Tableau Specialist Study Guide

Connecting to & Preparing Data

This link summarizes the Tableau file types. https://onlinehelp.tableau.com/current/pro/desktop/en-us/environ_filesandfolders.htm

Create and save data connections

Note that you can't save a data connection on Tableau Public – you need Tableau desktop to do this.

https://onlinehelp.tableau.com/current/pro/desktop/en-us/export_connection.htm

Create a live connection to a data source

When you connect to a data source you will initially be using a live connection. It's a live connection unless you create an extract.

Explain the differences between using live connections versus extracts

When you create a live connection, when you refresh a Tableau view it will update based on changes to the underlying data. When you create an extract, the Tableau view will use the same underlying data unless you choose to refresh the extract.

If you create an extract, your Tableau workbook will continue to work even if you are not able to connect to the original data source. For example, you can create an extract while you are connected to the network, but still be able to use the extract even when you are offline.

http://drawingwithnumbers.artisart.org/tde-or-live-when-to-use-tableau-data-extracts/

https://www.tableau.com/about/blog/2016/4/tableau-online-tips-extracts-live-connections-cloud-data-53351

Create an extract

This feature is not available in Tableau Public, but you can see how to do it in Tableau Desktop here: https://onlinehelp.tableau.com/current/pro/desktop/en-us/extracting_data.htm

Save metadata properties in a . TDS

Data Source (.tds) – Tableau data source files have the .tds file extension. Data source files are shortcuts for quickly connecting to the original data that you use often. Data source files do not contain the actual data but rather the information necessary to connect to the actual data as well as any modifications you've made on top of the actual data such as changing default properties, creating calculated fields, adding groups, and so on.

https://onlinehelp.tableau.com/current/pro/desktop/en-us/export_connection.htm

Modify data connections

Add a join

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

A join is a concept from SQL (SQL stands for Structured Query Language), so if you would like general information on joins you can see it here: https://www.w3schools.com/sql/sql_join.asp

Add a blend
https://onlinehelp.tableau.com/current/pro/desktop/en-us/multiple_connections.htm

Unlike joins and unions, blends are not a SQL concept.

What is the difference between a join and a blend? Data blending simulates a traditional left join. The main difference between the two is when the aggregation is performed. A join combines the data and then aggregates. A blend aggregates and then combines the data.

How to decide whether to do a join or a blend? https://kb.tableau.com/articles/howto/deciding-between-joining-tables-and-blending-data

Add a union
https://onlinehelp.tableau.com/current/pro/desktop/en-us/union.htm

A union is a concept from SQL (SQL stands for Structured Query Language), so if you would like more general information on unions you can see it here: https://www.w3schools.com/sql/sql_union.asp

Manage data properties

Rename a data field
https://onlinehelp.tableau.com/current/pro/desktop/en-us/howto_connect.htm

Assign an alias to a data value
https://onlinehelp.tableau.com/current/pro/desktop/en-us/datafields_fieldproperties_aliases_ex1editing.htm

Assign a geographic role to a data field
https://onlinehelp.tableau.com/current/pro/desktop/en-us/maps_geographicroles.htm

Change data type for a data field (number, date, string, boolean, etc.)
https://onlinehelp.tableau.com/current/pro/desktop/en-us/datafields_typesandroles_datatypes.htm

Change default properties for a data field (number format, aggregation, color, date format, etc.)
https://onlinehelp.tableau.com/current/pro/desktop/en-us/datafields_fieldproperties.htm

Exploring & Analyzing Data

Create basic charts
https://onlinehelp.tableau.com/current/pro/desktop/en-us/dataview_examples.htm

Create a bar chart
https://onlinehelp.tableau.com/current/pro/desktop/en-us/buildexamples_bar.htm

Create a line chart
https://onlinehelp.tableau.com/current/pro/desktop/en-us/buildexamples_line.htm

Create a scatterplot
https://onlinehelp.tableau.com/current/pro/desktop/en-us/buildexamples_scatter.htm

Create a map using geographic data
https://onlinehelp.tableau.com/current/pro/desktop/en-us/buildexamples_maps.htm

Create a combined axis chart
https://onlinehelp.tableau.com/current/pro/desktop/en-us/qs_combo_charts.htm

Create a dual axis chart
https://kb.tableau.com/articles/howto/dual-axis-bar-chart-multiple-measures

Create a stacked bar
https://onlinehelp.tableau.com/current/pro/desktop/en-us/buildexamples_bar.htm (scroll down to step 7)

Create a chart to show specific values (crosstab, highlight table)
Crosstab (also called text table): https://onlinehelp.tableau.com/current/pro/desktop/en-us/buildexamples_text.htm

Highlight table: https://onlinehelp.tableau.com/current/pro/desktop/en-us/buildexamples_highlight.htm

Organize data and apply filters

Create a visual group
https://onlinehelp.tableau.com/current/pro/desktop/en-us/sortgroup_groups_editing.htm

Create a group using labels
https://onlinehelp.tableau.com/current/pro/desktop/en-us/sortgroup_groups_creating.htm

