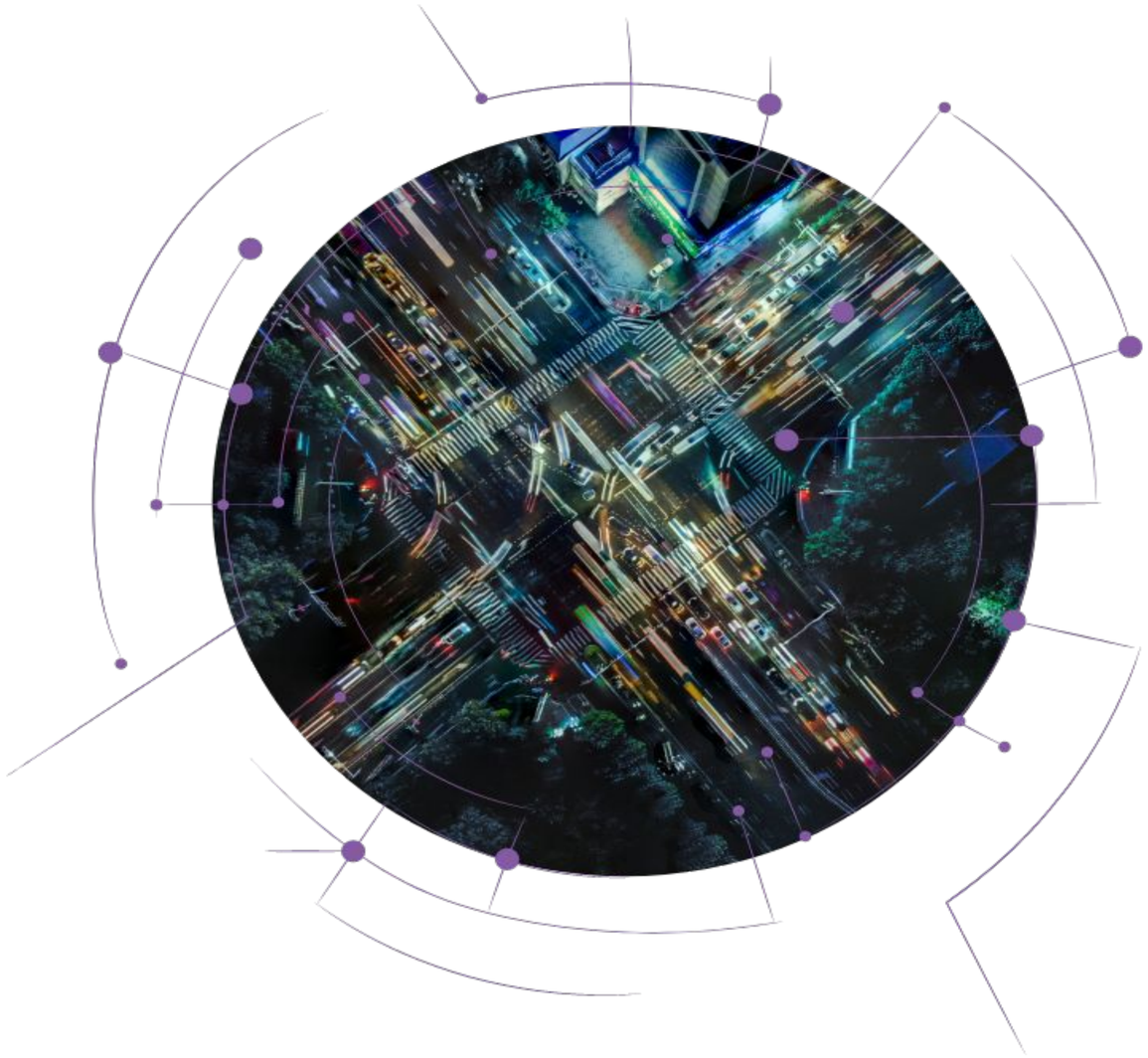
DATASOCIETY:

Introduction to Tableau

Part 8



Module completion checklist

Objective	Complete
Implement table calculations with dataset	✓
Understand addressing and partitioning fields	✓
Explore level of detail (LOD) functions	
Implement number calculations on given dataset	
Implement aggregate calculations on given dataset	

Level of Detail (LOD) functions

- Level of Detail (LOD) functions give you more control over the **level of granularity** you want to compute.

