Exercise 1: The Simpsons
# Understanding Data Parts

Objectives

1. Understand the cues Tableau provides to help us understand variables
2. Build Intuition about different types of variables
3. Understand how Tableau uses aggregation on variables

Types of Variables

1. Open the Tableau starter workbook called **Exercise 1 Simpsons Starter** in the Exercise Starter Workbooks folder.
2. Drag **Number of Records** from the Measures Pane to the Rows shelf.

Question 1: How many data points are in this data set? _____

3. Drag **Season** from the Dimensions Pane to the Columns shelf.
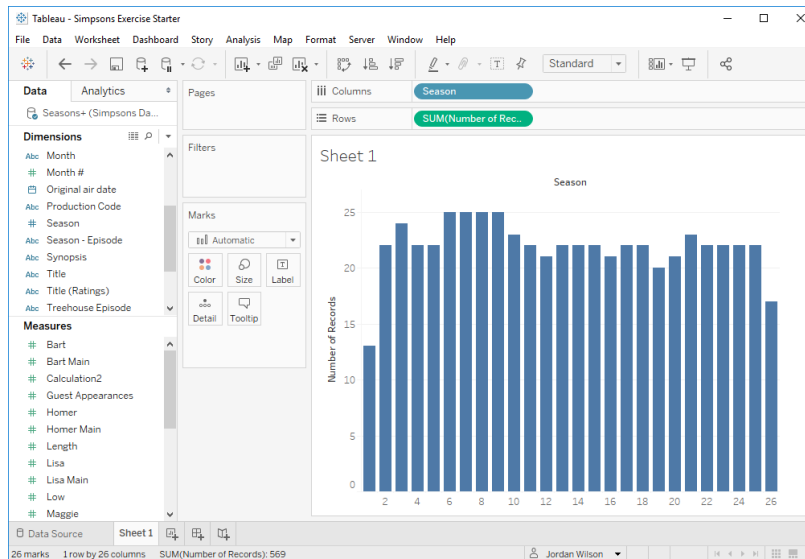
Notice the visual cues Tableau provides, like the symbols next to the field names in the data pane (i.e. the left sidebar) and the colors of the fields in the data pane and on the row and column shelves.

Question 2: What do the symbols and colors represent?

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4. Click on **Show Me** and take note of the types of graphs that are available to use and the types that are not:
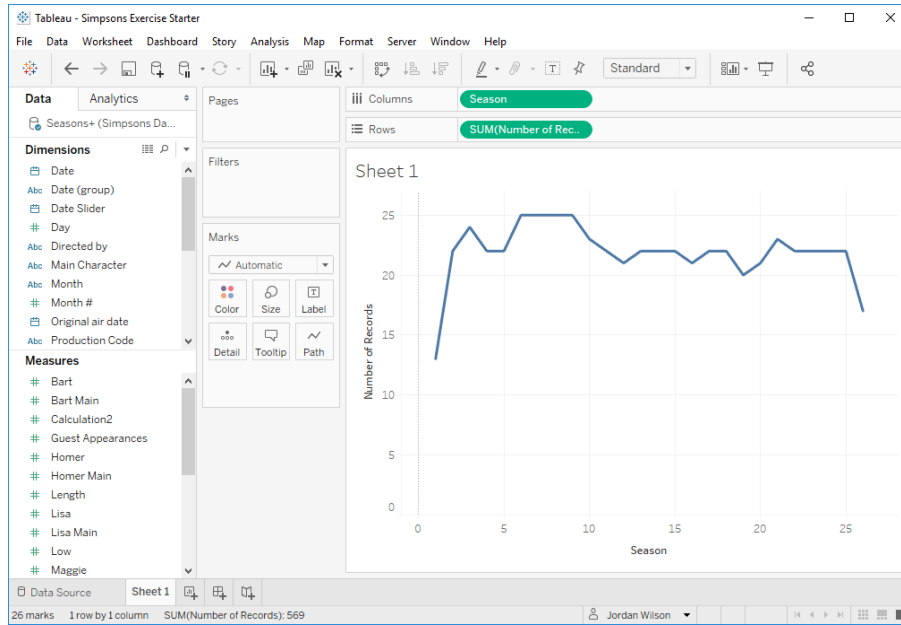

Question 3: What types of graphs are available on the Show Me menu?

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5. Right click on **Season** currently on the Columns shelf. Change the variable from **Discrete** to **Continuous**.

Notice the change in the graph type and the color of the pills on the shelves.

6. Click on **Show Me.** How have the selections changed?

Question 4: What graphs are now available on the Show Me menu?

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7. Try changing the mark type from **Automatic** to another mark type and notice how the visualization changes.

