1. Using the Kalahari data set construct a scatterplot of LMS (y-axis) by People using Rcmdr. Change the plot so that both LMS and People are on log scales. Create logged versions of all three variables. Compute the linear regression of LMS~People (the one we did in class) for comparison. Then compute the log-log version (power function) of the same relationship. Predict the area of a site with 13, 18, and 20 people using the predict() function for each model (linear and log-log). Which model fits the data better?

2. Now analyze the relationship between LMS and Days for the !Kung sites. Does the scatterplot indicate that the relationship could be nonlinear? Compute the linear regression and the log-log transformed regression. Predict the area of a site with 4, 14, and 19 people using the predict() function for each model (linear and log-log). Which model fits the data better?

3. Finally create a new variable, PeopleDays, consisting of People times Days. Construct a scatterplot and check for nonlinearity. Compute the linear regression and the log-log transformed regression. Predict the area of a site with 20, 100, 200, and 275 person-days using the predict() function for each model (linear and log-log). Which model fits the data better?

4. Create a subset of Darl points from the DartPoints data set. Construct a linear regression predicting Length from Width that you could use in predicting the length of broken points. How well does the regression fit the data? Use predict() to estimate the length and confidence interval for points that are 15, 19, and 23 mm wide.

5. Using the Snodgrass data plot the relationship between house Area (y-axis) and Length (x-axis). Is the relationship linear? Compute the linear regression and then compute polynomial regressions. Begin with the quadratic regression and keep adding terms until they are no longer significant. Discuss your results.