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C E R T I F I E D

**Day 1**











# slack

This will be our primary form  
of communication. Join  
[here](#), or click the logo



# Tentative Calendar

Today	<	>	September 2019							Month ▾	
SUN Sep 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7					
8	9	10	11	12	13	14					
15	16	17	18	19	20	21					
22	23	24	25	26  7:30pm Tableau 1: Conne	27  11:20am Tableau 1: Conr	28					
29	30	Oct 1	2	3  7:30pm Tableau 2: Explor	4  11:20am Tableau 2: Explk	5					

# October

Today < > October 2019						
<div>🔍 ⓘ ⚙️ Month ▾</div>						
SUN 29	MON 30	TUE Oct 1	WED 2	THU 3 ● 7:30pm Tableau 2: Explor	FRI 4 ● 11:20am Tableau 2: Expl	SAT 5
6	7	8	9	FALL BREAK		
13 FALL BREAK	14	15	16	17 ● 7:30pm Tableau 3: Sharir	18 ● 11:20am Tableau 3: Shar	19
20	21	22	23	24 ● 7:30pm Tableau 4: Under	25 ● 11:20am Tableau 4: Unde	26
27	28	29	30	31 Halloween	Nov 1	2



# Study Guides

We will be using the [Tableau provided guide](#) extensively.

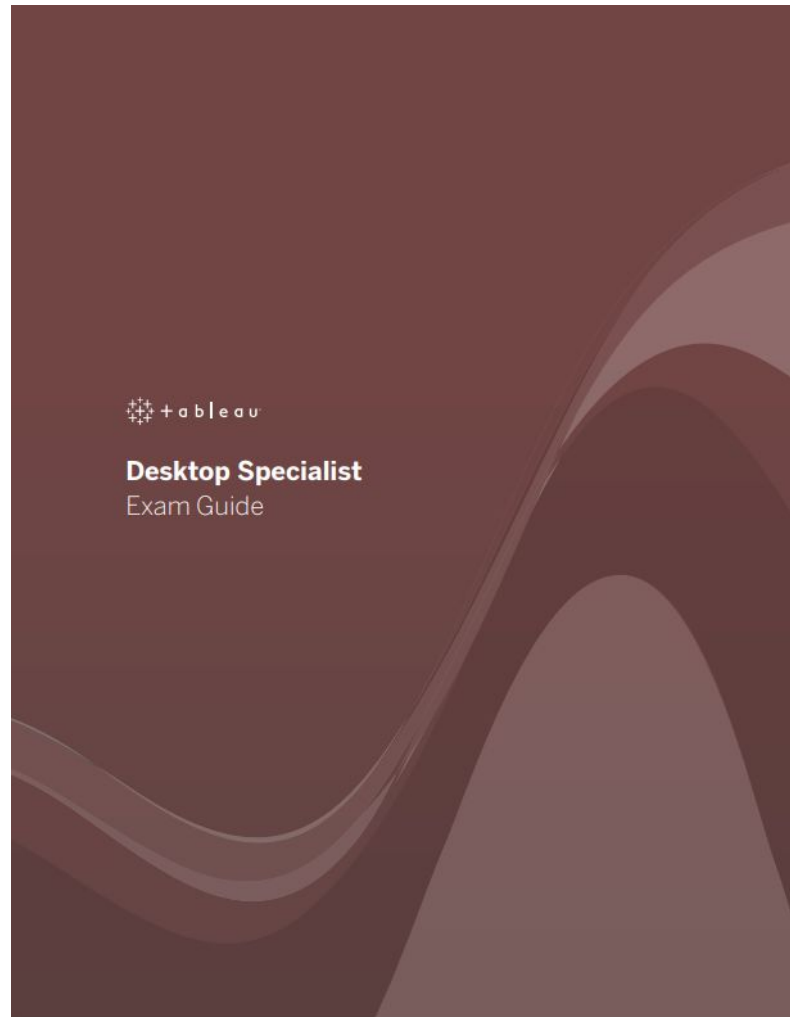
Bookmark it for easy access.

