**Visualization 1: Scatterplot**

Kind of analysis that has become easier:

With this scatterplot, it has become easier to see if there is a correlation between math and reading scores and if the correlation differs by gender. It helps to identify if students who performed well in math, also performed well in reading or not.

Reason for choosing this visualization:

A scatterplot is a useful visualization when the goal is to examine the relationship between two continuous variables. In this case, we want to examine the relationship between math and reading scores, and color points by gender. Hence, this scatterplot is the best way to visualize the relationship between the two continuous variables with a categorical variable.

**Visualization 2: Boxplot**

Kind of analysis that has become easier:

With this boxplot, it has become easier to compare the distribution of math scores for each race/ethnicity group and to see if there are any outliers. It also helps to understand the range and median of math scores in each race/ethnicity group.

Reason for choosing this visualization:

A boxplot is a useful visualization when the goal is to compare the distribution of a continuous variable across different groups. In this case, we want to compare the distribution of math scores across different race/ethnicity groups. Boxplot is the best way to visualize the distribution of data and find out if there are any outliers present or not.

**Visualization 3: Bar chart**

Kind of analysis that has become easier:

With this bar chart, it has become easier to see the number of students who completed the test preparation course by parental level of education. It helps in understanding the impact of parental level of education on the completion of the test preparation course.

Reason for choosing this visualization:

A bar chart is a useful visualization when the goal is to compare counts or percentages across different categories. In this case, we want to compare the count of students who completed the test preparation course by parental level of education. Bar chart is the best way to visualize count data and compare them with different categories.

**Visualization 4: Line chart**

Kind of analysis that has become easier:

With this line chart, it has become easier to compare the distribution of writing scores by gender. It helps in understanding the difference in the distribution of writing scores between males and females.

Reason for choosing this visualization:

A line chart is a useful visualization when the goal is to examine the distribution of a continuous variable across different categories. In this case, we want to examine the distribution of writing scores across different genders. Line chart is the best way to visualize the distribution of continuous data and compare them across different categories.

**Visualization 5: Stacked bar chart**

Kind of analysis that has become easier:

With this stacked bar chart, it has become easier to compare the number of students who received free/reduced or standard lunch by race/ethnicity. It helps in understanding the distribution of free/reduced and standard lunch by race/ethnicity.

Reason for choosing this visualization:

A stacked bar chart is a useful visualization when the goal is to examine the counts or percentages of a variable across different categories and show them as a part of the whole. In this case, we want to examine the count of students who received free/reduced or standard lunch by race/ethnicity. Stacked bar chart is the best way to visualize count data and compare them with different categories and their parts.