

Psychology 407  
Assignment G

Suppose we have a 50 question test and wish to investigate whether the order of the fifty items makes any difference in the final scores obtained. Assume we assign 35 students at random to five groups so that there are seven students in each. We then select at random 5 out of the 50! possible orderings of the test questions and assign at random one of these orderings to each group. The dependent measure is the number of correct answers. The data are as follows:

Order:	1	2	3	4	5
	35	36	38	27	32
	32	32	27	16	34
	41	34	23	40	26
	42	40	15	32	28
	31	37	29	36	23
	36	44	28	38	36
	35	42	33	22	28
Totals:	252	265	193	211	207

Sum Squares Error: 1014.29

Sum Squares Treatments = 657.60

- i) Construct the appropriate ANOVA table based on Model II.
- ii) Estimate the components of variance and the intraclass correlation coefficient. What does this tell you?
- iii) Construct a 95% confidence interval for  $\rho_I$ .