It includes:

- The format of the test
- What it will cover
- Sample questions
- Helpful links

AIMS Society Study Guide:

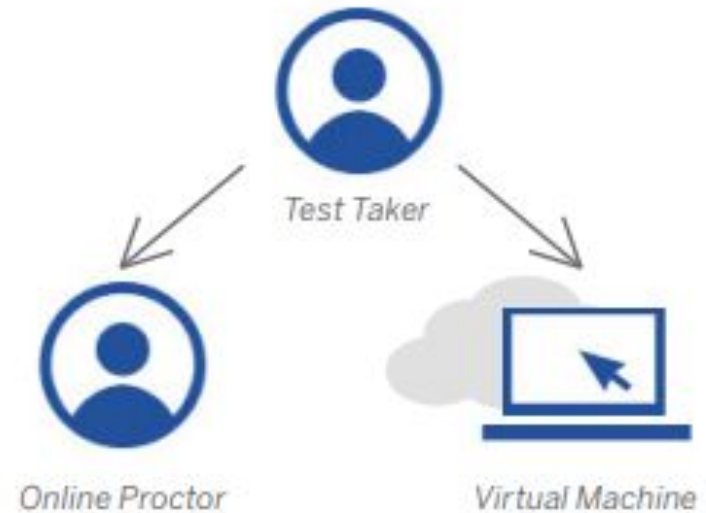
- Links to videos for each topic





# Exam Format

- \$80 Test
- 60 Minutes
- 30 Questions
- Multiple Choice, Hands-On
- Passing Score: 70%
- Conducted via Virtual Machine
- Proctored





# Today's Topic - Connecting and Preparing Data

## Create and save data connections

- Create a live connection to a data source
- Explain the differences between live connections and extracts
- Create an extract
- Save metadata in a .TDS

## Modify data connections

- Joins
- Blends
- Unions

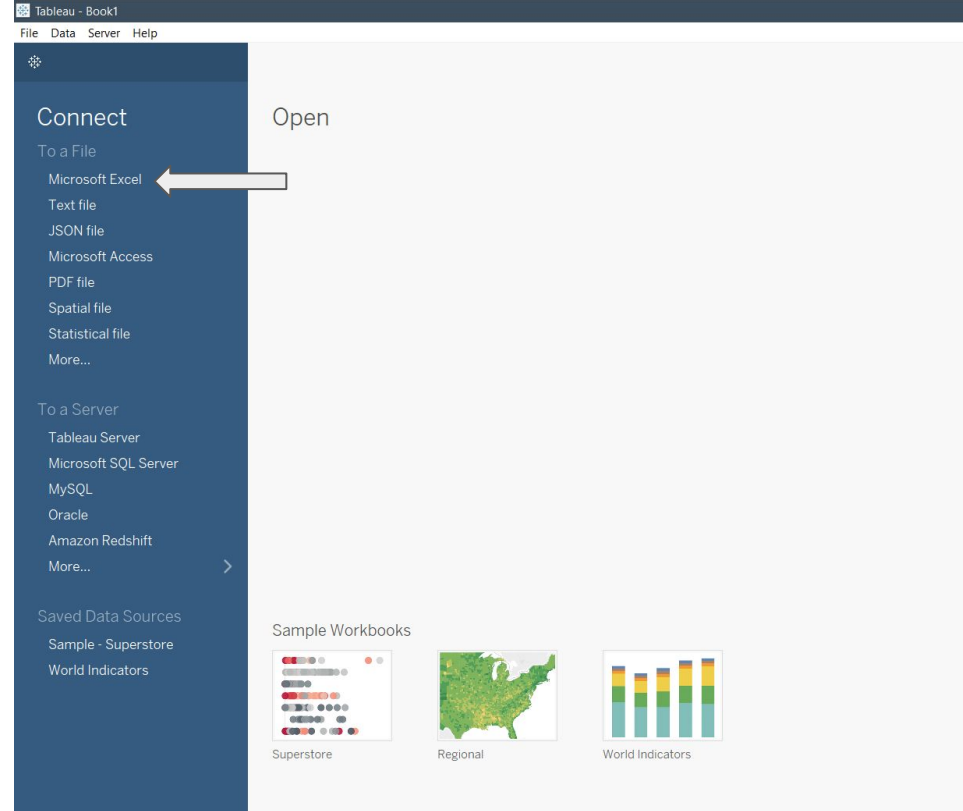
## Manage data properties

- Rename a data field
- Assign a geographic role to a data field
- Change data type for a data field
- Change default properties for a data field



# Connect Data

- Download [example data set](#)
- Extract it to somewhere you can access on your computer
- Select Microsoft Excel in the Connect tab
- Choose the Global Superstore Orders







