EDMS 646: Homework 3

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PART 1: Multiple Regression - Initial model: Use data set HSB1

1.

$$\hat{Y} = 50.3514 + 4.7188(\text{locus}) + 0.2549(\text{concept}) + 1.7113(\text{mot})$$

Controlling for self-concept and motivation, one unit increase in locus of control will increase the science score by 4.7188 units. Controlling for locus of control and motivation, one unit increase in self-concept will increase the science score by 0.2549 units. Controlling for locus of control and self-concept, one unit increase in motivation will increase the science score by 1.7113 units.

2. H_0: $\beta_{locus} = \beta_{concept} = \beta_{mot} = 0$ H_1: $\beta_j \neq 0$

3.

4.

Part 2: Multiple Regression - Final model: Use data set HSB1

1.

2. It looks evenly distributed to me and I don't seem to detect any outliers here.

Part 3: ANOVA using Multiple Regression

1.

2.

3.