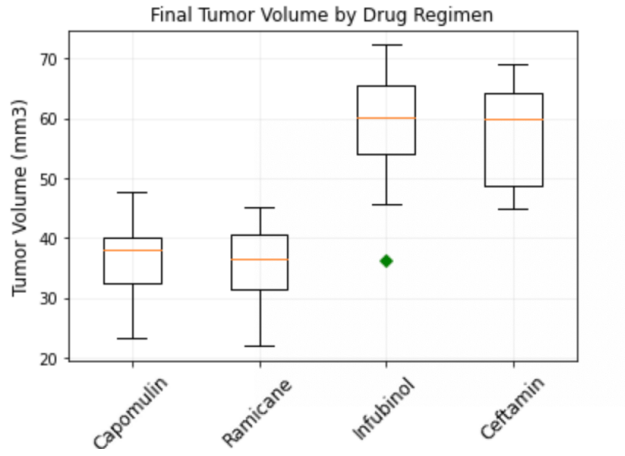
You must include a written description of at least three observations or insights about the data.

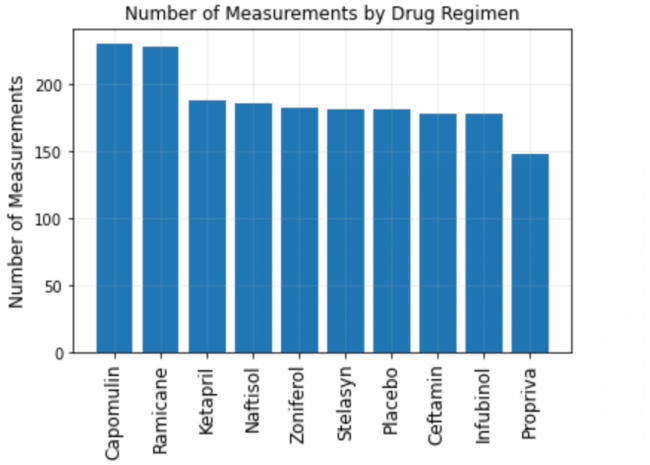
Observation 1:
In this assignment, I was asked to analyze the final tumor volume for mice being treated with a pre-selected group of drug regimens—Capomulin, Ramicane, Infubinol, and Ceftamin. A notable observation from the figure below is the comparatively smaller final tumor size of mice treated with Capomulin and Ramicane.

Figure 1: Final Tumor Volume by Drug Regimen



It is also notable that Capomulin and Ramicane have the greatest number of measurements out of this dataset; this may suggest that the data reflected in the figure above was not unduly influenced by a small, fortunate sample of mice.

Figure 2: Number of Measurements by Drug Regimen

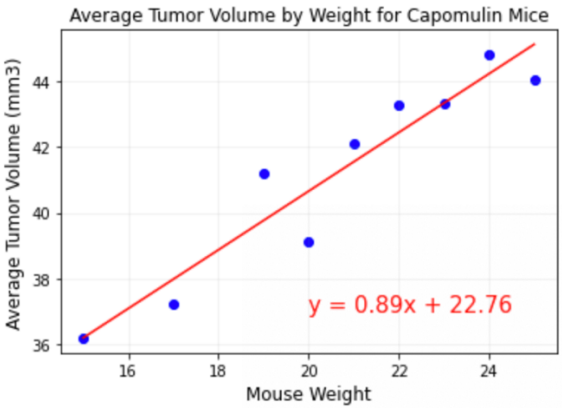


That said, further analysis would be required to discern any potential differences between the mice of each drug regimen's subset of the data. More on this in the next observation.

You must include a written description of at least three observations or insights about the data.

Observation 2:
The figure below plots the average tumor volume of each weight group of Capomulin mice. The linear regression and resulting slope suggests a positive correlation between the weight of a mouse and the volume of its tumor.

Figure 3: Average Tumor Volume by Weight for Capomulin Mice



I believe the weights of the mice for each drug regimen could be an additional area of analysis; this would help uncover if the lower final tumor volume for Capomulin and Ramicane could be contextualized using the weights of the mice on each regimen.

It is important to note that the figure above does not calculate these averages with any regard for timepoint; as there was no instruction to remove duplicate mice entries (i.e. different timepoints), the data may be skewed by the number of measurements for any particular mouse.

Observation 3:
For the exercise of plotting a single Capomulin mouse's tumor volume over time, I selected Mouse s710. The plot created from Mouse s710's data did not paint as strong of a story as I was hoping; in order to better confirm the trend in the data, I have included a supplemental linear regression which reflects a negative correlation between tumor volume and time on the Capomulin drug regimen.

Figure 4: Tumor Volume of a Capomulin Mouse vs. Timepoint

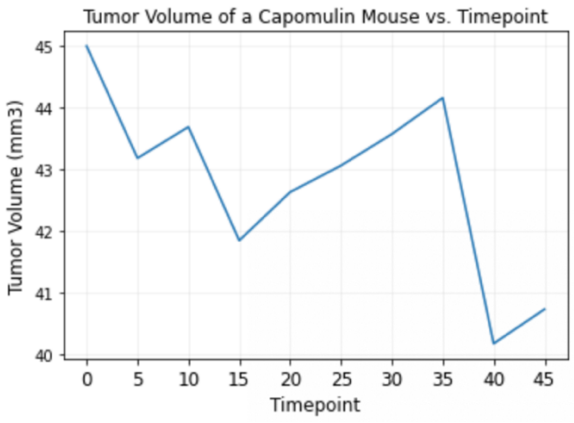


Figure 5: Supplemental Linear Regression of Figure 4