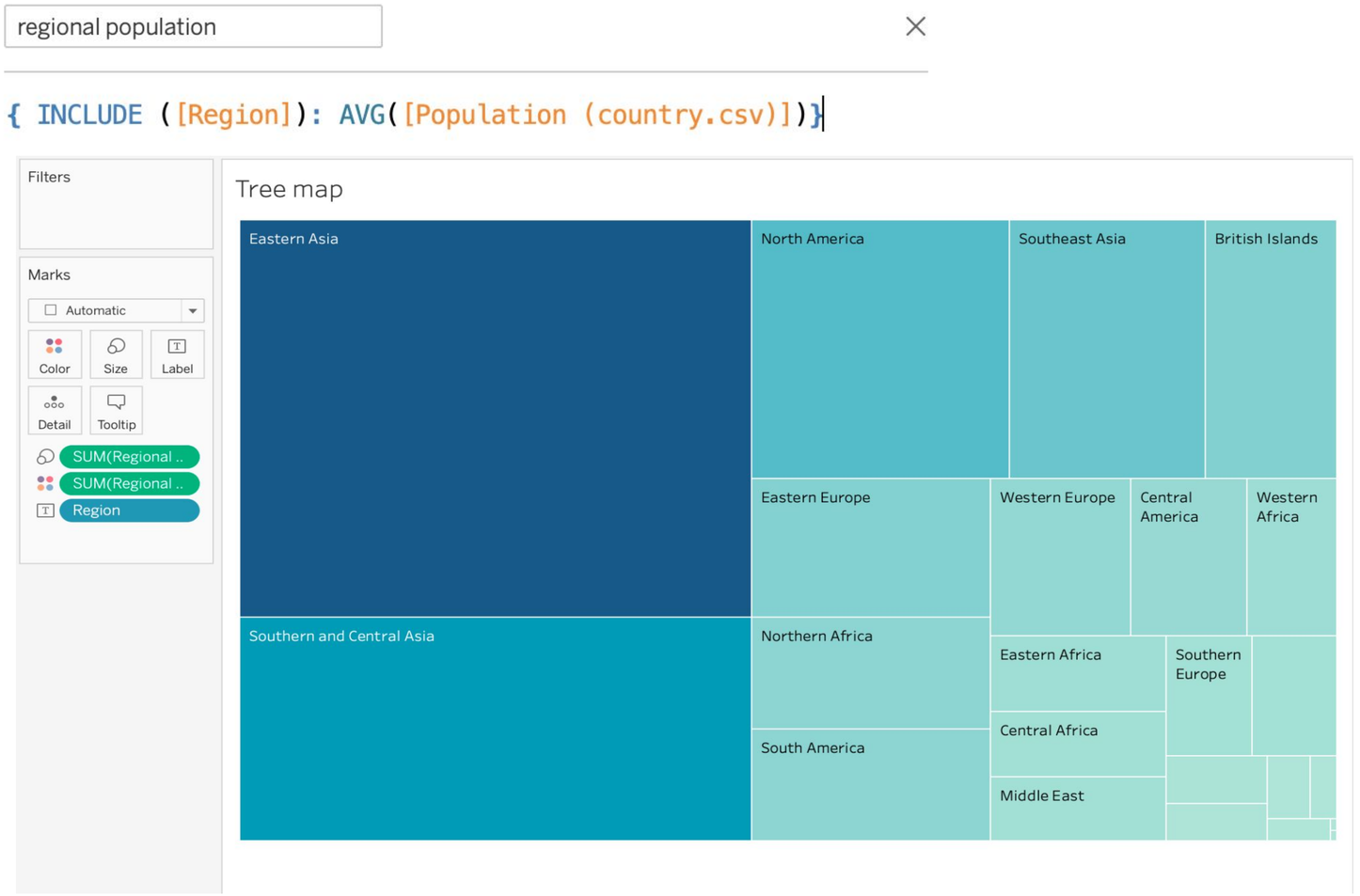
- In the world dataset we could aggregate population by:
  - City
  - Country
  - Region
  - Continent

Level of Detail (LOD) function syntax

- The syntax for LOD functions has curly braces.
  - **{ keyword ([column]): aggregation function ([data column]) }**
- The keyword can be:
  - **FIXED**: takes into account the keyword and the dimensions in the table.
  - **INCLUDE**: only takes into account the keyword dimension.
  - **EXCLUDE**: ignores the specified dimension.

Creating a treemap with a LOD function

- We will now create a treemap with population summarized at the region level.
- What does this plot tell us?



