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Project 1: Seattle Weather

**Introduction:**

In this project, we asked the question of whether it rains more in Seattle, WA than in New York City, NY. To investigate, we will be using data sets from the National Centers for Environmental Information NOAA Climate Data Online search tool. From the search tool, we requested data that includes daily precipitation measured in both cities from January 1, 2020, to January 1, 2024.

**Analysis:**

In Figure 1, we explored how many rainy days each city gets per year. From the bar plot, we observe that Seattle has more rainy days than New York City for the years included in our data set. Over the years, the number of rainy days for both cities slightly fluctuates, but the changes are not too drastic. Something that stands out in this plot is that Seattle experienced the highest number of rainy days in 2020 with over 175 days of precipitation. New York City also had a greater number of rainy days in 2020 compared to the other years. We do see a decrease in rainy days for both cities in 2021 and 2022 compared to 2020, but we do see it increase in 2023.

**Figure 1:**

A graph of a number of years

Description automatically generated

Figure 2 shows the amount of precipitation, in inches, both cities get each year. All the years except 2022 shows that New York City receives more inches of rain than Seattle. This is most notable in 2023, with New York City receiving over 50 inches of precipitation. New York City’s yearly precipitation does show more variation with the most significant increase in 2023 compared to the previous year. On the other hand, Seattle seems to receive a consistent amount of rain each year of about 35 to 40 inches of rain.

**Figure 2:**

A graph of a number of years

Description automatically generated

Similar to Figure 2, we will also look at inches of precipitation in Figure 3. In this plot we show average daily precipitation broken down by months for both cities. Something noticeable is that New York City tends to have more precipitation than Seattle from March to October. Another interesting thing we see is that New York City is typically wetter in summer to early fall. Seattle does seem to have higher precipitation in the winter months. We can see that in January and December, Seattle gets about 0.20 inches of daily precipitation.

**Figure 3:**

A graph with blue and orange lines

Description automatically generated

**Conclusion:**

From analyzing New York City and Seattle’s precipitation from 2020 to 2024, we can conclude that New York City tends to receive more inches of precipitation, however, Seattle tends to have more rainy days in a year. In Figure 1, we observe that Seattle has more rainy days and in Figure 2 and 3, we see that New York City typically gets more rain. This indicates that when it rains in New York City, it tends to be heavy rain.