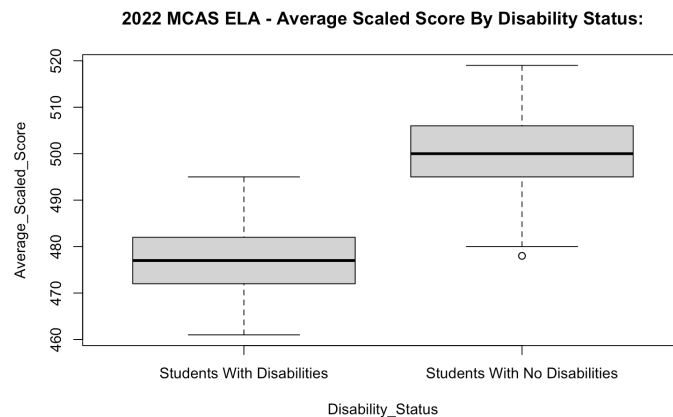# R Commands - Box Plots

By: Timothy Hodgdon, Nolan Karsok, Broderick Kelly
Adam Nelson, Shreyas Risbud, and Souri Sasanfar

Due Monday, April 17th, 2023
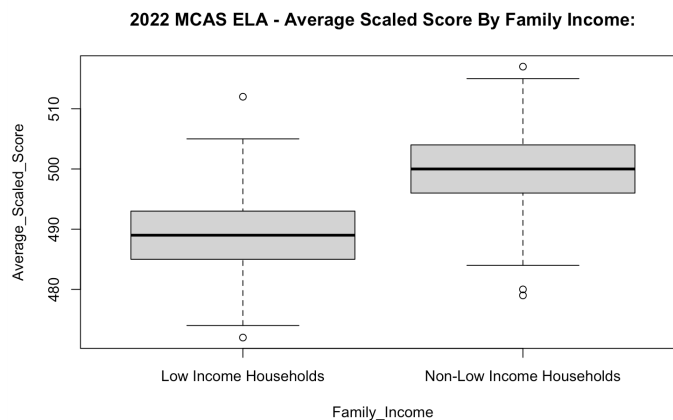
2022 MCAS ELA (English Language Arts)

Disability Status:

```
par(mfrow = c(1, 1))
Average_Scaled_Score <- c(Disabilities_2022_MCAS_ELA_Scores_List, No_Disabilities_2022_MCAS_ELA_Scores_List)
Disability_Status <- c(Disabilities, No_Disabilities)
Box_Plot <- boxplot(Average_Scaled_Score ~ Disability_Status,
                    main = "2022 MCAS ELA - Average Scaled Score By Disability Status:")
Box_Plot
```


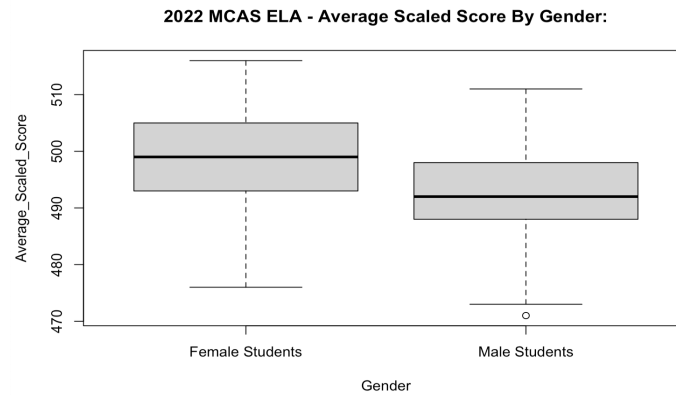2022 MCAS ELA - Average Scaled Score By Disability Status:

Family Income:

```
par(mfrow = c(1, 1))
Average_Scaled_Score <- c(Low_Income_2022_MCAS_ELA_Scores_List, Non_Low_Income_2022_MCAS_ELA_Scores_List)
Family_Income <- c(Low_Income_Households, Non_Low_Income_Households)
Box_Plot <- boxplot(Average_Scaled_Score ~ Family_Income,
                    main = "2022 MCAS ELA - Average Scaled Score By Family Income:")
Box_Plot
```
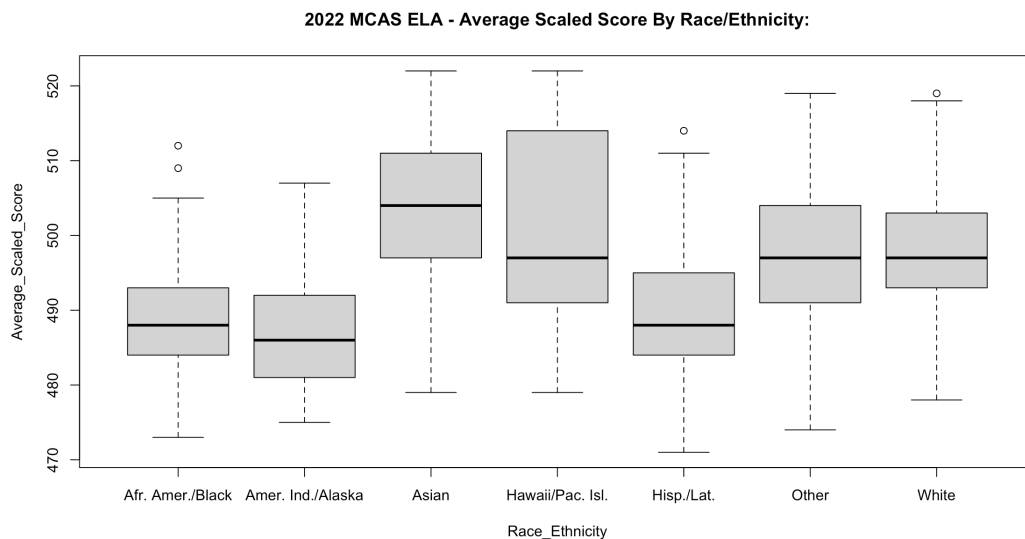

2022 MCAS ELA - Average Scaled Score By Family Income:

Gender:

```r
par(mfrow = c(1, 1))
Average_Scaled_Score <- c(Male_2022_MCAS_ELA_Scores_List, Female_2022_MCAS_ELA_Scores_List)
Gender <- c(Male_Students, Female_Students)
Box_Plot <- boxplot(Average_Scaled_Score ~ Gender,
                    main = "2022 MCAS ELA - Average Scaled Score By Gender:")
Box_Plot
```

2022 MCAS ELA - Average Scaled Score By Gender:

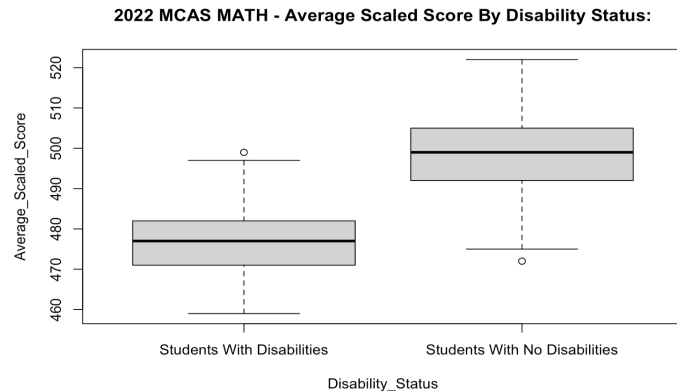## Race/Ethnicity:

```r
par(mfrow = c(1, 1))
Average_Scaled_Score <- c(AI_AN_2022_MCAS_ELA_Scores_List, AA_B_2022_MCAS_ELA_Scores_List,
                          Asian_2022_MCAS_ELA_Scores_List, Hispanic_Latino_2022_MCAS_ELA_Scores_List,
                          NH_PI_2022_MCAS_ELA_Scores_List, White_2022_MCAS_ELA_Scores_List,
                          Other_2022_MCAS_ELA_Scores_List)
Race_Ethnicity <- c(AI_AN_Students, AA_B_Students, Asian_Students, Hispanic_Latino_Students, NH_PI_Students,
                    White_Students, Other_Students)
Box_Plots <- boxplot(Average_Scaled_Score ~ Race_Ethnicity,
                     main = "2022 MCAS ELA - Average Scaled Score By Race/Ethnicity:")
Box_Plots
```

