The GLM Procedure

Class Level Information		
Class	**Levels**	**Values**
replicate	4	1 2 3 4
treatment	6	1 2 3 4 5 6
number	6	5 6 7 8 9 10

Number of Observations Read	144
Number of Observations Used	139

The GLM Procedure

Dependent Variable: assessment

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	53	90180.44410	1701.51781	1641.80	<.0001
Error	85	88.09199	1.03638		
Corrected Total	138	90268.53609			

R-Square	Coeff Var	Root MSE	assessment Mean
0.999024	3.491378	1.018026	29.15828

Source	DF	Type I SS	Mean Square	F Value	Pr > F
replicate	3	145.18777	48.39592	46.70	<.0001
treatment	5	89386.39388	17877.27878	17249.8	<.0001
replicate*treatment	15	143.38764	9.55918	9.22	<.0001
number	5	441.33353	88.26671	85.17	<.0001
treatment*number	25	64.14128	2.56565	2.48	0.0011

Source	DF	Type III SS	Mean Square	F Value	Pr > F
replicate	3	28.68910	9.56303	9.23	<.0001
treatment	5	87034.39095	17406.87819	16795.9	<.0001
replicate*treatment	15	148.12242	9.87483	9.53	<.0001
number	5	431.59132	86.31826	83.29	<.0001
treatment*number	25	64.14128	2.56565	2.48	0.0011

The GLM Procedure

Source	Type III Expected Mean Square
replicate	Var(Error) + 5.6793 Var(replicate*treatment) + 34.076 Var(replicate)
treatment	Var(Error) + 5.7121 Var(replicate*treatment) + Q(treatment,treatment*number)
replicate*treatment	Var(Error) + 5.7145 Var(replicate*treatment)
number	Var(Error) + Q(number,treatment*number)
treatment*number	Var(Error) + Q(treatment*number)

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

Standard Errors and Probabilities Calculated Using the Type III MS for replicate*treatment as an Error Term

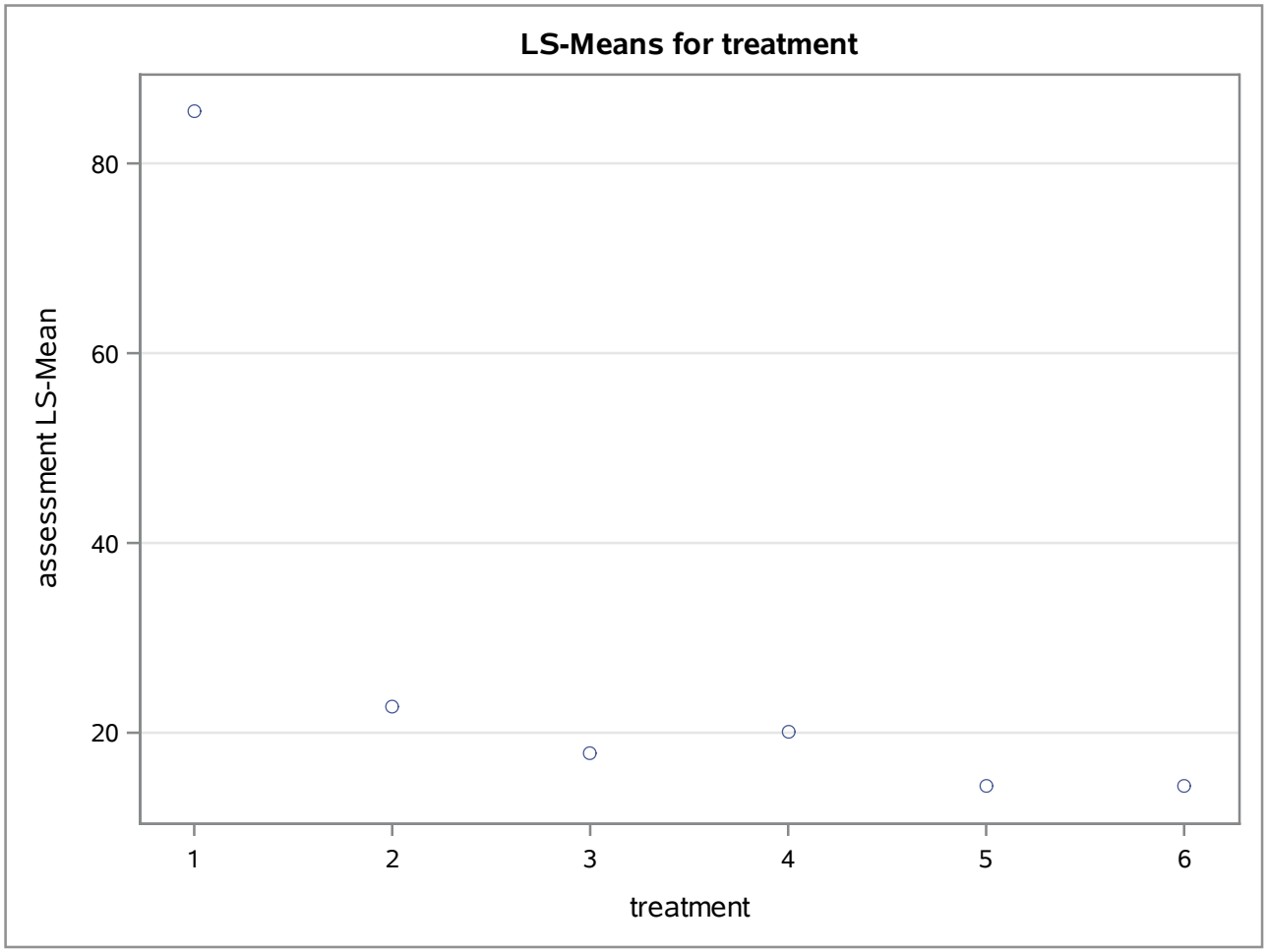
treatment	assessment LSMEAN	Standard Error	Pr > |t|	LSMEAN Number
1	85.5166752	0.6624811	<.0001	1
2	22.7083355	0.6414446	<.0001	2
3	17.8489602	0.6803547	<.0001	3
4	20.1250020	0.6414446	<.0001	4
5	14.3750014	0.6414446	<.0001	5
6	14.4114600	0.6803547	<.0001	6

Least Squares Means for effect treatment
Pr > |t| for H0: LSMean(i)=LSMean(j)

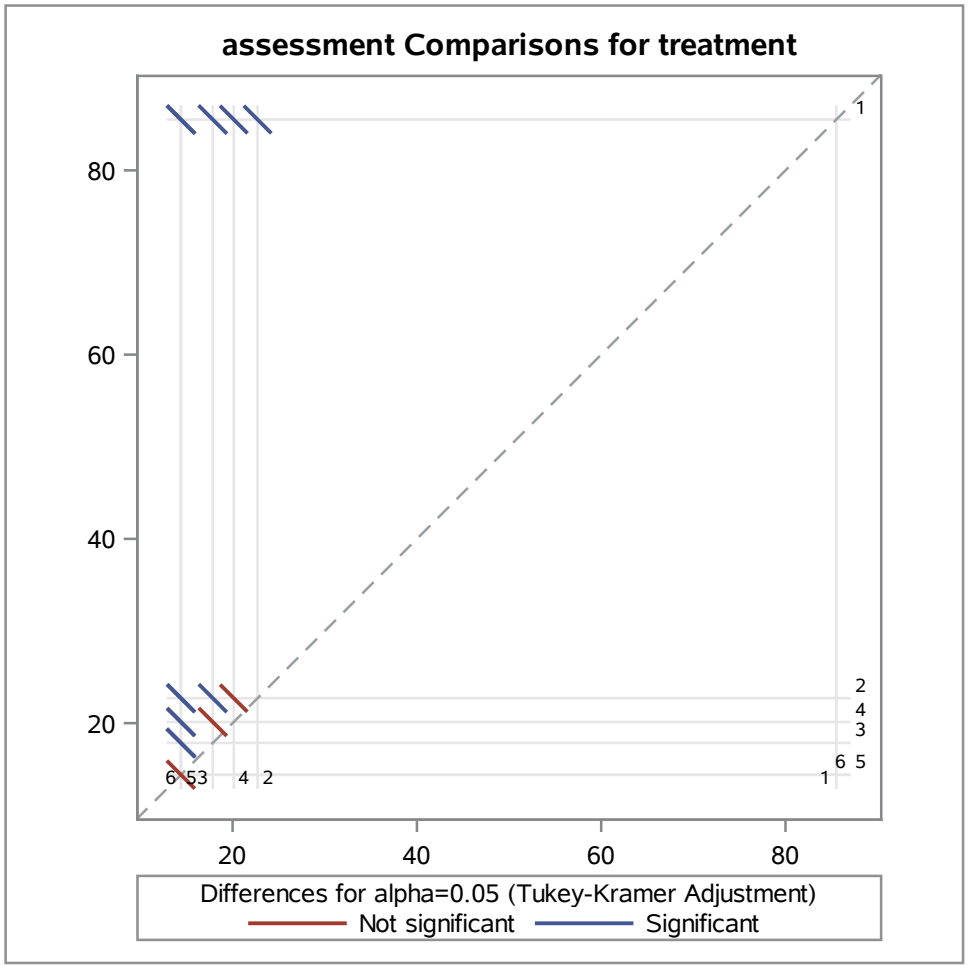
Dependent Variable: assessment

i/j	1	2	3	4	5	6
1		<.0001	<.0001	<.0001	<.0001	<.0001
2	<.0001		0.0012	0.1031	<.0001	<.0001
3	<.0001	0.0012		0.2056	0.0208	0.0273
4	<.0001	0.1031	0.2056		0.0002	0.0002
5	<.0001	<.0001	0.0208	0.0002		1.0000
6	<.0001	<.0001	0.0273	0.0002	1.0000	

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



Tukey-Kramer Comparison Lines for Least Squares Means of treatment				
LS-means with the same letter are not significantly different.				
		assessment LSMEAN	treatment	LSMEAN Number
	A	85.51668	**1**	1
	B	22.70834	**2**	2
	B			
C	B	20.12500	**4**	4
C				
C		17.84896	**3**	3
	D	14.41146	**6**	6
	D			
	D	14.37500	**5**	5

