Lab 2B - Oh the Summaries ...

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

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

Use these two steps to calculate the *range* of your predominant color.

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.

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*.

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

Write down the numbers that split the data up into these 4 pieces.

How long is the interval of the middle two pieces?

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?

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.

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