Name:_____ Date:_____

Lab 2B: Oh the Summaries…
Response Sheet

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

Extreme values

- Which of the color scores had the smallest min value? Which had the largest max value?

- Use the range function to calculate the max and min values of your predominant color.

Calculating a range value

- Use these two steps to calculate the *range* of your predominant color.
  - Step 1: Use the `range` function to assign the max and min values of a variable the name values.
  - Step 2: Use the `diff` function to calculate the difference of values.

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.

Name:_____ Date:_____

Lab 2B: Oh the Summaries…
Response Sheet

Our first function

- Use a dotPlot or histogram to find the personality color with the largest difference between the max and min values. Then use the `Range` function you created to calculate its *range*.

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?

Name:_____ Date:_____

Lab 2B: Oh the Summaries…
Response Sheet

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?

Boxplots

- By showing someone a dotPlot, how would you teach him/her 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.

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

Name:_____ Date:_____

Lab 2B: Oh the Summaries…
Response Sheet

On your own

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