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

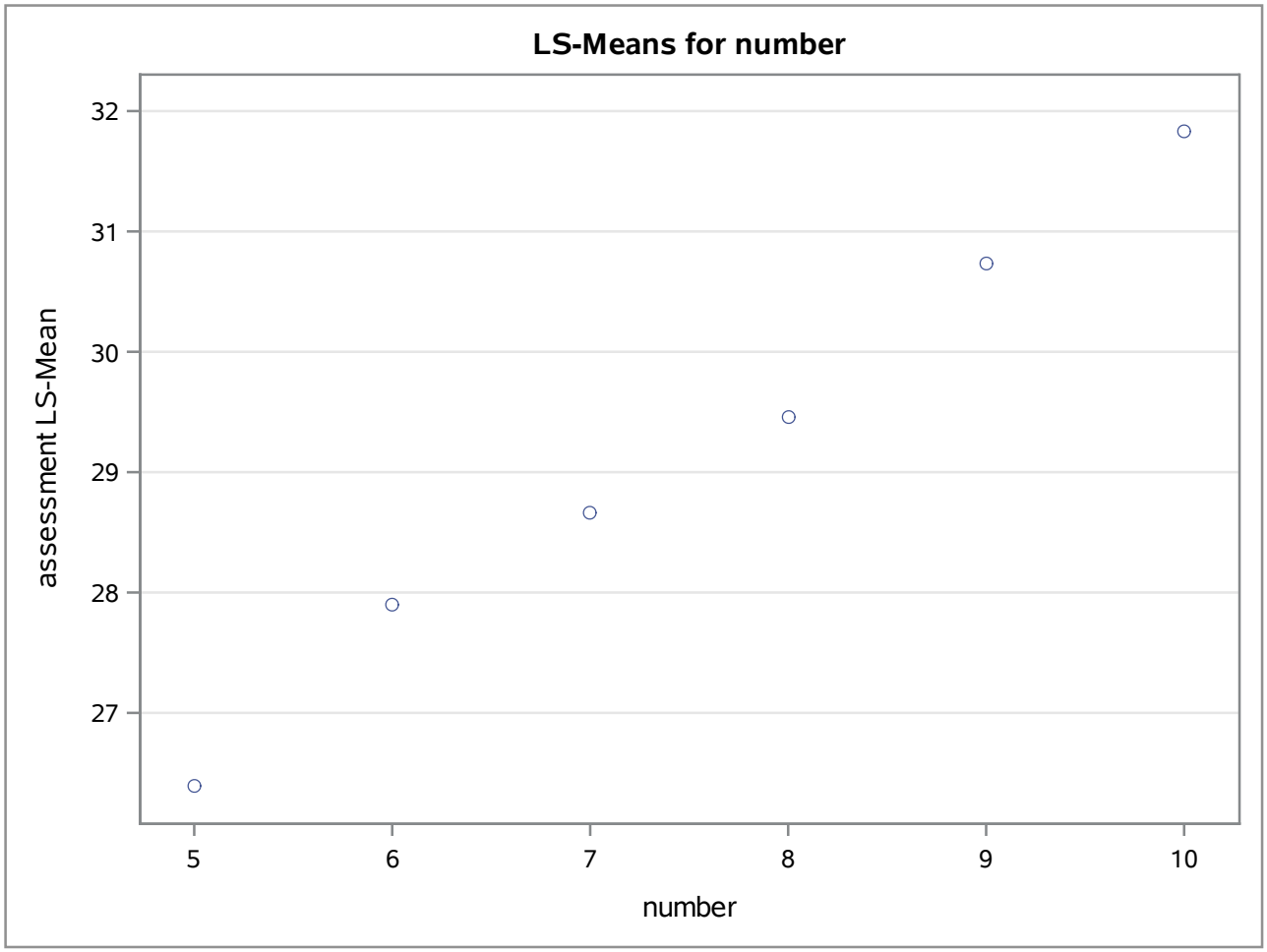
number	assessment LSMEAN	Standard Error	Pr > |t|	LSMEAN Number
5	26.3916693	0.2146187	<.0001	1
6	27.9036486	0.2146486	<.0001	2
7	28.6666695	0.2078036	<.0001	3
8	29.4587084	0.2146486	<.0001	4
9	30.7369823	0.2146486	<.0001	5
10	31.8277562	0.2146486	<.0001	6

Least Squares Means for effect number
Pr > |t| for H0: LSMean(i)=LSMean(j)

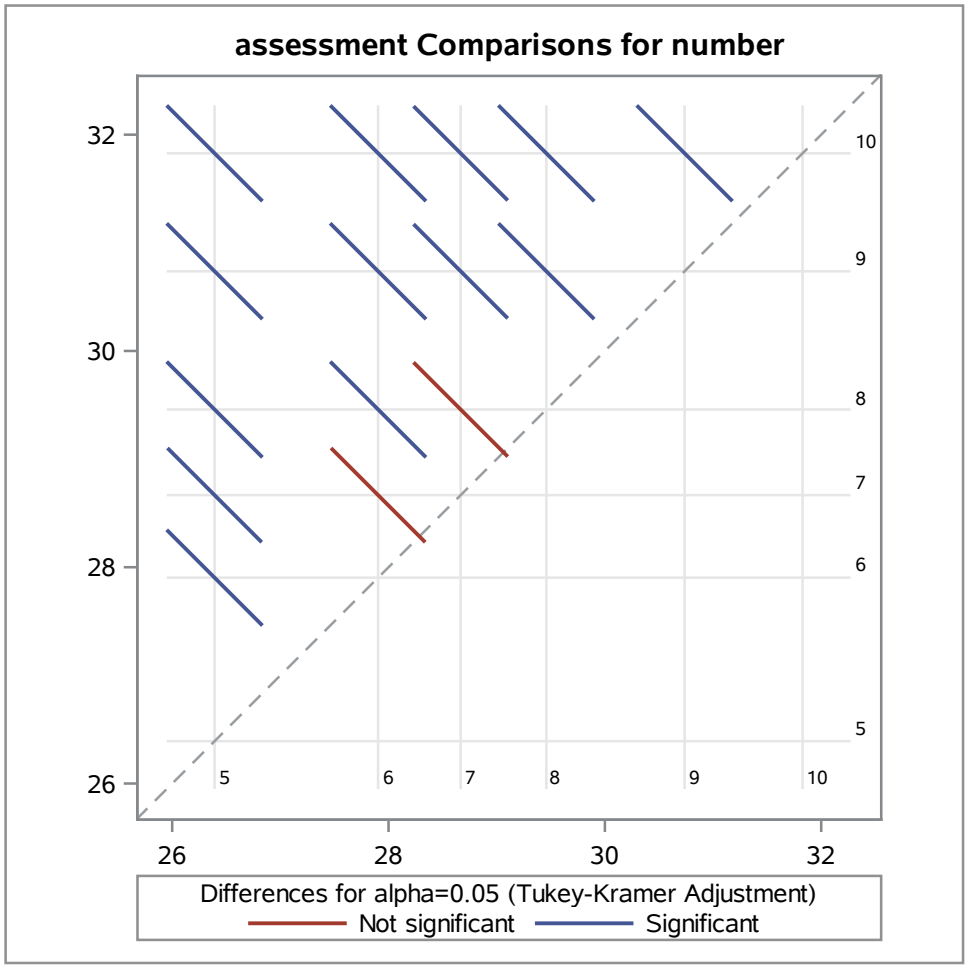
Dependent Variable: assessment

i/j	1	2	3	4	5	6
1		<.0001	<.0001	<.0001	<.0001	<.0001
2	<.0001		0.1204	<.0001	<.0001	<.0001
3	<.0001	0.1204		0.0964	<.0001	<.0001
4	<.0001	<.0001	0.0964		0.0009	<.0001
5	<.0001	<.0001	<.0001	0.0009		0.0070
6	<.0001	<.0001	<.0001	<.0001	0.0070	

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



Tukey-Kramer Comparison Lines for Least Squares Means of number				
LS-means with the same letter are not significantly different.				
		assessment LSMEAN	number	LSMEAN Number
	A	31.82776	**10**	6
	B	30.73698	**9**	5
	C	29.45871	**8**	4
	C			
D	C	28.66667	**7**	3
D				
D		27.90365	**6**	2
	E	26.39167	**5**	1

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	assessment LSMEAN	Standard Error	Pr > |t|	LSMEAN Number
1	5	81.3500079	0.6022721	<.0001	1
1	6	83.2500082	0.5090129	<.0001	2
1	7	85.0000085	0.5090129	<.0001	3
1	8	85.7500087	0.5090129	<.0001	4
1	9	88.2500090	0.5090129	<.0001	5
1	10	89.5000090	0.5090129	<.0001	6
2	5	21.0000020	0.5090129	<.0001	7
2	6	22.0000020	0.5090129	<.0001	8
2	7	22.2500020	0.5090129	<.0001	9
2	8	22.7500023	0.5090129	<.0001	10
2	9	23.5000023	0.5090129	<.0001	11
2	10	24.7500025	0.5090129	<.0001	12
3	5	15.2500018	0.5090129	<.0001	13
3	6	16.9218767	0.6026561	<.0001	14
3	7	17.2500018	0.5090129	<.0001	15
3	8	18.0000020	0.5090129	<.0001	16
3	9	18.9218769	0.6026561	<.0001	17
3	10	20.7500020	0.5090129	<.0001	18
4	5	16.7500020	0.5090129	<.0001	19
4	6	18.2500020	0.5090129	<.0001	20
4	7	19.2500020	0.5090129	<.0001	21
4	8	21.0000020	0.5090129	<.0001	22
4	9	22.7500023	0.5090129	<.0001	23
4	10	22.7500020	0.5090129	<.0001	24
5	5	11.7500010	0.5090129	<.0001	25
5	6	13.0000010	0.5090129	<.0001	26
5	7	13.7500010	0.5090129	<.0001	27
5	8	14.0000015	0.5090129	<.0001	28
5	9	16.0000017	0.5090129	<.0001	29
5	10	17.7500020	0.5090129	<.0001	30
6	5	12.2500012	0.5090129	<.0001	31
6	6	14.0000015	0.5090129	<.0001	32
6	7	14.5000018	0.5090129	<.0001	33
6	8	15.2522339	0.6026561	<.0001	34

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	assessment LSMEAN	Standard Error	Pr > |t|	LSMEAN Number
6	**9**	15.0000018	0.5090129	<.0001	35
6	**10**	15.4665196	0.6026561	<.0001	36

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

Least Squares Means for effect treatment*number
Pr > |t| for H0: LSMean(i)=LSMean(j)

