

Homework 3

1. Confirm the expression for $E(\bar{y}_{3..})$ at the bottom of page 163.
2. Problem 11.3 (a)-(d). You can find the data on the course website as both an Excel workbook and a text file. Be sure to use Yandell's suggested transformation. The table of treatment counts on page 178 contains some errors, but this discrepancy should not affect the way in which you analyze the problem. Do not include the 14 observations with code C in your analysis. For parts (a), (b), and (d), do not conduct a full analysis; instead report p-values from Type III analyses, and compare results. For (c), do not conduct a full analysis; instead interpret only the Type III and Type IV contrasts for the hypothesis test of no BA effect from SAS output.
3. Consider the following simulation in which the response is the test size (the target is .05). Four different methods are studied at four different sample sizes for four different distributions. Analyze the data, and comment on the residual plot. Which method(s), if any, would you recommend?

| Method | Sample Size | | | |
|--------|-------------|--------|--------|--------|
| | 10 | 15 | 50 | 100 |
| I | D=.114 | A=.085 | C=.065 | B=.007 |
| II | C=.123 | B=.103 | D=.106 | A=.062 |
| III | A=.147 | C=.146 | B=.100 | D=.046 |
| IV | B=.177 | D=.146 | A=.144 | C=.103 |