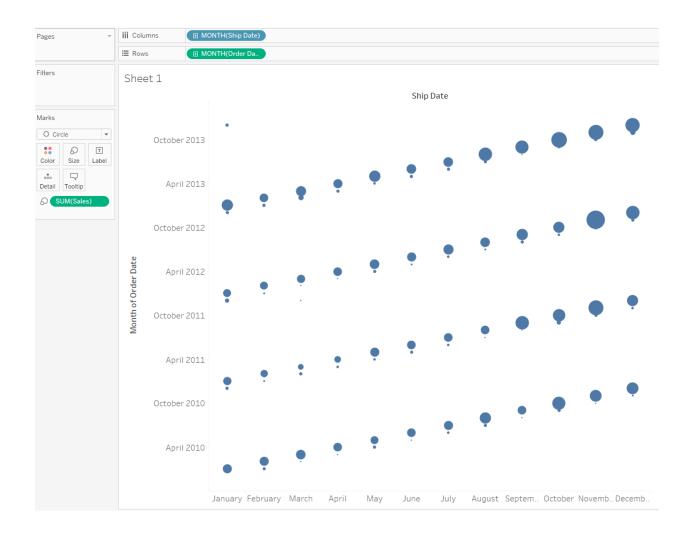
https://onlinehelp.tableau.com/current/pro/desktop/en-us/datafields typesandroles.htm#About

35. The visualization shows ship date and order date. Are the dates discrete or continuous?



- a. Ship date is discrete, order date is continuous
- b. Ship date is discrete, order date is discrete
- c. Ship date is continuous, order date is discrete
- d. Ship date is continuous, order date is continuous

Correct answer is A. Blue pills indicates discrete and creates headers, while green pill indicates continuous and creates axis.

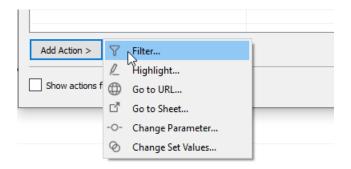


- 36. When the Use as Filter option is selected for a worksheet in a dashboard, what is the default for how the action is run?
 - a. On right-click
 - b. On hover
 - c. On select
 - d. On menu
 - e. On highlight

When you use the Use as Filter option to create a dashboard option, the action will be run on select.

- 37. Which of the following are dashboard actions? [select two]
 - a. Change Group
 - b. Change Set Values
 - c. Change Bin
 - d. Change Parameter
 - e. Change Map Zoom Area

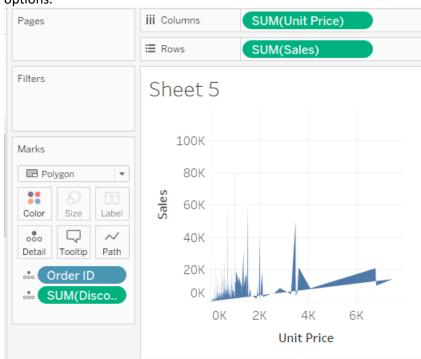
The available dashboard options are shown below



- 38. Which mark type cannot have its size adjusted?
 - a. Circle
 - b. Text
 - c. Line
 - d. Polygon
 - e. Pie

https://help.tableau.com/current/pro/desktop/enus/viewparts marks markproperties.htm#edit-marks-sizes

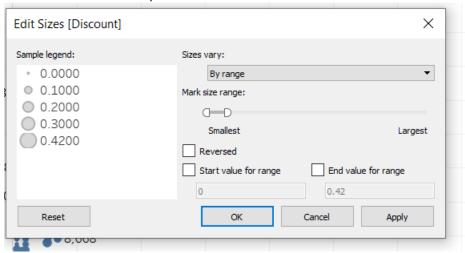
When Polygon is selected, the Size option will be greyed out. It will be enabed with the other options.



- 39. Which of the following are options for mark sizes? [Select two]
 - a. Stepped
 - b. By calculation

- c. Reversed
- d. By parameter
- e. By range

Here are the mark size options for a continuous measure:



- 40. Which dashboard layouts are created automatically by default? [select two]
 - a. Default
 - b. Tablet
 - c. Desktop
 - d. Web
 - <mark>e. Phone</mark>

The Tableau documentation notes, "To create phone layouts whenever you create a new dashboard, choose Dashboard > Add Phone Layouts to New Dashboards. (This option is on by default.)" https://help.tableau.com/current/pro/desktop/en-us/dashboards dsd create.htm#automatically-add-phone-layouts

Try creating a new dashboard and select the Layout pane. When you do this, you should see the Default and Phone layouts have been created automatically, unless you change the default option.