Create a set
https://onlinehelp.tableau.com/current/pro/desktop/en-us/sortgroup_sets_create.htm

Organize dimensions into a hierarchy
https://onlinehelp.tableau.com/current/pro/desktop/en-us/qs_hierarchies.htm

Add a filter to the view
https://onlinehelp.tableau.com/current/pro/desktop/en-us/filtering.htm

Add a context filter
With sets: https://kb.tableau.com/articles/issue/top-n-unexpected-results

For performance: https://onlinehelp.tableau.com/current/pro/desktop/en-us/filtering_context.htm

Add a date filter
Relative date filters: https://onlinehelp.tableau.com/current/pro/desktop/en-us/qs_relative_dates.htm

Apply analytics to a worksheet

Add a manual or a computed sort
https://onlinehelp.tableau.com/current/pro/desktop/en-us/sortgroup_sorting_computed_howto.htm

Add a reference line or trend line
Reference line: https://onlinehelp.tableau.com/current/pro/desktop/en-us/reference_lines.htm#Add_a_Reference_Line

Trend line: https://onlinehelp.tableau.com/current/pro/desktop/en-us/trendlines_add.htm

Use a table calculation
https://onlinehelp.tableau.com/current/pro/desktop/en-us/calculations_calculatedfields_understand_types.htm#Table

https://onlinehelp.tableau.com/current/pro/desktop/en-us/calculations_tablecalculations_quick.htm

Use bins and histograms

Bins: https://onlinehelp.tableau.com/current/pro/desktop/en-us/calculations_bins.htm

Histograms: https://onlinehelp.tableau.com/current/pro/desktop/en-us/buildexamples_histogram.htm

Create a calculated field (e.g. string, date, simple arithmetic)

https://onlinehelp.tableau.com/current/pro/desktop/en-us/calculations_calculatedfields.htm

Add a parameter

https://onlinehelp.tableau.com/current/pro/desktop/en-us/parameters_create.htm

Sharing Insights

Format view for presentation

https://onlinehelp.tableau.com/current/pro/desktop/en-us/formatting.htm

Visual best practices guidebook: https://www.tableau.com/learn/whitepapers/tableau-visual-guidebook?signin=c6cf87638b3864d1c393ffafb79ae10c

Use color

https://onlinehelp.tableau.com/current/pro/desktop/en-us/visual_best_practices.htm#Change_color_with_purpose

https://onlinehelp.tableau.com/current/pro/desktop/en-us/visual_best_practices.htm#Limit_colors

Use bolding

https://onlinehelp.tableau.com/current/pro/desktop/en-us/formatting_fonts_beta.htm

Use shapes

https://onlinehelp.tableau.com/current/pro/desktop/en-us/viewparts_marks_markproperties.htm#edit-shapes

Change size of marks

https://onlinehelp.tableau.com/current/pro/desktop/en-us/viewparts_marks_markproperties.htm#edit-marks-sizes

Select fonts

https://onlinehelp.tableau.com/current/pro/desktop/en-us/formatting_fonts_beta.htm

Create and modify a dashboard

Create a dashboard layout

https://onlinehelp.tableau.com/current/pro/desktop/en-us/dashboards_organize_floatingandtiled.htm

Add interactive or explanatory elements

https://onlinehelp.tableau.com/current/guides/get-started-tutorial/en-us/get-started-tutorial-build.htm#add-interactivity

Add dashboard actions

https://onlinehelp.tableau.com/current/pro/desktop/en-us/actions.htm

Modify existing dashboard layout for mobile devices

https://onlinehelp.tableau.com/current/pro/desktop/en-us/dashboards_dsd_create.htm

Create a story using dashboards or views
https://onlinehelp.tableau.com/current/pro/desktop/en-us/story_create.htm

Share a twbx as a PDF
https://onlinehelp.tableau.com/current/pro/desktop/en-us/save_export_image.htm

Share a twbx as an image
https://onlinehelp.tableau.com/current/pro/desktop/en-us/save_export_image.htm

Understanding Tableau Concepts

Dimensions and measures
https://www.tableau.com/drive/dimensions-and-measures-intro

Explain what kind of information dimensions usually contain
https://onlinehelp.tableau.com/current/pro/desktop/en-us/datafields_typesandroles.htm#Dimension

Explain what kind of information measures usually contain
https://onlinehelp.tableau.com/current/pro/desktop/en-us/datafields_typesandroles.htm#Measure

Discrete and continuous fields

Explain how discrete fields are displayed in Tableau
https://onlinehelp.tableau.com/current/pro/desktop/en-us/datafields_typesandroles.htm#Behavior

Explain how continuous fields are displayed in Tableau
https://onlinehelp.tableau.com/current/pro/desktop/en-us/datafields_typesandroles.htm#Behavior

Explain the difference between discrete date parts and continuous date values in Tableau
https://onlinehelp.tableau.com/current/pro/desktop/en-us/datafields_typesandroles.htm#Behavior

