

## Latin Squares Discussion

Respond to the following questions individually then discuss your answers in your group. You should hand in your individual responses. We will discuss your group responses and then I will lecture on advanced topics.

1. How many degrees of freedom would be available in a 3 by 3 Latin Square? How many degrees of freedom are available for error? Discuss the implications for testing interactions between factors.
2. A standard square lists the factor levels A, B, C, and D in order in the first row and first column. Otherwise, each factor level must appear exactly once in the remaining rows and columns. Provide another standard 4 by 4 square other than

A	B	C	D
B	C	D	A
C	D	A	B
D	A	B	C

3. Show SAS code you would need in order to analyze the following latin square.

Row	Column				
	1	2	3	4	5
1	A=24	B=20	C=19	D=24	E=24
2	B=17	C=24	D=30	E=27	A=36
3	C=18	D=38	E=26	A=27	B=21
4	D=26	E=31	A=26	B=23	C=22
5	E=22	A=30	B=20	C=29	D=31