Dependent Variable: assessment

i/j	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1		0.8828	0.0059	0.0002	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
2	0.8828		0.8727	0.1916	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
3	0.0059	0.8727		1.0000	0.0088	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
4	0.0002	0.1916	1.0000		0.1916	0.0007	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
5	<.0001	<.0001	0.0088	0.1916		0.9986	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
6	<.0001	<.0001	<.0001	0.0007	0.9986		<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
7	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001		1.0000	0.9986	0.8727	0.1916	0.0007	<.0001	0.0008
8	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	1.0000		1.0000	1.0000	0.9769	0.0786	<.0001	<.0001
9	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.9986	1.0000		1.0000	0.9986	0.1916	<.0001	<.0001
10	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.8727	1.0000	1.0000		1.0000	0.6518	<.0001	<.0001
11	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.1916	0.9769	0.9986	1.0000		0.9986	<.0001	<.0001
12	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.0007	0.0786	0.1916	0.6518	0.9986		<.0001	<.0001
13	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001		0.9713
14	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.0008	<.0001	<.0001	<.0001	<.0001	<.0001	0.9713	
15	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.0007	<.0001	<.0001	<.0001	<.0001	<.0001	0.6518	1.0000
16	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.0280	0.0002	<.0001	<.0001	<.0001	<.0001	0.0786	1.0000
17	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.7547	0.0624	0.0237	0.0026	<.0001	<.0001	0.0054	0.9176
18	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	1.0000	0.9986	0.9769	0.6518	0.0786	0.0002	<.0001	0.0026
19	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.9769	1.0000
20	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.0786	0.0007	0.0002	<.0001	<.0001	<.0001	0.0280	0.9992
21	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.8727	0.0786	0.0280	0.0025	<.0001	<.0001	0.0002	0.5198
22	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	1.0000	1.0000	0.9986	0.8727	0.1916	0.0007	<.0001	0.0008
23	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.8727	1.0000	1.0000	1.0000	1.0000	0.6518	<.0001	<.0001
24	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.8727	1.0000	1.0000	1.0000	1.0000	0.6518	<.0001	<.0001
25	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.0025	<.0001
26	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.3917	0.0017
27	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.9769	0.0440
28	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.9986	0.1078
29	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	1.0000	1.0000
30	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.0088	<.0001	<.0001	<.0001	<.0001	<.0001	0.1916	1.0000
31	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.0280	<.0001
32	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.9986	0.1078
33	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	1.0000	0.4312

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

Least Squares Means for effect treatment*number
Pr > |t| for H0: LSMean(i)=LSMean(j)

Dependent Variable: assessment

i/j	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
2	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
3	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
4	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
5	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
6	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
7	0.0007	0.0280	0.7547	1.0000	<.0001	0.0786	0.8727	1.0000	0.8727	0.8727	<.0001	<.0001	<.0001	<.0001
8	<.0001	0.0002	0.0624	0.9986	<.0001	0.0007	0.0786	1.0000	1.0000	1.0000	<.0001	<.0001	<.0001	<.0001
9	<.0001	<.0001	0.0237	0.9769	<.0001	0.0002	0.0280	0.9986	1.0000	1.0000	<.0001	<.0001	<.0001	<.0001
10	<.0001	<.0001	0.0026	0.6518	<.0001	<.0001	0.0025	0.8727	1.0000	1.0000	<.0001	<.0001	<.0001	<.0001
11	<.0001	<.0001	<.0001	0.0786	<.0001	<.0001	<.0001	0.1916	1.0000	1.0000	<.0001	<.0001	<.0001	<.0001
12	<.0001	<.0001	<.0001	0.0002	<.0001	<.0001	<.0001	0.0007	0.6518	0.6518	<.0001	<.0001	<.0001	<.0001
13	0.6518	0.0786	0.0054	<.0001	0.9769	0.0280	0.0002	<.0001	<.0001	<.0001	0.0025	0.3917	0.9769	0.9986
14	1.0000	1.0000	0.9176	0.0026	1.0000	0.9992	0.5198	0.0008	<.0001	<.0001	<.0001	0.0017	0.0440	0.1078
15		1.0000	0.9713	0.0025	1.0000	1.0000	0.6518	0.0007	<.0001	<.0001	<.0001	<.0001	0.0025	0.0088
16	1.0000		1.0000	0.0786	0.9986	1.0000	0.9986	0.0280	<.0001	<.0001	<.0001	<.0001	<.0001	0.0002
17	0.9713	1.0000		0.9202	0.6705	1.0000	1.0000	0.7547	0.0026	0.0026	<.0001	<.0001	<.0001	<.0001
18	0.0025	0.0786	0.9202		0.0002	0.1916	0.9769	1.0000	0.6518	0.6518	<.0001	<.0001	<.0001	<.0001
19	1.0000	0.9986	0.6705	0.0002		0.9769	0.1916	<.0001	<.0001	<.0001	<.0001	0.0007	0.0280	0.0786
20	1.0000	1.0000	1.0000	0.1916	0.9769		1.0000	0.0786	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
21	0.6518	0.9986	1.0000	0.9769	0.1916	1.0000		0.8727	0.0025	0.0025	<.0001	<.0001	<.0001	<.0001
22	0.0007	0.0280	0.7547	1.0000	<.0001	0.0786	0.8727		0.8727	0.8727	<.0001	<.0001	<.0001	<.0001
23	<.0001	<.0001	0.0026	0.6518	<.0001	<.0001	0.0025	0.8727		1.0000	<.0001	<.0001	<.0001	<.0001
24	<.0001	<.0001	0.0026	0.6518	<.0001	<.0001	0.0025	0.8727	1.0000		<.0001	<.0001	<.0001	<.0001
25	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001		0.9986	0.6518	0.3917
26	<.0001	<.0001	<.0001	<.0001	0.0007	<.0001	<.0001	<.0001	<.0001	<.0001	0.9986		1.0000	1.0000
27	0.0025	<.0001	<.0001	<.0001	0.0280	<.0001	<.0001	<.0001	<.0001	<.0001	0.6518	1.0000		1.0000
28	0.0088	0.0002	<.0001	<.0001	0.0786	<.0001	<.0001	<.0001	<.0001	<.0001	0.3917	1.0000	1.0000	
29	0.9986	0.6518	0.1078	<.0001	1.0000	0.3917	0.0088	<.0001	<.0001	<.0001	<.0001	0.0280	0.3917	0.6518
30	1.0000	1.0000	0.9999	0.0280	1.0000	1.0000	0.9769	0.0088	<.0001	<.0001	<.0001	<.0001	0.0002	0.0007
31	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	1.0000	1.0000	0.9769	0.8727
32	0.0088	0.0002	<.0001	<.0001	0.0786	<.0001	<.0001	<.0001	<.0001	<.0001	0.3917	1.0000	1.0000	1.0000
33	0.0786	0.0025	0.0001	<.0001	0.3917	0.0007	<.0001	<.0001	<.0001	<.0001	0.0786	0.9769	1.0000	1.0000

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

Least Squares Means for effect treatment*number
Pr > |t| for H0: LSMean(i)=LSMean(j)

Dependent Variable: assessment

i/j	29	30	31	32	33	34	35	36
1	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
2	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
3	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
4	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
5	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
6	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
7	<.0001	0.0088	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
8	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
9	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
10	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
11	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
12	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
13	1.0000	0.1916	0.0280	0.9986	1.0000	1.0000	1.0000	1.0000
14	1.0000	1.0000	<.0001	0.1078	0.4312	0.9902	0.8702	0.9989
15	0.9986	1.0000	<.0001	0.0088	0.0786	0.8188	0.3917	0.9386
16	0.6518	1.0000	<.0001	0.0002	0.0025	0.1871	0.0280	0.3342
17	0.1078	0.9999	<.0001	<.0001	0.0001	0.0179	0.0017	0.0397
18	<.0001	0.0280	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
19	1.0000	1.0000	<.0001	0.0786	0.3917	0.9938	0.8727	0.9996
20	0.3917	1.0000	<.0001	<.0001	0.0007	0.0831	0.0088	0.1680
21	0.0088	0.9769	<.0001	<.0001	<.0001	0.0012	<.0001	0.0032
22	<.0001	0.0088	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
23	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
24	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
25	<.0001	<.0001	1.0000	0.3917	0.0786	0.0114	0.0088	0.0044
26	0.0280	<.0001	1.0000	1.0000	0.9769	0.5935	0.6518	0.3910
27	0.3917	0.0002	0.9769	1.0000	1.0000	0.9935	0.9986	0.9604
28	0.6518	0.0007	0.8727	1.0000	1.0000	0.9997	1.0000	0.9956
29		0.8727	0.0007	0.6518	0.9769	1.0000	1.0000	1.0000
30	0.8727		<.0001	0.0007	0.0088	0.3639	0.0786	0.5631
31	0.0007	<.0001		0.8727	0.3917	0.0819	0.0786	0.0370
32	0.6518	0.0007	0.8727		1.0000	0.9997	1.0000	0.9956
33	0.9769	0.0088	0.3917	1.0000		1.0000	1.0000	1.0000

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

Least Squares Means for effect treatment*number
Pr > |t| for H0: LSMean(i)=LSMean(j)

Dependent Variable: assessment

i/j	1	2	3	4	5	6	7	8	9	10	11	12	13	14
34	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	1.0000	0.9902
35	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	1.0000	0.8702
36	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	1.0000	0.9989

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

Least Squares Means for effect treatment*number
Pr > |t| for H0: LSMean(i)=LSMean(j)

