PBS 111 Homework 1

Winter 21

Due 1/07/21 at noon (or as per usual). I will go over the dataset and the issues in class on Monday.

All of the problems use the datafile: "read2007.csv".

1. Compute 'readgrade' (overall reading ability) which is average of word\_id and word\_atk . Divide the students into three groups with rougly equal numbers in poor, average, and good based on readgrade (you can use two groups if you prefer). Carry out a three-group (or two group) ANOVA with snd\_same as the DV. Now compare that three-group ANOVA to doing a simple regression using snd\_same as DV and readgrade as the predictor variable.

2. Redo the ANOVA and the regression in Question 1 adding IQ as a covariate. For the ANOVA, compute the adjusted means. Comment on the use of the covariate.

3. Do a MANOVA using snd\_same, cat\_sam, look\_sam, mean\_sam as DVs and the three-group reading ability as the IV. Anything interesting?