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 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 *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**.
    - **Then use the `iqr()` function to calculate it for you.**

- **Which personality color score has the widest spread according to the *IQR*? Which is narrowest?**

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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.**

    - **Then use the `bwplot` function to create a *boxplot* using `R`.**

Our favorite summaries

Calculating a range value

- **Use these two steps to calculate 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.**

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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

- **Create a function called `myIQR` that uses the `quantile` function to compute the middle 30% of the data.**