Dependent Variable: assessment

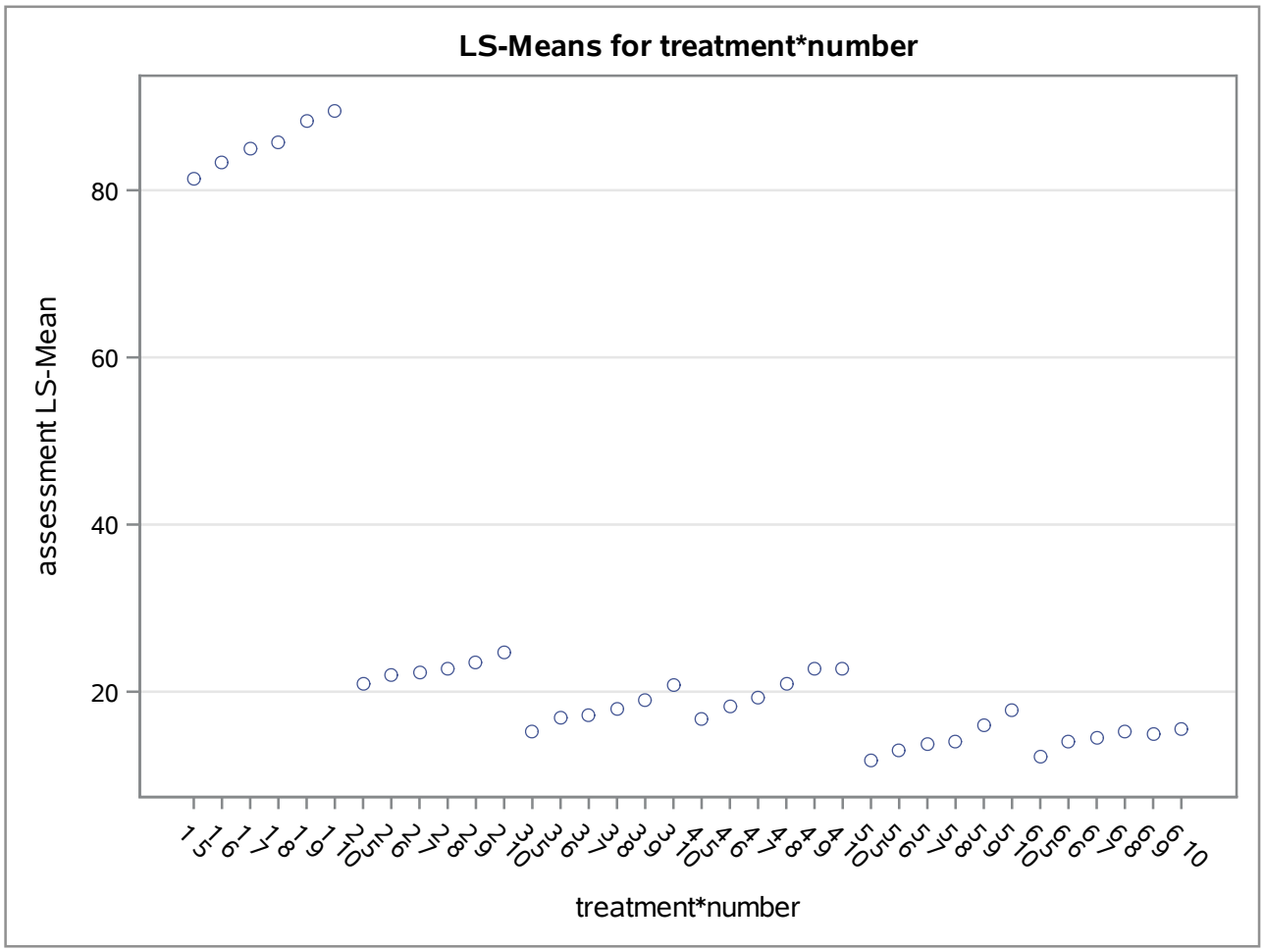
i/j	15	16	17	18	19	20	21	22	23	24	25	26	27	28
34	0.8188	0.1871	0.0179	<.0001	0.9938	0.0831	0.0012	<.0001	<.0001	<.0001	0.0114	0.5935	0.9935	0.9997
35	0.3917	0.0280	0.0017	<.0001	0.8727	0.0088	<.0001	<.0001	<.0001	<.0001	0.0088	0.6518	0.9986	1.0000
36	0.9386	0.3342	0.0397	<.0001	0.9996	0.1680	0.0032	<.0001	<.0001	<.0001	0.0044	0.3910	0.9604	0.9956

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

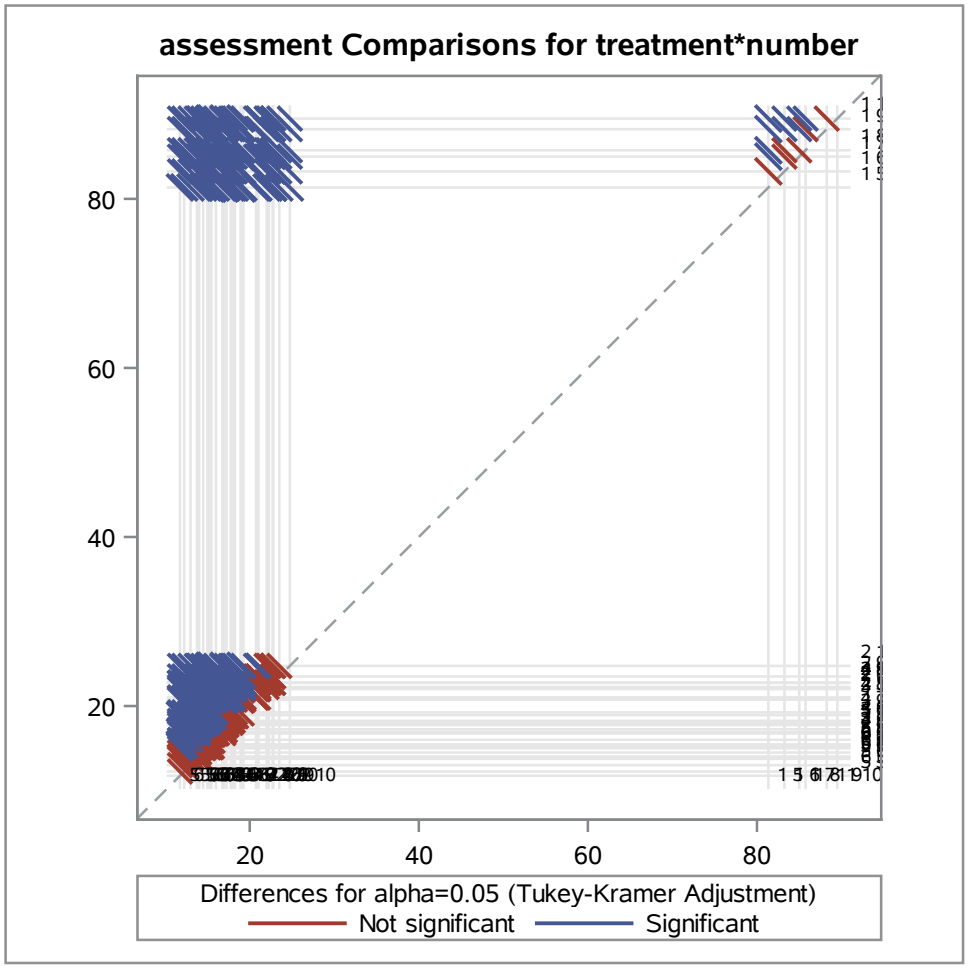
Least Squares Means for effect treatment*number
Pr > |t| for H0: LSMean(i)=LSMean(j)

Dependent Variable: assessment

i/j	29	30	31	32	33	34	35	36
34	1.0000	0.3639	0.0819	0.9997	1.0000		1.0000	1.0000
35	1.0000	0.0786	0.0786	1.0000	1.0000	1.0000		1.0000
36	1.0000	0.5631	0.0370	0.9956	1.0000	1.0000	1.0000	



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



Tukey-Kramer Comparison Lines for Least Squares Means of treatment*number											
LS-means with the same letter are not significantly different.											
								assessment LSMEAN	treatment	number	LSMEAN Number
				A				89.50001	**1**	**10**	6
				A							
	B			A				88.25001	**1**	**9**	5
	B										
	B			C				85.75001	**1**	**8**	4
				C							
				C				85.00001	**1**	**7**	3
				C							
	D			C				83.25001	**1**	**6**	2
	D										
	D							81.35001	**1**	**5**	1
The LINES display does not reflect all significant comparisons. The following additional pairs are significantly different: (13,31)											

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

Tukey-Kramer Comparison Lines for Least Squares Means of treatment*number

LS-means with the same letter are not significantly different.

								assessment LSMEAN	treatment	number	LSMEAN Number
				E				24.75000	**2**	**10**	12
				E							
	F			E				23.50000	**2**	**9**	11
	F			E							
	F			E				22.75000	**4**	**9**	23
	F			E							
	F			E				22.75000	**2**	**8**	10
	F			E							
	F			E				22.75000	**4**	**10**	24
	F			E							
	F			E				22.25000	**2**	**7**	9
	F			E							
	F			E		G		22.00000	**2**	**6**	8
	F					G					
	F			H		G		21.00000	**4**	**8**	22
	F			H		G					
	F			H		G		21.00000	**2**	**5**	7
	F			H		G					
	F	I		H		G		20.75000	**3**	**10**	18
		I		H		G					
	J	I		H		G		19.25000	**4**	**7**	21
	J	I		H		G					
K	J	I		H		G		18.92188	**3**	**9**	17
K	J	I		H							
K	J	I		H		L		18.25000	**4**	**6**	20
K	J	I				L					
K	J	I		M		L		18.00000	**3**	**8**	16
K	J			M		L					
K	J	N		M		L		17.75000	**5**	**10**	30
K	J	N		M		L					

The LINES display does not reflect all significant comparisons. The following additional pairs are significantly different: (13,31)

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

Tukey-Kramer Comparison Lines for Least Squares Means of treatment*number											
LS-means with the same letter are not significantly different.											
								assessment LSMEAN	treatment	number	LSMEAN Number
K	J	N		M		L	O	17.25000	**3**	**7**	15
K	J	N		M		L	O				
K	J	N		M	P	L	O	16.92188	**3**	**6**	14
K	J	N		M	P	L	O				
K	J	N		M	P	L	O	16.75000	**4**	**5**	19
K		N		M	P	L	O				
K	Q	N		M	P	L	O	16.00000	**5**	**9**	29
	Q	N		M	P	L	O				
R	Q	N		M	P	L	O	15.46652	**6**	**10**	36
R	Q	N		M	P	L	O				
R	Q	N	S	M	P	L	O	15.25223	**6**	**8**	34
R	Q	N	S	M	P		O				
R	Q	N	S	M	P		O	15.25000	**3**	**5**	13
R	Q	N	S		P		O				
R	Q	N	S		P		O	15.00000	**6**	**9**	35
R	Q		S		P		O				
R	Q		S	T	P		O	14.50000	**6**	**7**	33
R	Q		S	T	P						
R	Q		S	T	P			14.00000	**6**	**6**	32
R	Q		S	T	P						
R	Q		S	T	P			14.00000	**5**	**8**	28
R	Q		S	T							
R	Q		S	T				13.75000	**5**	**7**	27
R			S	T							
R			S	T				13.00000	**5**	**6**	26
			S	T							
			S	T				12.25000	**6**	**5**	31
				T							
				T				11.75000	**5**	**5**	25

The LINES display does not reflect all significant comparisons. The following additional pairs are significantly different: (13,31)

The GLM Procedure

Dependent Variable: assessment

Tests of Hypotheses Using the Type III MS for replicate*treatment as an Error Term					
Source	**DF**	**Type III SS**	**Mean Square**	**F Value**	**Pr > F**
treatment	5	87034.39095	17406.87819	1762.75	<.0001
replicate	3	28.68910	9.56303	0.97	0.4334