# Live

# VS

# Extract

- Direct connection to data
- Real-time updates
- Data queries only as fast as the database itself

- “Snapshots” of data
- Much faster than Live
- Does not update automatically

Orders (Global Superstore Orders 2016)

Connection ☒ Live ☐ Extract Filters 0 | Add

Orders

Sort fields Data source order ☐ Show aliases ☐ Show hidden fields 1,000 rows

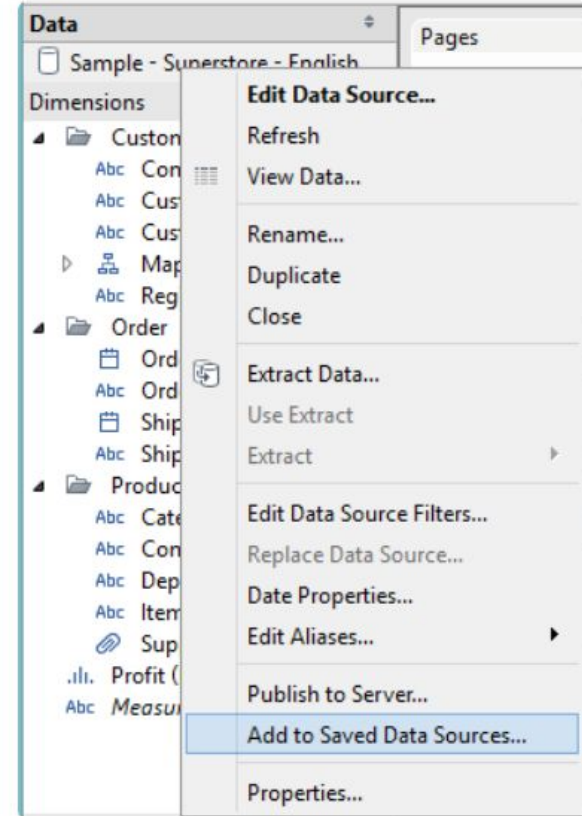
#	Abc	Abc	Abc	Abc	Abc	Abc	Abc	Abc	Abc	Abc	Abc
Orders	Orders	Orders	Orders	Orders	Orders	Orders	Orders	Orders	Orders	Orders	Orders
Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Na...	Segment	Postal Code	City	State	Country



## Option 1

### Save metadata in a .TDS

- Contains only the information you need to connect to the data source
  - Data Source Type
  - Connection information specified on the data source page; for example, database server address, port, location of local files, tables
  - Groups, sets, calculated fields, bins
  - Default field properties; for example, number formats, aggregation and sort order
- Used when everyone has access to the same data source

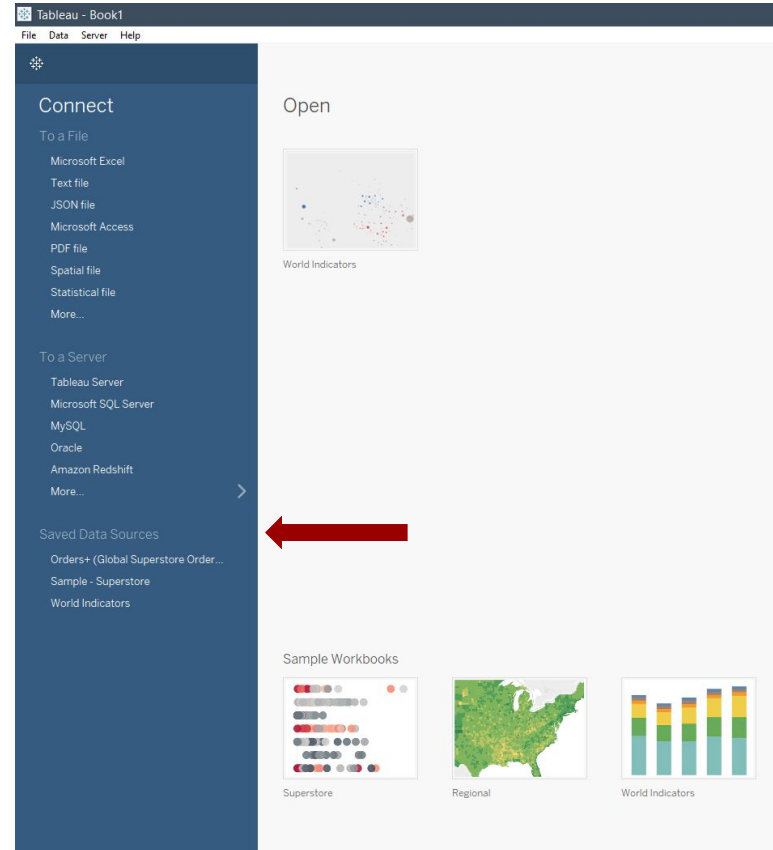




# Open a .TDS

Note:

