

Project Chapter 5 - Linear Quantitative Relationships

Group Project Instructions- Your team will analyze the linear relationship between two quantitative data sets. The ordered pair data can be found at matt-teachout.org under “Int Alg for Stats” and “Data Sets”. Look for the data set that says, “Correlation data project#5”. Make sure your poster has the following items. You will be presenting your poster to the other students in the class.

Topics: *IQ/Brain Volume , MLB Runs Scored/Attendance , MLB Runs Allowed/Wins , Price Item/Customer Satisfaction , Meat/illness , CEO Golf Score/Stock Price , Swim time/Pulse , Boats/Manatee Deaths , Cost of Living/Aviation Pay , Poverty/BMI , Alcohol/Tobacco in England*

- Pick one of the pairs of quantitative variables and pick which should be X and which should be Y. The poster should give the explanatory variable (x) and response variables (y), what the units are for x and y.
- Why this topic was important or interesting to your group.
- Poster should have a scatterplot with regression line.
- Poster should have the correlation coefficient (r) and a sentence describing its meaning.
- Poster should have r-squared and a sentence describing its meaning.
- Poster should have the regression line equation
- Write a sentence describing the meaning of the slope
- Write a sentence describing the meaning of the y-intercept.
- Poster should have the Standard Deviation of the Residual Errors and two sentences describing both of the meanings of Standard Deviation.
- What is the scope of the x-values?
- Pick any x-value in the scope. Plug in that x value into the regression line equation and predict the y value. How much error could be in that prediction?
- Poster should have a residual plot versus the x-value. Is the residual plot “V” shaped or evenly spread out?
- Poster should have the histogram of the residuals. Is the histogram bell shaped? Is the histogram centered at zero?
- Decorate your poster to spark interest.
- Give a good presentation of the poster to classmates explaining everything.