Obs	_NAME_	treatment	LSMEAN	STDERR	NUMBER	COV1	COV2	COV3	COV4	COV5	COV6
1	assessment	1	85.5167	0.66248	1	0.43888	0.00000	0.00000	0.00000	0.00000	0.00000
2	assessment	2	22.7083	0.64144	2	0.00000	0.41145	0.00000	0.00000	0.00000	0.00000
3	assessment	3	17.8490	0.68035	3	0.00000	0.00000	0.46288	0.00000	0.00000	0.00000
4	assessment	4	20.1250	0.64144	4	0.00000	0.00000	0.00000	0.41145	0.00000	0.00000
5	assessment	5	14.3750	0.64144	5	0.00000	0.00000	0.00000	0.00000	0.41145	0.00000
6	assessment	6	14.4115	0.68035	6	0.00000	0.00000	0.00000	0.00000	0.00000	0.46288

Obs	_NAME_	number	LSMEAN	STDERR	NUMBER2	COV1	COV2	COV3	COV4	COV5	COV6
1	assessment	5	26.3917	0.21462	1	0.046061	0.000000	0.000000	0.000000	0.000000	0.000000
2	assessment	6	27.9036	0.21465	2	0.000000	0.046074	0.000000	0.000000	-0.000193	0.000000
3	assessment	7	28.6667	0.20780	3	0.000000	0.000000	0.043182	0.000000	0.000000	0.000000
4	assessment	8	29.4587	0.21465	4	0.000000	0.000000	0.000000	0.046074	0.000000	-0.000193
5	assessment	9	30.7370	0.21465	5	0.000000	-0.000193	0.000000	0.000000	0.046074	0.000000
6	assessment	10	31.8278	0.21465	6	0.000000	0.000000	0.000000	-0.000193	0.000000	0.046074

Obs	_NAME_	treatment	number	LSMEAN	STDERR	NUMBER2	COV1	COV2	COV3	COV4	COV5
1	assessment	1	5	81.3500	0.60227	1	0.36273	0.00000	0.00000	0.00000	0.00000
2	assessment	1	6	83.2500	0.50901	2	0.00000	0.25909	0.00000	0.00000	0.00000
3	assessment	1	7	85.0000	0.50901	3	0.00000	0.00000	0.25909	0.00000	0.00000
4	assessment	1	8	85.7500	0.50901	4	0.00000	0.00000	0.00000	0.25909	0.00000
5	assessment	1	9	88.2500	0.50901	5	0.00000	0.00000	0.00000	0.00000	0.25909
6	assessment	1	10	89.5000	0.50901	6	0.00000	0.00000	0.00000	0.00000	0.00000
7	assessment	2	5	21.0000	0.50901	7	0.00000	0.00000	0.00000	0.00000	0.00000
8	assessment	2	6	22.0000	0.50901	8	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	COV6	COV7	COV8	COV9	COV10	COV11	COV12	COV13	COV14	COV15	COV16	COV17
1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
6	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
7	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
8	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	COV18	COV19	COV20	COV21	COV22	COV23	COV24	COV25	COV26	COV27	COV28	COV29
1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
6	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	COV30	COV31	COV32	COV33	COV34	COV35	COV36
1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
6	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	_NAME_	treatment	number	LSMEAN	STDERR	NUMBER2	COV1	COV2	COV3	COV4	COV5
9	assessment	2	7	22.2500	0.50901	9	0.00000	0.00000	0.00000	0.00000	0.00000
10	assessment	2	8	22.7500	0.50901	10	0.00000	0.00000	0.00000	0.00000	0.00000
11	assessment	2	9	23.5000	0.50901	11	0.00000	0.00000	0.00000	0.00000	0.00000
12	assessment	2	10	24.7500	0.50901	12	0.00000	0.00000	0.00000	0.00000	0.00000
13	assessment	3	5	15.2500	0.50901	13	0.00000	0.00000	0.00000	0.00000	0.00000
14	assessment	3	6	16.9219	0.60266	14	0.00000	0.00000	0.00000	0.00000	0.00000
15	assessment	3	7	17.2500	0.50901	15	0.00000	0.00000	0.00000	0.00000	0.00000
16	assessment	3	8	18.0000	0.50901	16	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	COV6	COV7	COV8	COV9	COV10	COV11	COV12	COV13	COV14	COV15	COV16	COV17
9	0.00000	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
10	0.00000	0.00000	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
11	0.00000	0.00000	0.00000	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000
13	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000
14	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.36319	0.00000	0.00000	-0.00694
15	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.25909	0.00000	0.00000
16	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.25909	0.00000

Obs	COV18	COV19	COV20	COV21	COV22	COV23	COV24	COV25	COV26	COV27	COV28	COV29
9	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
10	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
11	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
13	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
14	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
15	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
16	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	COV30	COV31	COV32	COV33	COV34	COV35	COV36
9	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
10	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
11	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
13	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
14	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
15	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
16	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	_NAME_	treatment	number	LSMEAN	STDERR	NUMBER2	COV1	COV2	COV3	COV4	COV5
17	assessment	3	9	18.9219	0.60266	17	0.00000	0.00000	0.00000	0.00000	0.00000
18	assessment	3	10	20.7500	0.50901	18	0.00000	0.00000	0.00000	0.00000	0.00000
19	assessment	4	5	16.7500	0.50901	19	0.00000	0.00000	0.00000	0.00000	0.00000
20	assessment	4	6	18.2500	0.50901	20	0.00000	0.00000	0.00000	0.00000	0.00000
21	assessment	4	7	19.2500	0.50901	21	0.00000	0.00000	0.00000	0.00000	0.00000
22	assessment	4	8	21.0000	0.50901	22	0.00000	0.00000	0.00000	0.00000	0.00000
23	assessment	4	9	22.7500	0.50901	23	0.00000	0.00000	0.00000	0.00000	0.00000
24	assessment	4	10	22.7500	0.50901	24	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	COV6	COV7	COV8	COV9	COV10	COV11	COV12	COV13	COV14	COV15	COV16	COV17
17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-0.00694	0.00000	0.00000	0.36319
18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
19	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
20	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
21	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
22	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
23	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
24	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	COV18	COV19	COV20	COV21	COV22	COV23	COV24	COV25	COV26	COV27	COV28	COV29
17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
18	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
19	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
20	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
21	0.00000	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
22	0.00000	0.00000	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
23	0.00000	0.00000	0.00000	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
24	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	COV30	COV31	COV32	COV33	COV34	COV35	COV36
17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
19	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
20	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
21	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
22	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
23	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
24	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	_NAME_	treatment	number	LSMEAN	STDERR	NUMBER2	COV1	COV2	COV3	COV4	COV5
25	assessment	5	5	11.7500	0.50901	25	0.00000	0.00000	0.00000	0.00000	0.00000
26	assessment	5	6	13.0000	0.50901	26	0.00000	0.00000	0.00000	0.00000	0.00000
27	assessment	5	7	13.7500	0.50901	27	0.00000	0.00000	0.00000	0.00000	0.00000
28	assessment	5	8	14.0000	0.50901	28	0.00000	0.00000	0.00000	0.00000	0.00000
29	assessment	5	9	16.0000	0.50901	29	0.00000	0.00000	0.00000	0.00000	0.00000
30	assessment	5	10	17.7500	0.50901	30	0.00000	0.00000	0.00000	0.00000	0.00000
31	assessment	6	5	12.2500	0.50901	31	0.00000	0.00000	0.00000	0.00000	0.00000
32	assessment	6	6	14.0000	0.50901	32	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	COV6	COV7	COV8	COV9	COV10	COV11	COV12	COV13	COV14	COV15	COV16	COV17
25	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
26	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
27	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
28	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
29	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
30	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
31	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
32	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	COV18	COV19	COV20	COV21	COV22	COV23	COV24	COV25	COV26	COV27	COV28	COV29
25	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000
26	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000
27	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.25909	0.00000	0.00000
28	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.25909	0.00000
29	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.25909
30	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
31	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
32	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	COV30	COV31	COV32	COV33	COV34	COV35	COV36
25	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
26	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
27	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
28	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
29	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
30	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
31	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000	0.00000
32	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000	0.00000

Obs	_NAME_	treatment	number	LSMEAN	STDERR	NUMBER2	COV1	COV2	COV3	COV4	COV5
33	assessment	6	7	14.5000	0.50901	33	0.00000	0.00000	0.00000	0.00000	0.00000
34	assessment	6	8	15.2522	0.60266	34	0.00000	0.00000	0.00000	0.00000	0.00000
35	assessment	6	9	15.0000	0.50901	35	0.00000	0.00000	0.00000	0.00000	0.00000
36	assessment	6	10	15.4665	0.60266	36	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	COV6	COV7	COV8	COV9	COV10	COV11	COV12	COV13	COV14	COV15	COV16	COV17
33	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
34	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
35	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
36	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	COV18	COV19	COV20	COV21	COV22	COV23	COV24	COV25	COV26	COV27	COV28	COV29
33	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
34	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
35	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
36	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Obs	COV30	COV31	COV32	COV33	COV34	COV35	COV36
33	0.00000	0.00000	0.00000	0.25909	0.00000	0.00000	0.00000
34	0.00000	0.00000	0.00000	0.00000	0.36319	0.00000	-0.00694
35	0.00000	0.00000	0.00000	0.00000	0.00000	0.25909	0.00000
36	0.00000	0.00000	0.00000	0.00000	-0.00694	0.00000	0.36319

The Mixed Procedure

Model Information	
Data Set	WORK.STACKED
Dependent Variable	assessment
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information		
Class	**Levels**	**Values**
replicate	4	1 2 3 4
treatment	6	1 2 3 4 5 6
number	6	5 6 7 8 9 10

Dimensions	
Covariance Parameters	3
Columns in X	49
Columns in Z	28
Subjects	1
Max Obs per Subject	139

Number of Observations	
Number of Observations Read	144
Number of Observations Used	139
Number of Observations Not Used	5

Iteration History			
Iteration	**Evaluations**	**-2 Res Log Like**	**Criterion**
0	1	438.42803506	
1	2	385.19216028	0.00000169
2	1	385.19199351	0.00000000

Convergence criteria met.