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Number functions

- Number functions allow you to perform computations on the data values in your fields.

- They can only be used with fields that contain numerical values.
  - ABS(-7) = 7
  - ABS([Budget Variance])

- We can use a number function to clean up a messy column.

GNP Old ▲
Null
Null
Null
Null
Null
Null
Null
Null
Null
243.00
272.00
325.00
325.00
373.00
383.00
573.00

GNP_old_clean

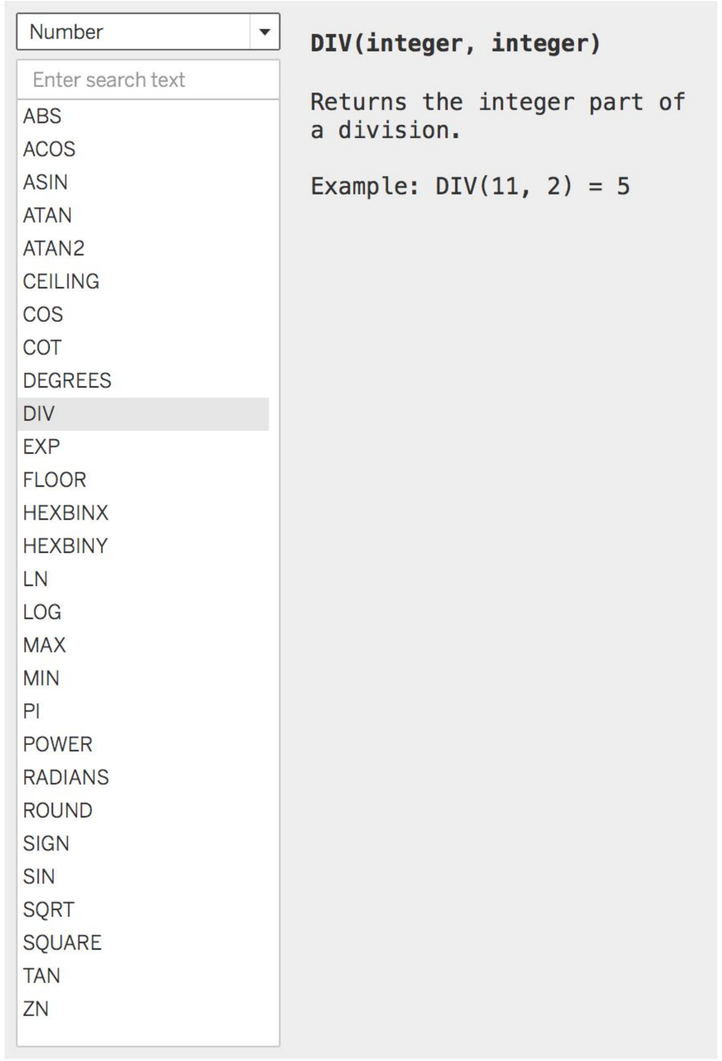
```
CEILING(ZN([GNP Old]))
```

GNP Old	GNP_old_clean
Null	0
Null	0
Null	0
Null	0
360,478.00	360,478
360,478.00	360,478
360,478.00	360,478
360,478.00	360,478
360,478.00	360,478
360,478.00	360,478

Number functions, cont'd.

- Normal statistical summary and math functions are also available.

- Notable functions include
  - Trigonometric functions.
  - RADIANS.
  - DIV for integer division.
  - FLOOR and CEIL.



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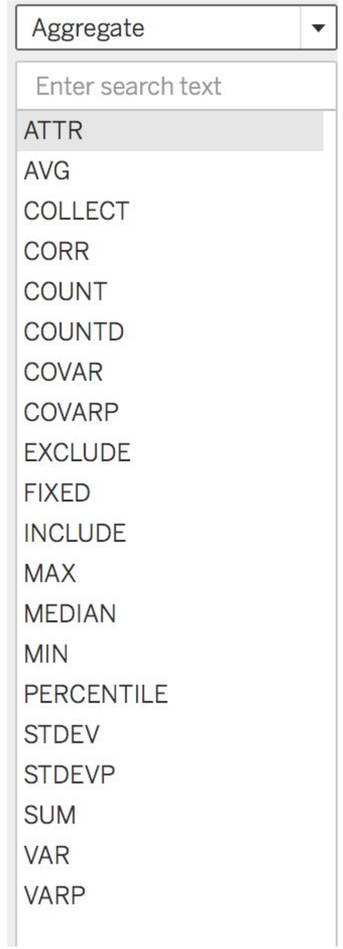
Aggregate functions

- Aggregations involve a summary function, like **SUM()** or **AVG().**
- The resulting function will have key built-in functions **AGG()** and /or **ATTR().**
- These allow the user to conduct operations at a particular granularity.
    - Granularity is controlled by an **attribute** such as year or continent.

