Latin Square Design Worksheet – Tang Sales and Shelf Space

Source: K. Cox (1964). "The Responsiveness to Shelf Space Changes in Supermarkets,"
Journal of Marketing Research, Vol.1 #2, pp. 63-67
Description: Latin Square Design of weekly sales for 6 weeks in 6 stores at 6 levels of
shelf space. Category3=Tang   (6 to 21 by 3)

store\week	1	2	3	4	5	6	mean		space	mean
1	25	38	31	30	35	25	30.667		6	32.000
2	59	48	47	65	62	43	54.000		9	31.333
3	36	48	55	54	54	47	49.000		12	33.500
4	39	19	27	41	29	33	31.333		15	34.833
5	23	17	24	26	25	11	21.000		18	36.833
6	22	18	19	9	25	22	19.167		21	36.667
mean	34.000	31.333	33.833	37.500	38.333	30.167	34.194		all	34.194

Treatment Factor: _____   Row Blocking Factor: _____Column Blocking Factor: _____

Total Sum of Squares: $df_{Total} =$

Space Sum of Squares: $df_{Space} =$

Store Sum of Squares: $df_{Store} =$

Week Sum of Squares: $df_{Week} =$

Error Sum of Squares: $df_{Error} =$

ANOVA Table

Source	df	SS	MS	F	F(.05)
Space					
Store					
Week					
Error					
Total					

Tukey's W for Comparing Pairs of Shelf space Means and Conclusion: S9   S6   S12   S15   S21   S18

Bonferroni's B for Comparing Pairs of Shelf space Means and Conclusion: S9   S6   S12   S15   S21   S18

Relative Efficiency of Latin Square to Completely Randomized Design:

# of Reps/Trt for CRD for equal SE(Trt Mean)_____