The Mixed Procedure

Covariance Parameter Estimates	
Cov Parm	**Estimate**
replicate	0
replicate*treatment	1.5634
Residual	1.0367

Fit Statistics	
-2 Res Log Likelihood	385.2
AIC (Smaller is Better)	389.2
AICC (Smaller is Better)	389.3
BIC (Smaller is Better)	388.0

Solution for Random Effects							
Effect	**replicate**	**treatment**	**Estimate**	**Std Err Pred**	**DF**	**t Value**	**Pr > |t|**
replicate	1		0	.	.	.	.
replicate	2		0	.	.	.	.
replicate	3		0	.	.	.	.
replicate	4		0	.	.	.	.
replicate*treatment	1	1	-0.8388	0.7267	85	-1.15	0.2517
replicate*treatment	1	2	1.0130	0.7124	85	1.42	0.1587
replicate*treatment	1	3	1.4731	0.7154	85	2.06	0.0426
replicate*treatment	1	4	-0.7129	0.7124	85	-1.00	0.3198
replicate*treatment	1	5	0.1126	0.7124	85	0.16	0.8748
replicate*treatment	1	6	-2.1595	0.7154	85	-3.02	0.0034
replicate*treatment	2	1	0.5797	0.7140	85	0.81	0.4191
replicate*treatment	2	2	0.4127	0.7124	85	0.58	0.5639
replicate*treatment	2	3	0.7227	0.7154	85	1.01	0.3153
replicate*treatment	2	4	0.03752	0.7124	85	0.05	0.9581
replicate*treatment	2	5	0.4127	0.7124	85	0.58	0.5639
replicate*treatment	2	6	0.6775	0.7289	85	0.93	0.3553
replicate*treatment	3	1	1.7804	0.7140	85	2.49	0.0146
replicate*treatment	3	2	-0.9380	0.7124	85	-1.32	0.1915
replicate*treatment	3	3	-0.2223	0.7289	85	-0.30	0.7611
replicate*treatment	3	4	0.1876	0.7124	85	0.26	0.7929
replicate*treatment	3	5	0.7129	0.7124	85	1.00	0.3198
replicate*treatment	3	6	0.2417	0.7154	85	0.34	0.7363

The Mixed Procedure

Solution for Random Effects							
Effect	**replicate**	**treatment**	**Estimate**	**Std Err Pred**	**DF**	**t Value**	**Pr > |t|**
replicate*treatment	4	1	-1.5214	0.7140	85	-2.13	0.0360
replicate*treatment	4	2	-0.4878	0.7124	85	-0.68	0.4954
replicate*treatment	4	3	-1.9735	0.7289	85	-2.71	0.0082
replicate*treatment	4	4	0.4878	0.7124	85	0.68	0.4954
replicate*treatment	4	5	-1.2382	0.7124	85	-1.74	0.0858
replicate*treatment	4	6	1.2403	0.7289	85	1.70	0.0925

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
number	5	85	83.20	<.0001
treatment	5	15	1769.17	<.0001
treatment*number	25	85	2.48	0.0011

The PLM Procedure

Store Information	
Item Store	WORK.SPLITMIXED
Data Set Created From	WORK.STACKED
Created By	PROC MIXED
Date Created	02NOV18:10:41:07
Response Variable	assessment
Distribution	Normal
Class Variables	replicate treatment number
Model Effects	Intercept number treatment treatment*number

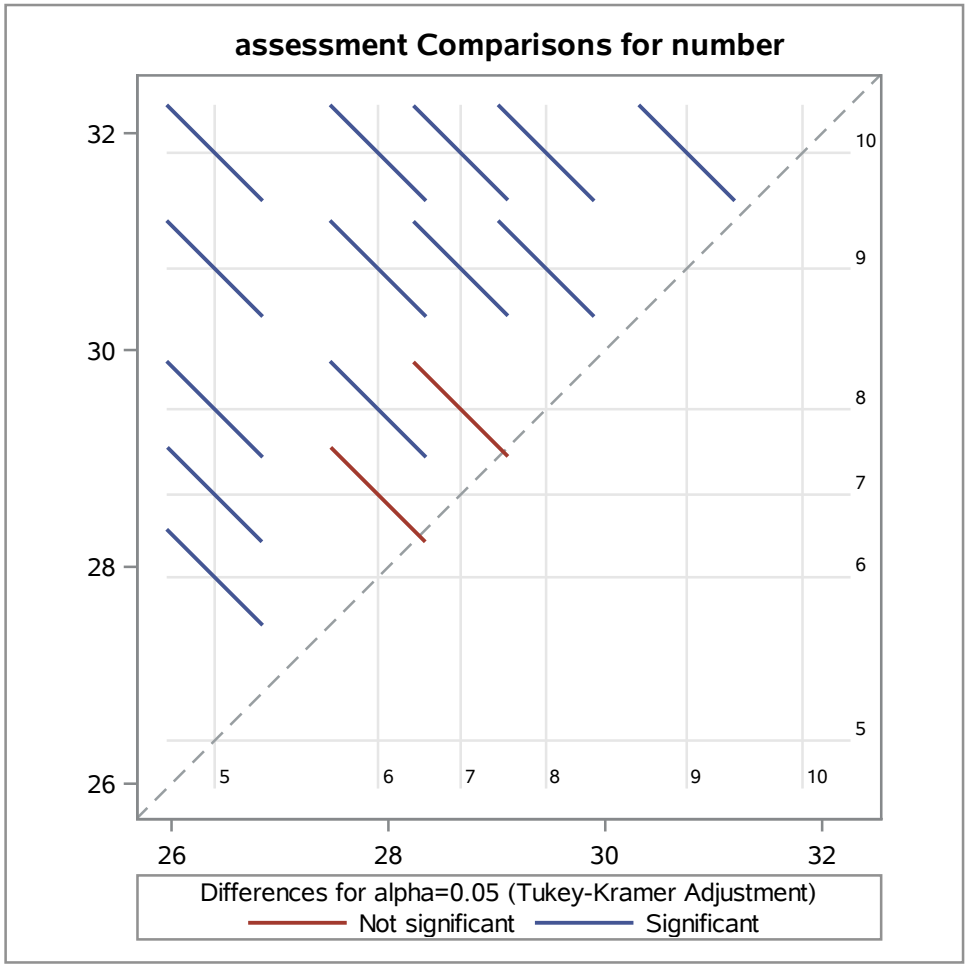
Class Level Information		
Class	**Levels**	**Values**
replicate	4	1 2 3 4
treatment	6	1 2 3 4 5 6
number	6	5 6 7 8 9 10

number Least Squares Means														
number	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**	**Alpha**	**Lower**	**Upper**	**Cov1**	**Cov2**	**Cov3**	**Cov4**	**Cov5**	**Cov6**
5	26.3978	0.3334	85	79.18	<.0001	0.05	25.7350	27.0607	0.1112	0.06514	0.06514	0.06514	0.06514	0.06514
6	27.9043	0.3334	85	83.69	<.0001	0.05	27.2414	28.5672	0.06514	0.1112	0.06514	0.06514	0.06497	0.06514
7	28.6667	0.3291	85	87.10	<.0001	0.05	28.0122	29.3211	0.06514	0.06514	0.1083	0.06514	0.06514	0.06514
8	29.4543	0.3334	85	88.34	<.0001	0.05	28.7914	30.1172	0.06514	0.06514	0.06514	0.1112	0.06514	0.06497
9	30.7515	0.3334	85	92.23	<.0001	0.05	30.0886	31.4144	0.06514	0.06497	0.06514	0.06514	0.1112	0.06514
10	31.8189	0.3334	85	95.43	<.0001	0.05	31.1560	32.4818	0.06514	0.06514	0.06514	0.06497	0.06514	0.1112

number Least Squares Means						
number	**Corr1**	**Corr2**	**Corr3**	**Corr4**	**Corr5**	**Corr6**
5	1.0000	0.5860	0.5936	0.5860	0.5860	0.5860
6	0.5860	1.0000	0.5936	0.5860	0.5845	0.5860
7	0.5936	0.5936	1.0000	0.5936	0.5936	0.5936
8	0.5860	0.5860	0.5936	1.0000	0.5860	0.5845
9	0.5860	0.5845	0.5936	0.5860	1.0000	0.5860
10	0.5860	0.5860	0.5936	0.5845	0.5860	1.0000

The PLM Procedure

Differences of number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer												
number	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper	Adj Lower	Adj Upper
5	6	-1.5065	0.3034	85	-4.97	<.0001	<.0001	0.05	-2.1097	-0.9033	-2.3911	-0.6219
5	7	-2.2688	0.2987	85	-7.60	<.0001	<.0001	0.05	-2.8627	-1.6750	-3.1397	-1.3979
5	8	-3.0565	0.3034	85	-10.07	<.0001	<.0001	0.05	-3.6597	-2.4532	-3.9411	-2.1718
5	9	-4.3536	0.3034	85	-14.35	<.0001	<.0001	0.05	-4.9568	-3.7504	-5.2382	-3.4690
5	10	-5.4211	0.3034	85	-17.87	<.0001	<.0001	0.05	-6.0243	-4.8178	-6.3057	-4.5365
6	7	-0.7623	0.2987	85	-2.55	0.0125	0.1209	0.05	-1.3562	-0.1685	-1.6333	0.1086
6	8	-1.5500	0.3034	85	-5.11	<.0001	<.0001	0.05	-2.1532	-0.9467	-2.4346	-0.6653
6	9	-2.8472	0.3040	85	-9.37	<.0001	<.0001	0.05	-3.4515	-2.2428	-3.7334	-1.9609
6	10	-3.9146	0.3034	85	-12.90	<.0001	<.0001	0.05	-4.5178	-3.3113	-4.7992	-3.0299
7	8	-0.7876	0.2987	85	-2.64	0.0099	0.0996	0.05	-1.3815	-0.1937	-1.6586	0.08330
7	9	-2.0848	0.2987	85	-6.98	<.0001	<.0001	0.05	-2.6787	-1.4909	-2.9557	-1.2139
7	10	-3.1522	0.2987	85	-10.55	<.0001	<.0001	0.05	-3.7461	-2.5583	-4.0232	-2.2813
8	9	-1.2972	0.3034	85	-4.28	<.0001	0.0007	0.05	-1.9004	-0.6939	-2.1818	-0.4125
8	10	-2.3646	0.3040	85	-7.78	<.0001	<.0001	0.05	-2.9689	-1.7603	-3.2509	-1.4783
9	10	-1.0674	0.3034	85	-3.52	0.0007	0.0089	0.05	-1.6707	-0.4642	-1.9521	-0.1828



The PLM Procedure

Tukey-Kramer Grouping for number Least Squares Means (Alpha=0.05)			
LS-means with the same letter are not significantly different.			
number	Estimate		
10	31.8189		A
9	30.7515		B
8	29.4543		C
			C
7	28.6667	D	C
		D	
6	27.9043	D	
5	26.3978		E

