Homework #9 - Chapter 13 ANOVA (Montgomery & Runger, 6ed)

Reading Assignment: Pages 539 - 547

Problems:

Notes:

1. Use the numbered textbook problems only as references to help add meaning to the data.

2. Do NOT solve the problems as stated in the textbook.

3. For each of the problems, use ANOVA techniques to determine whether or not there is a statistically significant difference between the various treatments ($\alpha = 0.05$).

4. In order to save you from the drudgery of tedious arithmetic, the SS_{Total} and $SS_{Treatment}$ are given. The F_{test} and $F_{Critical\ Value}$ are also provided so that you may check your work. Work through the necessary calculations to determine the F_{test} and $F_{Critical\ Value}$ and then draw your conclusions.

Page	Problem	SS_{Total}	$SS_{Treatment}$	F_{test}	$F_{Critical\ Value}$
555	13 - 5	636.96	475.76	14.76	2.87
555	13 - 6	11.28	3.65	3.59	3.68
555	13 - 7	643648	489740	12.73	3.49
555	13 - 8	651.7	260.9	4.01	3.89
556	13 - 9	1303.7	1060.5	16.35	3.06
556	13 - 10	1265.6	1133.4	30.85	2.77

Conclusions:

13-5	Reject	Conclude, at least one sample significantly different.
13-6	Fail to Reject	Insufficient evidence to say at least one sample significantly different.
13-7	Reject	Conclude, at least one sample significantly different.
13-8	Reject	Conclude, at least one sample significantly different.
13-9	Reject	Conclude, at least one sample significantly different.
13-10	Reject	Conclude, at least one sample significantly different.