2022 MCAS ELA - Average Scaled Score By Race/Ethnicity:
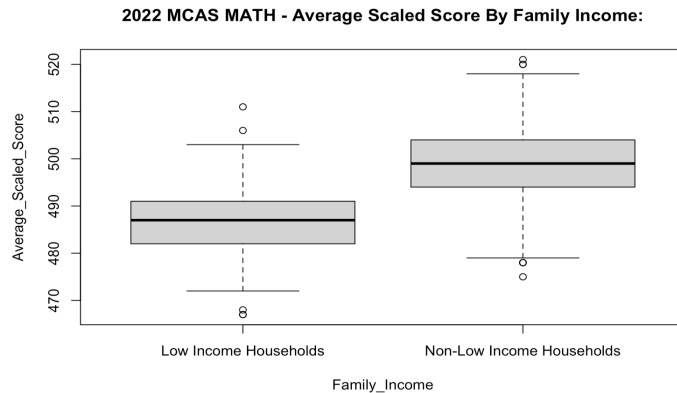
2022 MCAS MATH (Mathematics)

<u>Disability Status:</u>

```
par(mfrow = c(1, 1))
Average_Scaled_Score <- c(Disabilities_2022_MCAS_MATH_Scores_List, No_Disabilities_2022_MCAS_MATH_Scores_List)
Disability_Status <- c(Disabilities, No_Disabilities)
Box_Plot <- boxplot(Average_Scaled_Score ~ Disability_Status,
                    main = "2022 MCAS MATH - Average Scaled Score By Disability Status:")

Box_Plot
```

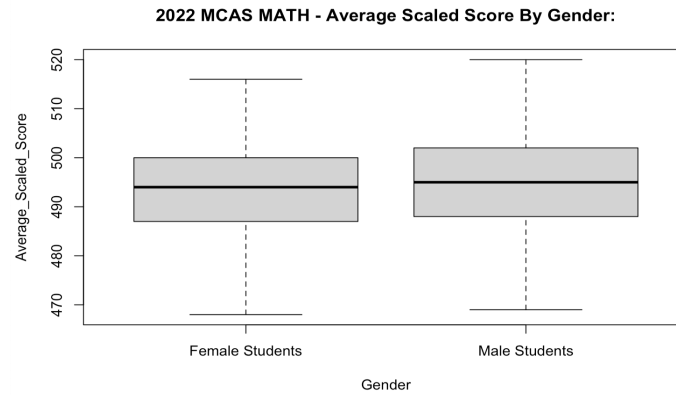**2022 MCAS MATH - Average Scaled Score By Disability Status:**

<u>Family Income:</u>

```
par(mfrow = c(1, 1))
Average_Scaled_Score <- c(Low_Income_2022_MCAS_MATH_Scores_List, Non_Low_Income_2022_MCAS_MATH_Scores_List)
Family_Income <- c(Low_Income_Households, Non_Low_Income_Households)
Box_Plot <- boxplot(Average_Scaled_Score ~ Family_Income,
                    main = "2022 MCAS MATH - Average Scaled Score By Family Income:")

Box_Plot
```

2022 MCAS MATH - Average Scaled Score By Family Income:

<u>Gender</u>:

```
par(mfrow = c(1, 1))
Average_Scaled_Score <- c(Male_2022_MCAS_MATH_Scores_List, Female_2022_MCAS_MATH_Scores_List)
Gender <- c(Male_Students, Female_Students)
Box_Plot <- boxplot(Average_Scaled_Score ~ Gender,
                    main = "2022 MCAS MATH - Average Scaled Score By Gender:")

Box_Plot
```

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2022 MCAS MATH - Average Scaled Score By Gender:

Race/Ethnicity:

```
par(mfrow = c(1, 1))
Average_Scaled_Score <- c(AI_AN_2022_MCAS_MATH_Scores_List, AA_B_2022_MCAS_MATH_Scores_List,
                          Asian_2022_MCAS_MATH_Scores_List, Hispanic_Latino_2022_MCAS_MATH_Scores_List,
                          NH_PI_2022_MCAS_MATH_Scores_List, White_2022_MCAS_MATH_Scores_List,
                          Other_2022_MCAS_MATH_Scores_List)
Race_Ethnicity <- c(AI_AN_Students, AA_B_Students, Asian_Students, Hispanic_Latino_Students, NH_PI_Students,
                    White_Students, Other_Students)
Box_Plots <- boxplot(Average_Scaled_Score ~ Race_Ethnicity,
                     main = "2022 MCAS MATH - Average Scaled Score By Race/Ethnicity:")
Box_Plots
```

2022 MCAS MATH - Average Scaled Score By Race/Ethnicity:

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