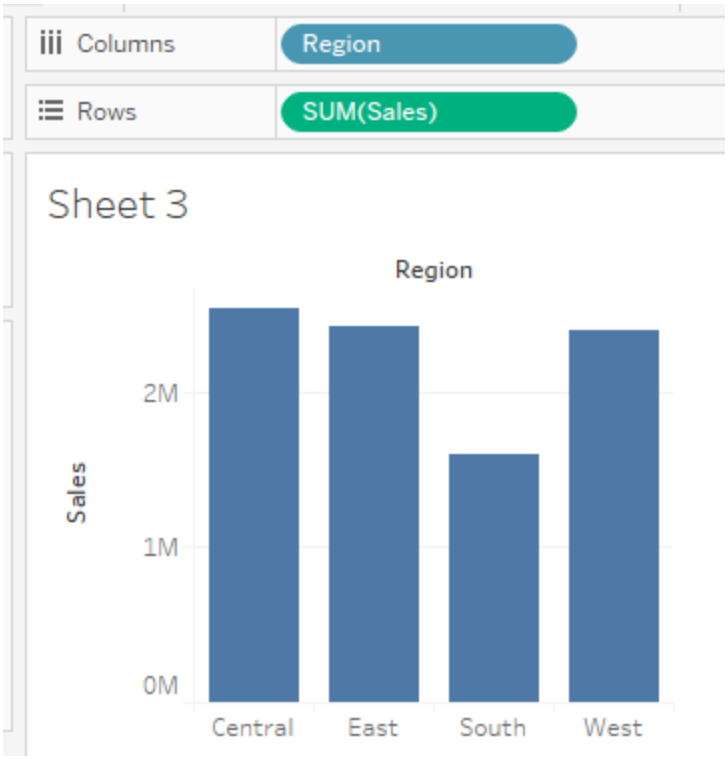
Aggregation
https://onlinehelp.tableau.com/current/pro/desktop/en-us/calculations_aggregation.htm

Explain why Tableau aggregates measures
If the measure is not aggregated, you would all of the individual values from the underlying in the view.

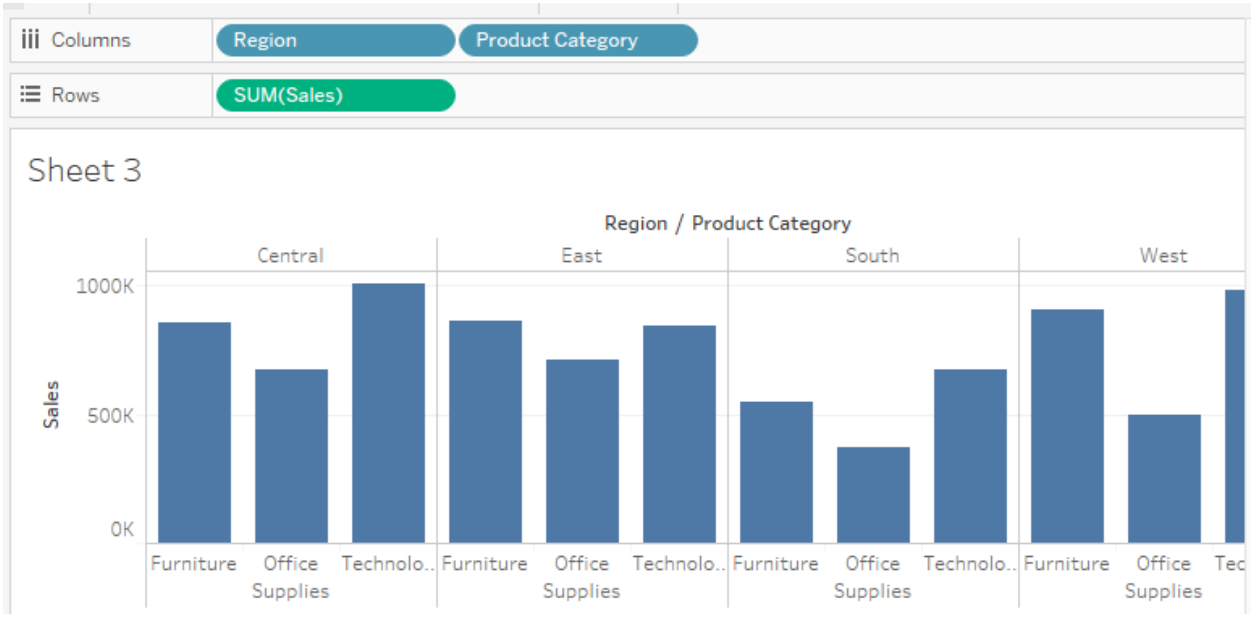
Describe how an aggregated measure changes when dimensions are added to the view
Adding dimensions to the view increases the granularity, also called the level of detail.

https://onlinehelp.tableau.com/current/pro/desktop/en-us/datafields_typesandroles.htm#how-dimensions-affect-the-level-of-detail-in-the-view

For example, if you have a view with the region dimension and SUM([Sales]):



Adding the Product Category dimension to the view will increase the granularity:



Now, instead of seeing Sum(SALES) for each region, we see SUM(Sales) for all combinations of region and product category that exist in the underlying data.