You have to either be connected to the same database server or have the same data as the person who made it





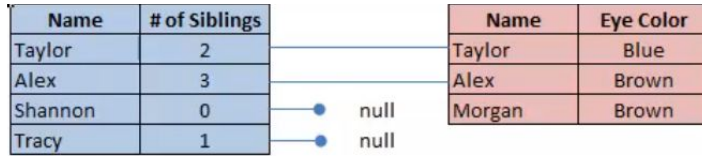
# Join

- Combining related data via **common fields** (Like a primary key)
  - Results in one virtual table that includes the **columns of both tables**
  - Combined at **row** level
- 
- *Note: the field you join on must have the same data type*



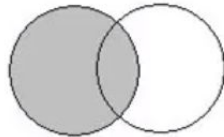
# Join Types

## Left Join

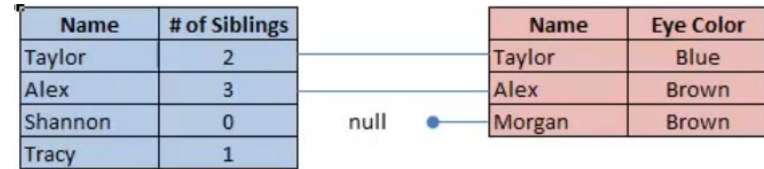


Left Join

Name	# of Siblings	Eye Color
Taylor	2	Blue
Alex	3	Brown
Shannon	0	null
Tracy	1	null

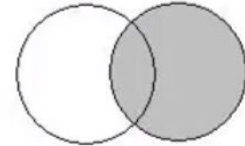


## Right Join



Right Join

Name	Eye Color	# of Siblings
Taylor	Blue	2
Alex	Brown	3
Morgan	Brown	null





# Join Types

## Inner Join

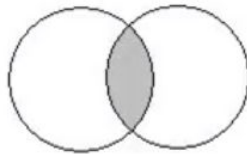
Name	# of Siblings
Taylor	2
Alex	3
Shannon	0
Tracy	1

Name	Eye Color
Taylor	Blue
Alex	Brown
Morgan	Brown



Inner Join

Name	# of Siblings	Eye Color
Taylor	2	Blue
Alex	3	Brown



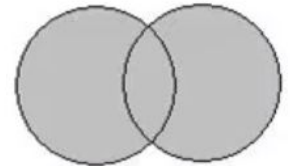
## Outer Join

Name	# of Siblings
Taylor	2
Alex	3
Shannon	0
Tracy	1

Name	Eye Color
Taylor	Blue
Alex	Brown
Morgan	Brown

Outer Join

Name	# of Siblings	Eye Color
Taylor	2	Blue
Alex	3	Brown
Shannon	0	null
Tracy	1	null
Morgan	null	Brown