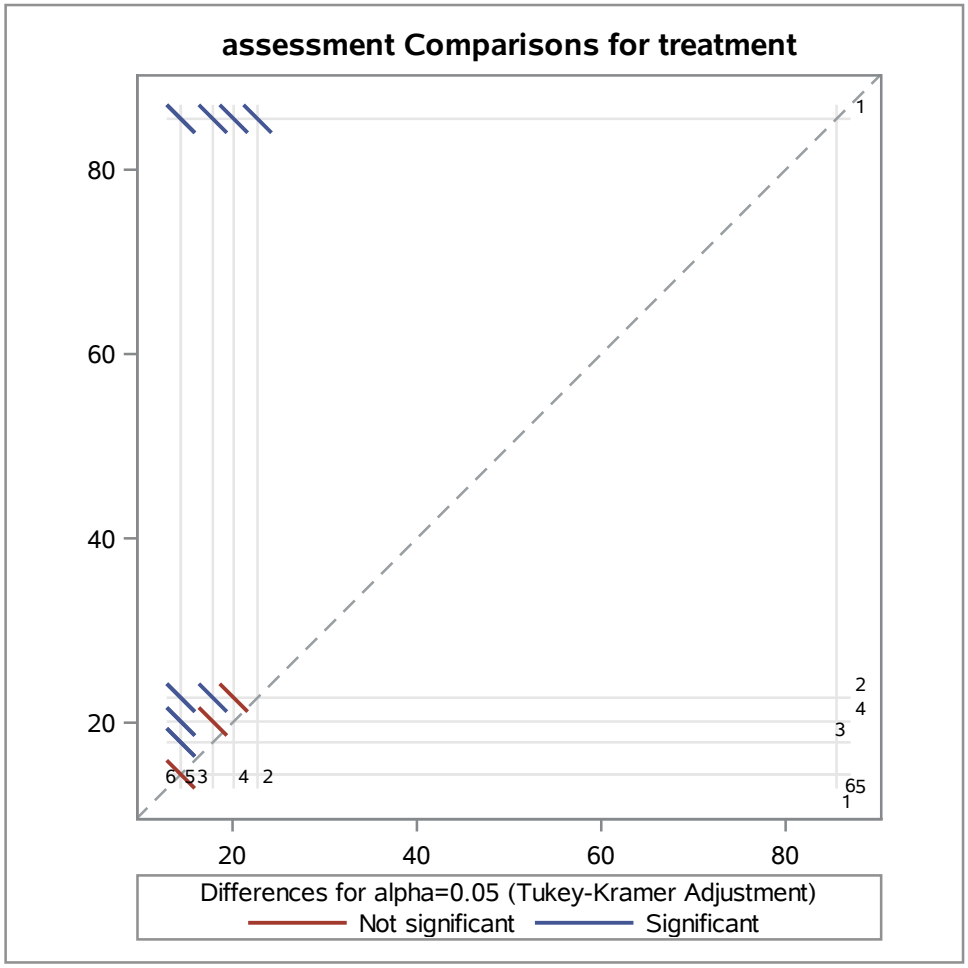
treatment Least Squares Means														
treatment	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper	Cov1	Cov2	Cov3	Cov4	Cov5	Cov6	Corr1
1	85.5229	0.6610	15	129.39	<.0001	0.05	84.1141	86.9316	0.4369						1.0000
2	22.7083	0.6588	15	34.47	<.0001	0.05	21.3041	24.1126		0.4340					
3	17.8641	0.6628	15	26.95	<.0001	0.05	16.4513	19.2770			0.4394				
4	20.1250	0.6588	15	30.55	<.0001	0.05	18.7208	21.5292				0.4340			
5	14.3750	0.6588	15	21.82	<.0001	0.05	12.9708	15.7792					0.4340		
6	14.3982	0.6628	15	21.72	<.0001	0.05	12.9854	15.8110						0.4394	

treatment Least Squares Means					
treatment	Corr2	Corr3	Corr4	Corr5	Corr6
1					
2	1.0000				
3		1.0000			
4			1.0000		
5				1.0000	
6					1.0000

The PLM Procedure

Differences of treatment Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	_treatment	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper	Adj Lower	Adj Upper
1	2	62.8145	0.9332	15	67.31	<.0001	<.0001	0.05	60.8254	64.8036	59.7826	65.8465
1	3	67.6587	0.9361	15	72.28	<.0001	<.0001	0.05	65.6635	69.6539	64.6175	70.6999
1	4	65.3979	0.9332	15	70.08	<.0001	<.0001	0.05	63.4087	67.3870	62.3659	68.4298
1	5	71.1479	0.9332	15	76.24	<.0001	<.0001	0.05	69.1587	73.1370	68.1159	74.1798
1	6	71.1246	0.9361	15	75.98	<.0001	<.0001	0.05	69.1295	73.1198	68.0834	74.1659
2	3	4.8442	0.9346	15	5.18	0.0001	0.0013	0.05	2.8522	6.8362	1.8079	7.8805
2	4	2.5833	0.9317	15	2.77	0.0142	0.1174	0.05	0.5975	4.5692	-0.4437	5.6104
2	5	8.3333	0.9317	15	8.94	<.0001	<.0001	0.05	6.3475	10.3192	5.3063	11.3604
2	6	8.3101	0.9346	15	8.89	<.0001	<.0001	0.05	6.3182	10.3021	5.2738	11.3464
3	4	-2.2609	0.9346	15	-2.42	0.0287	0.2105	0.05	-4.2528	-0.2689	-5.2972	0.7754
3	5	3.4891	0.9346	15	3.73	0.0020	0.0201	0.05	1.4972	5.4811	0.4528	6.5254
3	6	3.4659	0.9374	15	3.70	0.0022	0.0215	0.05	1.4679	5.4640	0.4204	6.5115
4	5	5.7500	0.9317	15	6.17	<.0001	0.0002	0.05	3.7641	7.7359	2.7230	8.7770
4	6	5.7268	0.9346	15	6.13	<.0001	0.0002	0.05	3.7348	7.7188	2.6905	8.7631
5	6	-0.02321	0.9346	15	-0.02	0.9805	1.0000	0.05	-2.0152	1.9688	-3.0595	3.0131



The PLM Procedure

Tukey-Kramer Grouping for treatment Least Squares Means (Alpha=0.05)			
LS-means with the same letter are not significantly different.			
treatment	**Estimate**		
1	85.5229		A
2	22.7083		B
			B
4	20.1250	C	B
		C	
3	17.8641	C	
6	14.3982		D
			D
5	14.3750		D

The PLM Procedure

treatment*number Least Squares Means														
treatment	number	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper	Cov1	Cov2	Cov3	Cov4	Cov5
1	5	81.3871	0.8670	85	93.87	<.0001	0.05	79.6633	83.1109	0.7517	0.3908	0.3908	0.3908	0.3908
1	6	83.2500	0.8062	85	103.26	<.0001	0.05	81.6470	84.8530	0.3908	0.6500	0.3908	0.3908	0.3908
1	7	85.0000	0.8062	85	105.43	<.0001	0.05	83.3970	86.6030	0.3908	0.3908	0.6500	0.3908	0.3908
1	8	85.7500	0.8062	85	106.36	<.0001	0.05	84.1470	87.3530	0.3908	0.3908	0.3908	0.6500	0.3908
1	9	88.2500	0.8062	85	109.46	<.0001	0.05	86.6470	89.8530	0.3908	0.3908	0.3908	0.3908	0.6500
1	10	89.5000	0.8062	85	111.01	<.0001	0.05	87.8970	91.1030	0.3908	0.3908	0.3908	0.3908	0.3908
2	5	21.0000	0.8062	85	26.05	<.0001	0.05	19.3970	22.6030					
2	6	22.0000	0.8062	85	27.29	<.0001	0.05	20.3970	23.6030					
2	7	22.2500	0.8062	85	27.60	<.0001	0.05	20.6470	23.8530					
2	8	22.7500	0.8062	85	28.22	<.0001	0.05	21.1470	24.3530					
2	9	23.5000	0.8062	85	29.15	<.0001	0.05	21.8970	25.1030					
2	10	24.7500	0.8062	85	30.70	<.0001	0.05	23.1470	26.3530					
3	5	15.2500	0.8062	85	18.92	<.0001	0.05	13.6470	16.8530					
3	6	16.9259	0.8672	85	19.52	<.0001	0.05	15.2017	18.6501					
3	7	17.2500	0.8062	85	21.40	<.0001	0.05	15.6470	18.8530					
3	8	18.0000	0.8062	85	22.33	<.0001	0.05	16.3970	19.6030					
3	9	19.0088	0.8672	85	21.92	<.0001	0.05	17.2847	20.7330					
3	10	20.7500	0.8062	85	25.74	<.0001	0.05	19.1470	22.3530					
4	5	16.7500	0.8062	85	20.78	<.0001	0.05	15.1470	18.3530					
4	6	18.2500	0.8062	85	22.64	<.0001	0.05	16.6470	19.8530					
4	7	19.2500	0.8062	85	23.88	<.0001	0.05	17.6470	20.8530					
4	8	21.0000	0.8062	85	26.05	<.0001	0.05	19.3970	22.6030					
4	9	22.7500	0.8062	85	28.22	<.0001	0.05	21.1470	24.3530					
4	10	22.7500	0.8062	85	28.22	<.0001	0.05	21.1470	24.3530					
5	5	11.7500	0.8062	85	14.57	<.0001	0.05	10.1470	13.3530					
5	6	13.0000	0.8062	85	16.12	<.0001	0.05	11.3970	14.6030					
5	7	13.7500	0.8062	85	17.05	<.0001	0.05	12.1470	15.3530					
5	8	14.0000	0.8062	85	17.36	<.0001	0.05	12.3970	15.6030					
5	9	16.0000	0.8062	85	19.85	<.0001	0.05	14.3970	17.6030					
5	10	17.7500	0.8062	85	22.02	<.0001	0.05	16.1470	19.3530					
6	5	12.2500	0.8062	85	15.19	<.0001	0.05	10.6470	13.8530					
6	6	14.0000	0.8062	85	17.36	<.0001	0.05	12.3970	15.6030					
6	7	14.5000	0.8062	85	17.98	<.0001	0.05	12.8970	16.1030					
6	8	15.2258	0.8672	85	17.56	<.0001	0.05	13.5016	16.9500					

