

Homework 4

1. (Gauge R & R). Eight randomly selected parts are measured by two different operators 3 different times. Analyze the data as a random effects model. Compare variance components computed using PROC MIXED (or PROC GLIMMIX) and PROC GLM.
2. Problem 11.4 (b)-(d). Use the provided data set. For part (b), the second question is asking how many aliases of two-way interactions are available to estimate; you should first start by finding the alias structure of the fractional factorial design, either through Minitab, or by careful inspection of the main effects columns. When analyzing the data, be sure to include these aliases of two-way interactions in the model. Be sure to include interaction plots for significant two-way interactions in your analysis.
3. Using the data from Problem 2, use Bayesian selection to find a “best” model containing only main effects and two-way interactions. Is it similar to your answer to 11(c) from Problem 2?