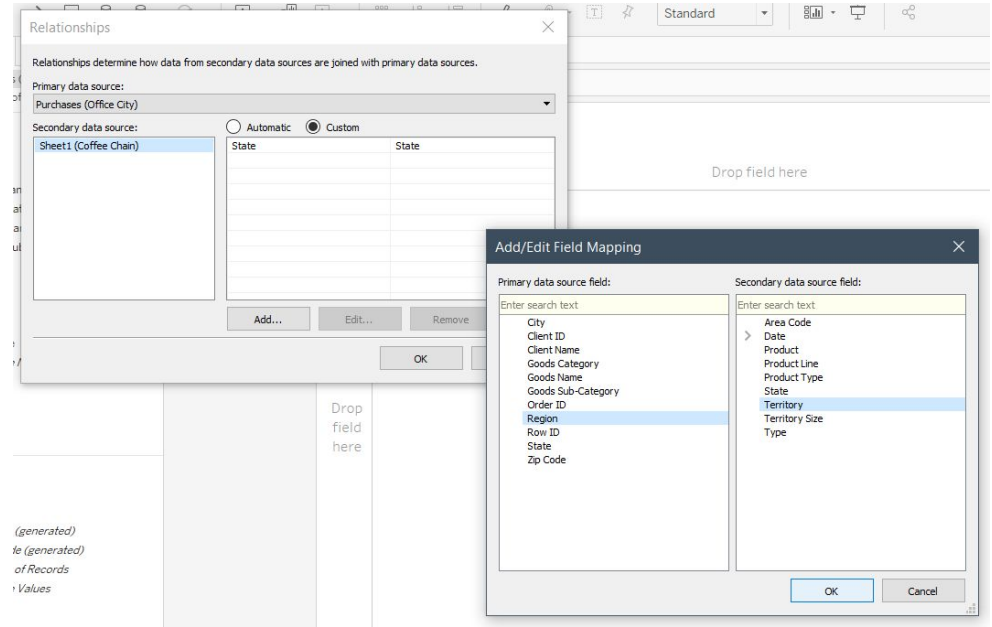
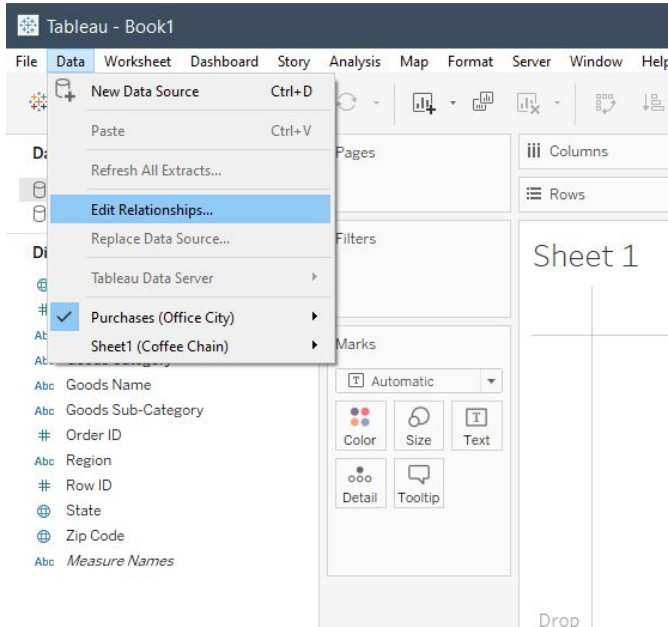


# Blending

- Combining data from multiple data sources into a single view
- Separate queries to separate data sources - aggregates results to common level in tableau
- Unlike joins, data blending keeps the data sources separate and simply displays their information together
  - Brings in additional information from a secondary data source and displays it with data from the primary data source directly in the view



# How to create a Blend







# Union

- Bring together two or more tables
- Joins - horizontal (add columns)
- Union - vertical (add rows)
- If field names don't match, tableau will function like an outer join by appending new rows and new columns



# Union

May2016

DAY	CUSTOMER	PURCHASES	TYPE
4	Lane	5	Credit
10	Chris	6	Credit
28	Juan	1	Credit

June2016

DAY	CUSTOMER	PURCHASES	TYPE
1	Lisa	3	Credit
28	Isaac	4	Cash
28	Sam	2	Credit

July2016

DAY	CUSTOMER	PURCHASES	TYPE
2	Mario	2	Credit
15	Wei	1	Cash
21	Jim	7	Cash

A union of these tables creates the following single table that contains all rows from all tables.

Union

DAY	CUSTOMER	PURCHASES	TYPE
4	Lane	5	Credit
10	Chris	6	Credit
28	Juan	1	Credit
1	Lisa	3	Credit
28	Isaac	4	Cash
28	Sam	2	Credit
2	Mario	2	Credit
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21	Jim	7	Cash



