Homework Assignment for Lesson 7

Please submit one document file in the ANGEL dropbox.

1) (40 pts) Consider a 2 x 2 factorial treatment design administered in in a RCBD with 3 replications.

Using variables to reflect an experiment of your choice, draw out a study diagram of the experimental layout, and describe your randomization process. Please keep in mind that a study diagram is just a drawing, and can be done by hand and scanned. If you prefer using computer software drawing tools, that’s OK as well.

2) (40 pts)Consider that the data we saw in Lesson 4.1.1 (Two-Factor Factorial: Greenhouse Example) actually was run as a RCBD. The data, now including block numbers is in the file ‘Greenhouse\_RCBD\_data’.

Run an ANOVA considering random block effects, and compare the Fcritical, and Fcalculated with the results obtained with the CRD (ignoring blocks).

3) (20 pts) Randomize (describing your process) the following Standard Latin square to produce a final layout.

|  |  |  |  |
| --- | --- | --- | --- |
| A | B | C | D |
| B | C | D | A |
| C | D | A | B |
| D | A | B | C |