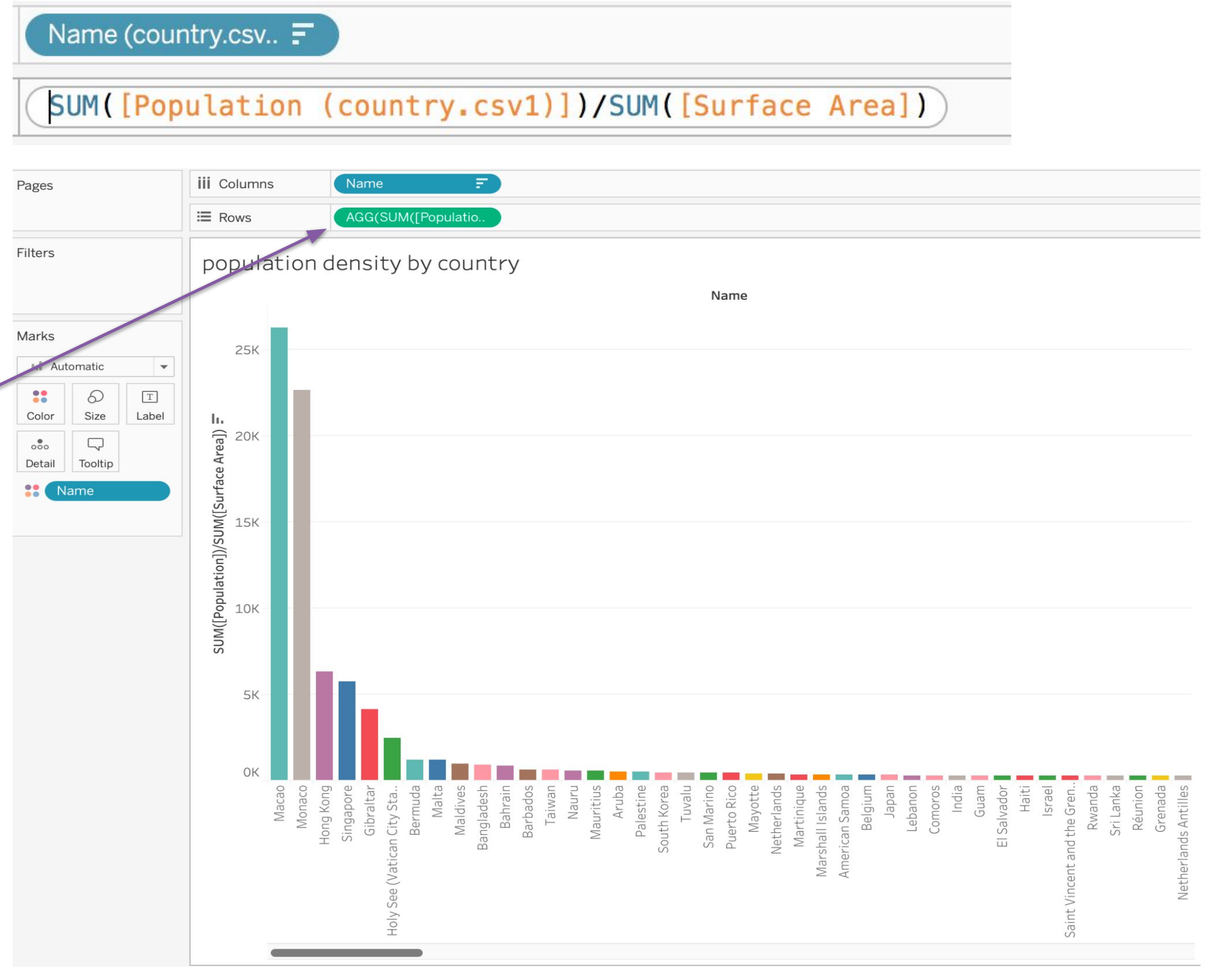


Aggregate functions

- We can use **AGG()** to get population density by country.
  - Divide Population/area
  - Aggregate at country level

