In this team project you will apply what you have learned about Statistics during this unit to explore several data sets. The exploration should follow the guidelines below and include a statement of your goals, and a conclusion about what you data show. Your team will present the project to your peers in the form of a Poster, Power Point, Web Page, or other approved canvas.

Your team will use the data collected from the Algebra II Survey.

Key Aspects:

* Explore Univariate AND Bivariate data from the Algebra II Survey
* State and defend mathematically patterns in the data from the survey
* Work with another student
* Present your project and findings

The Questions to pick from:

|  |
| --- |
| **1. How many people are in your family?** |
| **2. How many pets does your family have in your household?** |
| **3. How many TV are in your house?** |
| **4. What is the walking time from your home to school?** |
| **5. How many states have you visited?** |
| **6. How many times have you been camping?** |
| **7. How many other countries have you visited?** |
| **8. How many times have you flown in a plane?** |
| **9. How many books do you read in a typical year?** |
| **10. How many hours of TV did you watch last night (or on a typical night)?** |
| **11. How many hours do you spend daily (on average) on a computer?** |
| **12. Pick your favorite number between one and seven, inclusive.** |
| **13. Pick a color from this list.** |
| **14. If you were given a choice of grand prizes which one would you pick?** |

Guidelines

1) Choose at least one set of responses to a single survey question to explore and conjecture about.   
2) Choose at least two sets of responses to the survey that you think are related and explore the correlation between them. Develop a mathematical model for this relationship and interpolate and extrapolate appropriately using this model.  
3) Explore the contextual Domain and Range for your Bivariate data.

4) Use Graphs/Plots of your data and appropriate statistical measure to extract a pattern in both the Univariate and Bivariate data sets.

5) Report your findings in a clear and concise way using an appropriate and approved canvas.

**Rubric**

|  |  |  |  |
| --- | --- | --- | --- |
| **Objective** | **3** | **2** | **1** |
| **Data Analysis and Organization [24 points]** | Clear, complete, and appropriate analysis of both Univariate and Bivariate data leading to a conclusion.  Appropriate and relevant use of several of the following: Three Measures of Central Tendency, The Five Number Summary, Variance, Standard Deviation, Outliers, and Normal Distribution | Most data analysis is correct. The use of some of the statistical measures with very few inappropriate uses | Incomplete, inappropriate and/or lack of use of statistical measures and analysis |
| **Presentation [24 points]** | Statement of the problem is complete and clear.  At least two graphical representations of the data.  Explanation of the process use to examine the data.  Statement of the results of the project with conclusions and projections. | A few missing aspects with minor missteps. | Major items missing and inappropriate actions. |
| **Use of Mathematics [15 points]** | Correct and appropriate application of mathematics principals of statistics | A few minor and cosmetic errors | Limited understanding of mathematical concepts shown |
| **Language Arts [12 points]** | Statistical terms and vocabulary, correct and appropriate grammar (written and oral). | A few missteps that confuse and cloud understanding | Unacceptable usage and major missing terms and vocabulary |
| **Following Directions/Protocols [15 points]** | No violations | Few minor violations | Major violations |
| **Collaboration**  **[12 Points]** | Clear evidence of teamwork on the project | Some evidence of collaboration | No evidence that the team worked together on the project |