Changing the Aggregation type

1. Create a new worksheet. Let's evaluate how special episodes of the Simpsons fare in the ratings compared to regular season episodes.
2. Drag **Treehouse Episode** to the Columns Shelf.
3. Drag **Rating** to the Rows Shelf. The default calculation for the variable **Rating** is SUM().
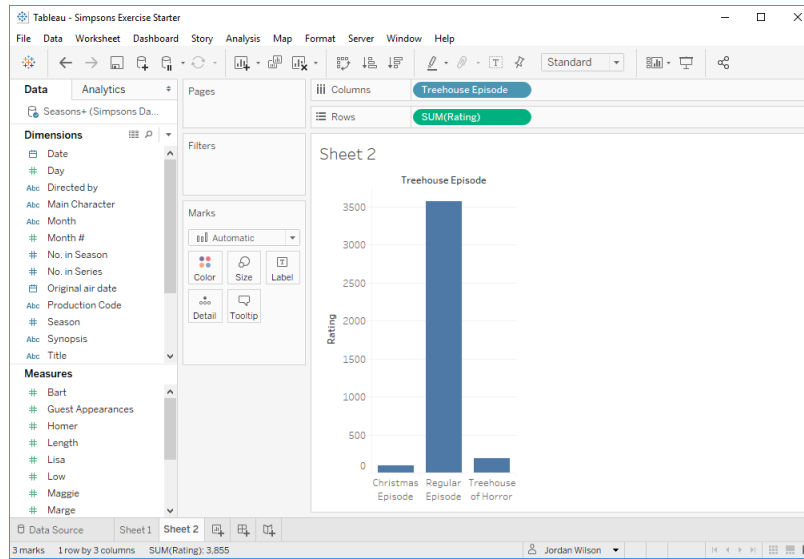
Question 5: Why does Tableau automatically apply this calculation?

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4. Right click on **SUM(Rating)** on the Rows shelf, go to Measure (Sum), and click through some of the aggregation functions. Choose the aggregation function that is most useful for the Rating measure.
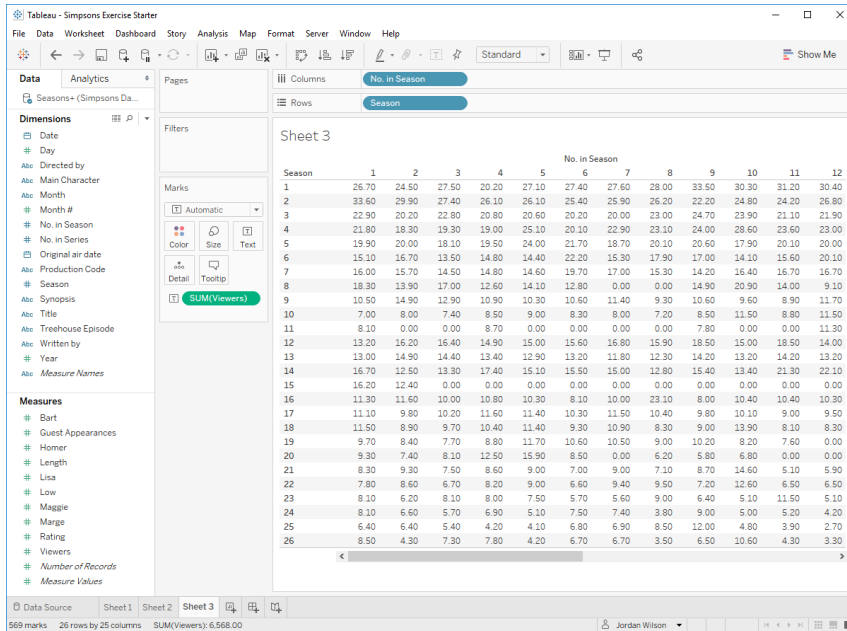
Question 6: Which episode type has the highest average rating?

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Creating a Heatmap

1. Create a new worksheet. Double Click on the variables **Season, No. in Season** and **Viewers**. Notice where Tableau automatically places these variables.

Notice how difficult it is to read this table. Adding color to a visualization can make it easier to read.

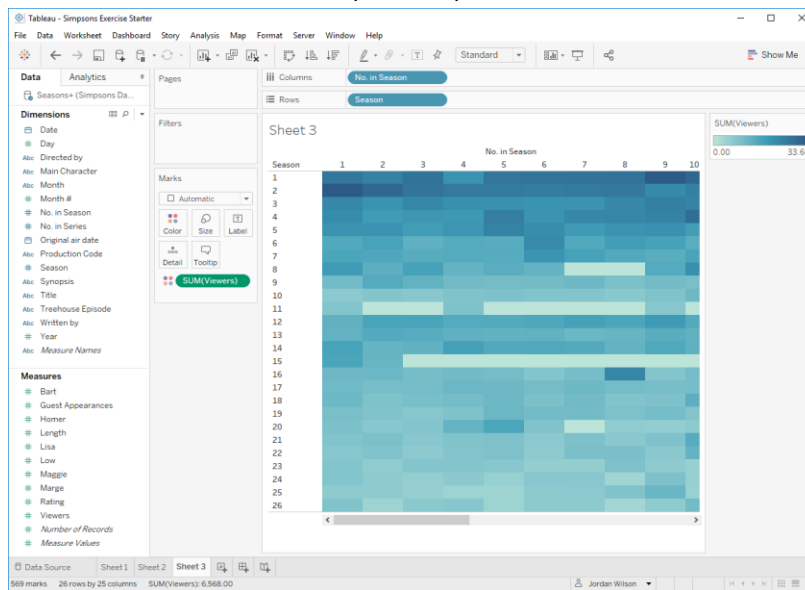2. Click on the Text icon [T] next to SUM(Viewers) and select **Color**.

3. Change the aggregation calculation for Viewers from Sum to Average, as we learned in Part B.

Question 6: When you changed the aggregation from Sum to Average, nothing appears to have changed. Why is that? _____

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