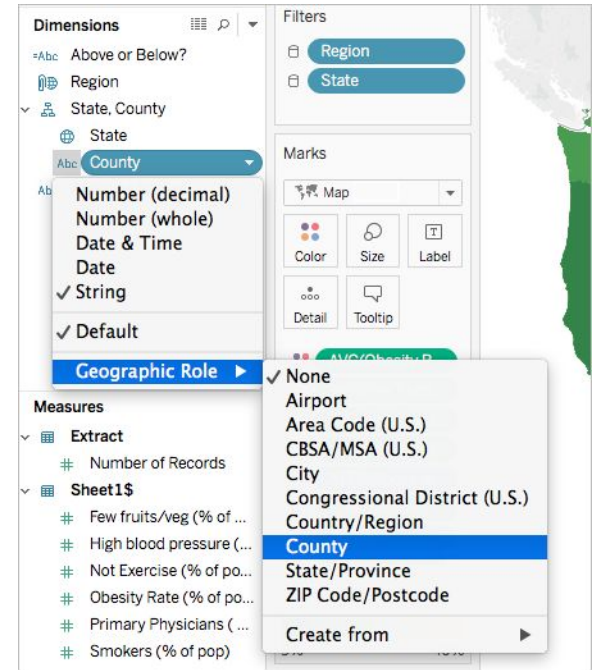
# Exercises: Join, Blend, Union

1. Use the [Global Superstore 2016](#), and connect the data the way you see fit. Create an extract of the data. Create a sheet that visualizes the sales for each region. Use the Show Me feature to create a treemap.
2. Download [Coffee Chain and Office City](#), and connect the data the way you see fit. Create a sheet that compares the sales between each company by state.
  1. To connect to multiple tables in a single data source at one time, what must be specified?
    - a. A blend
    - b. A calculation
    - c. A join
    - d. A hierarchy



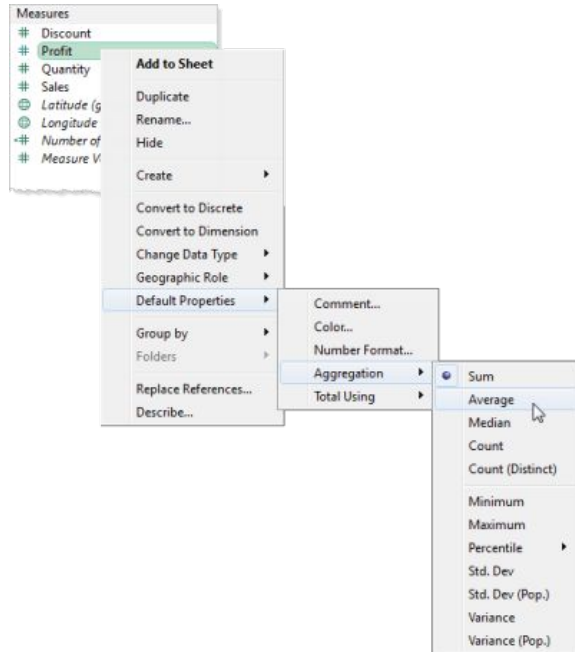
## Manage data properties

- Rename a data field
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- Change default properties for a data field

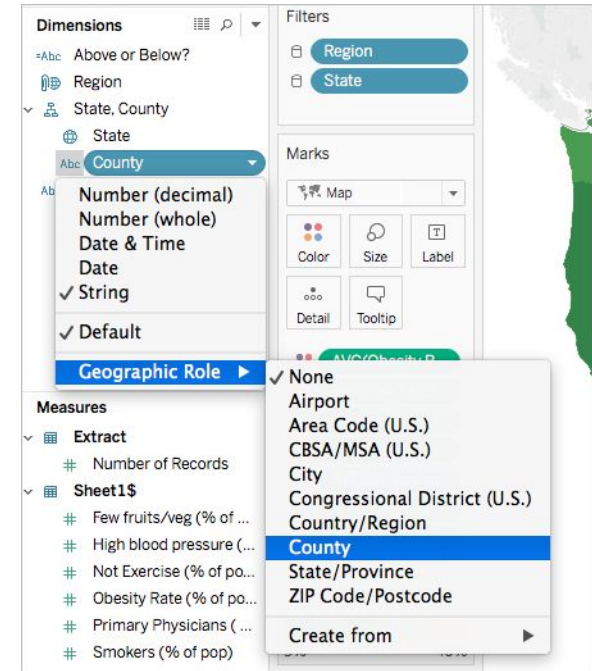




## Change default properties in a data field



## Assign a geographic role to a data field





# Dimensions vs Measures

Dimensions - categorical fields (date, customer, category)

- Often discrete
- Blue in Tableau

Measures - metrics; numbers we want to analyze

- Green in Tableau

# Today in Review - Connecting and Preparing Data

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