**Linear “OLS” Regression**

**Error Metrics (10 points)**

Assume two models were developed using 50 data points (n=50). The models and their respective ANOVA tables are given below.

**Model 1:** Let’s consider the regression model, which we will refer to as Model 1, given by

Y = 10,000 + 150\*X1 + 25\*X1^2 + 60\*X2 (M1).



**Model 2:** Now let’s consider an alternate regression model, which we will refer to as Model 2, given by

Y = 9,750 + 145\*X1 + 75\*X2 (M2).



Assignment: Research the formula for the following metrics. Also, determine how to interpret the results.

* Adjusted R-Squared
* Akaike Information Criteria (AIC)
* Akaike Information Criteria with correction for sample size (AICC)
* Schwarz Information Criteria (BIC, SBC)

Using the information given for M1 and M2, calculate (by hand or using EXCEL) the **Adjusted R-Squared, AIC, SBC,** and **AICC** for both models (M1 and M2). Simple, right? OK, here's the catch. You need to calculate the values \*AND\* comment on them (1 or 2 sentences should suffice). I just need to know that you know what these metrics are and how to use them. For example, you might say,

* “Using Adjusted R-Squared, I would prefer Model M1 because ….”
* “Using AIC, I would prefer Model M2 because ….”