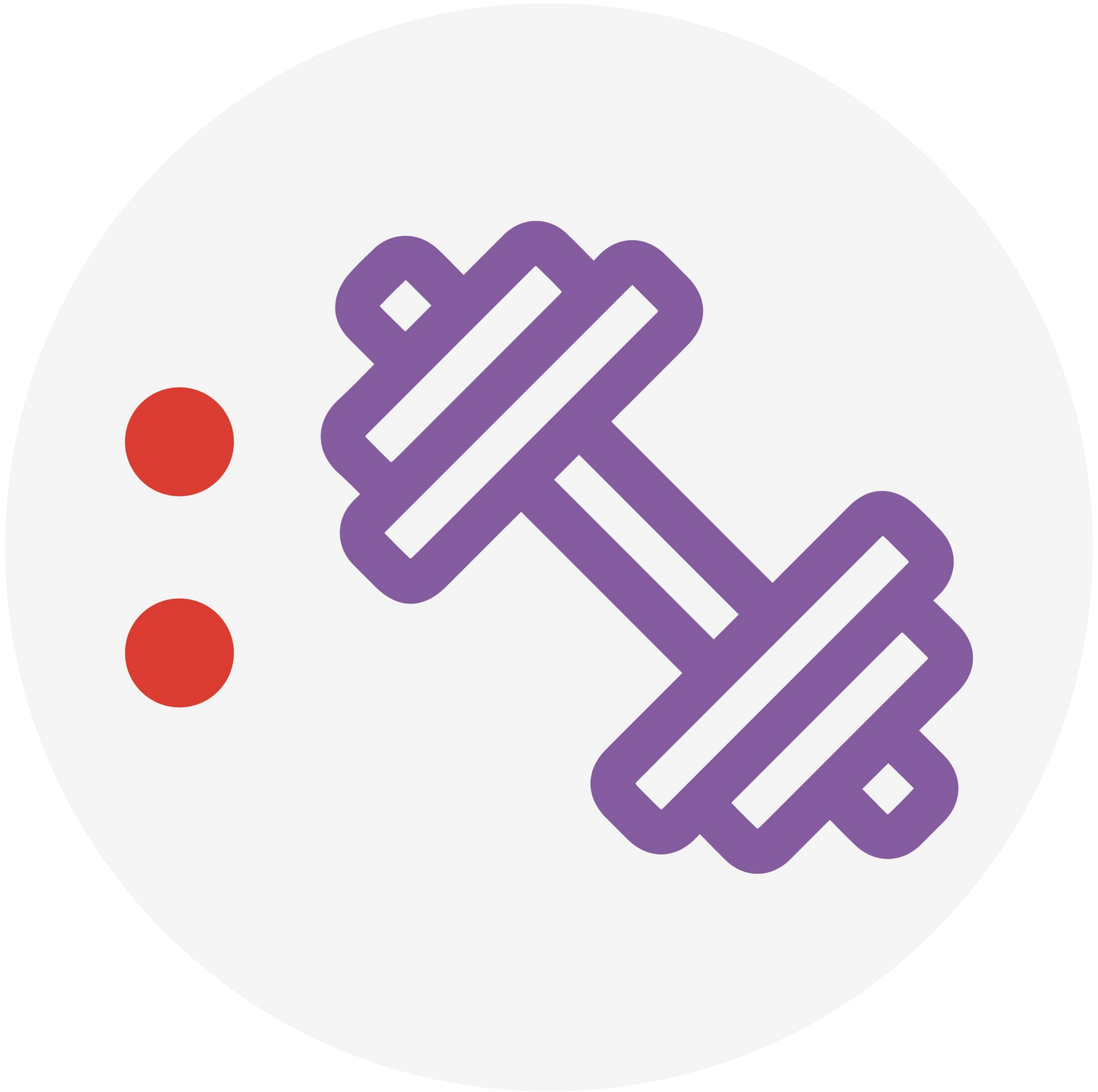
- Note that the aggregate formula was added directly to the pill.

- What other aggregation might we apply to our data?



Knowledge check 8

Exercise 8



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Congratulations!

In the past few modules, we covered:

- Functions
  - Table Calculations
    - Syntax
    - Addressing vs. Partitioning Fields
  - Level of Detail functions
  - Number functions
  - Aggregate functions

Next steps

In the next few modules, we will cover:

- String functions
- Date functions
- Type functions
- Logic functions

End of Part 8