

Name\_\_\_\_\_

Date\_\_\_\_\_

## LAB 2B: Oh the Summaries... *Response Sheet*

Directions: Record your responses to the lab questions in the spaces provided.

### Just the beginning

#### Extreme values

- Find and write down the min value and max value for your predominant color.
- Apply the range function to your predominant color and describe the output.

### Quartiles (Q1 & Q3)

- Use a similar line of code to calculate and write down Q3, which is the value that's larger than 75% of our data.

### The Inter-Quartile-Range (IQR)

- Write down the numbers that split the data up into these 4 pieces.
- How long is the interval of the middle two pieces?

### Calculating the IQR

- Use the values of Q1 and Q3 you calculated previously and find the IQR by hand.
- Which personality color score has the widest spread according to the IQR? Which is narrowest?

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### *Response Sheet*

#### Boxplots

- By showing someone a dotPlot, how would you teach them to make a *boxplot*? Write out your explanation in a series of steps for the person to use.
  - Use the steps you write to create a sketch of a *boxplot* for your predominant color's scores in your journal.

#### Our favorite summaries

##### Calculating a range value

- Use these two steps to calculate and write down the *range* of your predominant color.

#### Introducing custom functions

##### Example function

##### Using `mm_diff()`

- Which of the four colors has the largest absolute difference between the mean and median values?
  - By examining a dotPlot for this personality color, make an argument why either the mean or median would be the better description of the *center* of the data.

#### Our first function

- Use the Range function to find the personality color with the largest difference between the max and min values.

#### On your own