The PLM Procedure

treatment*number Least Squares Means

treatment	number	Cov6	Cov7	Cov8	Cov9	Cov10	Cov11	Cov12	Cov13	Cov14	Cov15	Cov16	Cov17	Cov18	Cov19
1	5	0.3908													
1	6	0.3908													
1	7	0.3908													
1	8	0.3908													
1	9	0.3908													
1	10	0.6500													
2	5		0.6500	0.3908	0.3908	0.3908	0.3908	0.3908							
2	6		0.3908	0.6500	0.3908	0.3908	0.3908	0.3908							
2	7		0.3908	0.3908	0.6500	0.3908	0.3908	0.3908							
2	8		0.3908	0.3908	0.3908	0.6500	0.3908	0.3908							
2	9		0.3908	0.3908	0.3908	0.3908	0.6500	0.3908							
2	10		0.3908	0.3908	0.3908	0.3908	0.3908	0.6500							
3	5								0.6500	0.3908	0.3908	0.3908	0.3908	0.3908	
3	6								0.3908	0.7520	0.3908	0.3908	0.3848	0.3908	
3	7								0.3908	0.3908	0.6500	0.3908	0.3908	0.3908	
3	8								0.3908	0.3908	0.3908	0.6500	0.3908	0.3908	
3	9								0.3908	0.3848	0.3908	0.3908	0.7520	0.3908	
3	10								0.3908	0.3908	0.3908	0.3908	0.3908	0.6500	
4	5														0.6500
4	6														0.3908
4	7														0.3908
4	8														0.3908
4	9														0.3908
4	10														0.3908
5	5														
5	6														
5	7														
5	8														
5	9														
5	10														
6	5														
6	6														
6	7														
6	8														

The PLM Procedure

treatment*number Least Squares Means															
treatment	number	Cov20	Cov21	Cov22	Cov23	Cov24	Cov25	Cov26	Cov27	Cov28	Cov29	Cov30	Cov31	Cov32	Cov33
1	5														
1	6														
1	7														
1	8														
1	9														
1	10														
2	5														
2	6														
2	7														
2	8														
2	9														
2	10														
3	5														
3	6														
3	7														
3	8														
3	9														
3	10														
4	5	0.3908	0.3908	0.3908	0.3908	0.3908									
4	6	0.6500	0.3908	0.3908	0.3908	0.3908									
4	7	0.3908	0.6500	0.3908	0.3908	0.3908									
4	8	0.3908	0.3908	0.6500	0.3908	0.3908									
4	9	0.3908	0.3908	0.3908	0.6500	0.3908									
4	10	0.3908	0.3908	0.3908	0.3908	0.6500									
5	5						0.6500	0.3908	0.3908	0.3908	0.3908	0.3908			
5	6						0.3908	0.6500	0.3908	0.3908	0.3908	0.3908			
5	7						0.3908	0.3908	0.6500	0.3908	0.3908	0.3908			
5	8						0.3908	0.3908	0.3908	0.6500	0.3908	0.3908			
5	9						0.3908	0.3908	0.3908	0.3908	0.6500	0.3908			
5	10						0.3908	0.3908	0.3908	0.3908	0.3908	0.6500			
6	5												0.6500	0.3908	0.3908
6	6												0.3908	0.6500	0.3908
6	7												0.3908	0.3908	0.6500
6	8												0.3908	0.3908	0.3908

The PLM Procedure

treatment*number Least Squares Means															
treatment	number	Cov34	Cov35	Cov36	Corr1	Corr2	Corr3	Corr4	Corr5	Corr6	Corr7	Corr8	Corr9	Corr10	Corr11
1	5				1.0000	0.5592	0.5592	0.5592	0.5592	0.5592					
1	6				0.5592	1.0000	0.6013	0.6013	0.6013	0.6013					
1	7				0.5592	0.6013	1.0000	0.6013	0.6013	0.6013					
1	8				0.5592	0.6013	0.6013	1.0000	0.6013	0.6013					
1	9				0.5592	0.6013	0.6013	0.6013	1.0000	0.6013					
1	10				0.5592	0.6013	0.6013	0.6013	0.6013	1.0000					
2	5										1.0000	0.6013	0.6013	0.6013	0.6013
2	6										0.6013	1.0000	0.6013	0.6013	0.6013
2	7										0.6013	0.6013	1.0000	0.6013	0.6013
2	8										0.6013	0.6013	0.6013	1.0000	0.6013
2	9										0.6013	0.6013	0.6013	0.6013	1.0000
2	10										0.6013	0.6013	0.6013	0.6013	0.6013
3	5														
3	6														
3	7														
3	8														
3	9														
3	10														
4	5														
4	6														
4	7														
4	8														
4	9														
4	10														
5	5														
5	6														
5	7														
5	8														
5	9														
5	10														
6	5	0.3908	0.3908	0.3908											
6	6	0.3908	0.3908	0.3908											
6	7	0.3908	0.3908	0.3908											
6	8	0.7520	0.3908	0.3848											

The PLM Procedure

treatment*number Least Squares Means														
treatment	number	Corr12	Corr13	Corr14	Corr15	Corr16	Corr17	Corr18	Corr19	Corr20	Corr21	Corr22	Corr23	Corr24
1	5													
1	6													
1	7													
1	8													
1	9													
1	10													
2	5	0.6013												
2	6	0.6013												
2	7	0.6013												
2	8	0.6013												
2	9	0.6013												
2	10	1.0000												
3	5		1.0000	0.5590	0.6013	0.6013	0.5590	0.6013						
3	6		0.5590	1.0000	0.5590	0.5590	0.5117	0.5590						
3	7		0.6013	0.5590	1.0000	0.6013	0.5590	0.6013						
3	8		0.6013	0.5590	0.6013	1.0000	0.5590	0.6013						
3	9		0.5590	0.5117	0.5590	0.5590	1.0000	0.5590						
3	10		0.6013	0.5590	0.6013	0.6013	0.5590	1.0000						
4	5								1.0000	0.6013	0.6013	0.6013	0.6013	0.6013
4	6								0.6013	1.0000	0.6013	0.6013	0.6013	0.6013
4	7								0.6013	0.6013	1.0000	0.6013	0.6013	0.6013
4	8								0.6013	0.6013	0.6013	1.0000	0.6013	0.6013
4	9								0.6013	0.6013	0.6013	0.6013	1.0000	0.6013
4	10								0.6013	0.6013	0.6013	0.6013	0.6013	1.0000
5	5													
5	6													
5	7													
5	8													
5	9													
5	10													
6	5													
6	6													
6	7													
6	8													

The PLM Procedure

treatment*number Least Squares Means													
treatment	number	Corr25	Corr26	Corr27	Corr28	Corr29	Corr30	Corr31	Corr32	Corr33	Corr34	Corr35	Corr36
1	5												
1	6												
1	7												
1	8												
1	9												
1	10												
2	5												
2	6												
2	7												
2	8												
2	9												
2	10												
3	5												
3	6												
3	7												
3	8												
3	9												
3	10												
4	5												
4	6												
4	7												
4	8												
4	9												
4	10												
5	5	1.0000	0.6013	0.6013	0.6013	0.6013	0.6013						
5	6	0.6013	1.0000	0.6013	0.6013	0.6013	0.6013						
5	7	0.6013	0.6013	1.0000	0.6013	0.6013	0.6013						
5	8	0.6013	0.6013	0.6013	1.0000	0.6013	0.6013						
5	9	0.6013	0.6013	0.6013	0.6013	1.0000	0.6013						
5	10	0.6013	0.6013	0.6013	0.6013	0.6013	1.0000						
6	5							1.0000	0.6013	0.6013	0.5590	0.6013	0.5590
6	6							0.6013	1.0000	0.6013	0.5590	0.6013	0.5590
6	7							0.6013	0.6013	1.0000	0.5590	0.6013	0.5590
6	8							0.5590	0.5590	0.5590	1.0000	0.5590	0.5117

The PLM Procedure

treatment*number Least Squares Means

treatment	number	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper	Cov1	Cov2	Cov3	Cov4	Cov5
6	9	15.0000	0.8062	85	18.61	<.0001	0.05	13.3970	16.6030					
6	10	15.4134	0.8672	85	17.77	<.0001	0.05	13.6893	17.1376					

The PLM Procedure

treatment*number Least Squares Means															
treatment	number	Cov6	Cov7	Cov8	Cov9	Cov10	Cov11	Cov12	Cov13	Cov14	Cov15	Cov16	Cov17	Cov18	Cov19
6	9														
6	10														

The PLM Procedure

treatment*number Least Squares Means															
treatment	number	Cov20	Cov21	Cov22	Cov23	Cov24	Cov25	Cov26	Cov27	Cov28	Cov29	Cov30	Cov31	Cov32	Cov33
6	9												0.3908	0.3908	0.3908
6	10												0.3908	0.3908	0.3908

The PLM Procedure

treatment*number Least Squares Means															
treatment	number	Cov34	Cov35	Cov36	Corr1	Corr2	Corr3	Corr4	Corr5	Corr6	Corr7	Corr8	Corr9	Corr10	Corr11
6	9	0.3908	0.6500	0.3908											
6	10	0.3848	0.3908	0.7520											

The PLM Procedure

treatment*number Least Squares Means														
treatment	number	Corr12	Corr13	Corr14	Corr15	Corr16	Corr17	Corr18	Corr19	Corr20	Corr21	Corr22	Corr23	Corr24
6	9													
6	10													

The PLM Procedure

treatment*number Least Squares Means													
treatment	number	Corr25	Corr26	Corr27	Corr28	Corr29	Corr30	Corr31	Corr32	Corr33	Corr34	Corr35	Corr36
6	9							0.6013	0.6013	0.6013	0.5590	1.0000	0.5590
6	10							0.5590	0.5590	0.5590	0.5117	0.5590	1.0000

The PLM Procedure

Differences of treatment*number Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
1	5	1	6	-1.8629	0.7874	85	-2.37	0.0203	0.9016	0.05	-3.4285	-0.2974
1	5	1	7	-3.6129	0.7874	85	-4.59	<.0001	0.0068	0.05	-5.1785	-2.0474
1	5	1	8	-4.3629	0.7874	85	-5.54	<.0001	0.0002	0.05	-5.9285	-2.7974
1	5	1	9	-6.8629	0.7874	85	-8.72	<.0001	<.0001	0.05	-8.4285	-5.2974
1	5	1	10	-8.1129	0.7874	85	-10.30	<.0001	<.0001	0.05	-9.6785	-6.5474
1	5	2	5	60.3871	1.1839	85	51.01	<.0001	<.0001	0.05	58.0331	62.7410
1	5	2	6	59.3871	1.1839	85	50.16	<.0001	<.0001	0.05	57.0331	61.7410
1	5	2	7	59.1371	1.1839	85	49.95	<.0001	<.0001	0.05	56.7831	61.4910
1	5	2	8	58.6371	1.1839	85	49.53	<.0001	<.0001	0.05	56.2831	60.9910
1	5	2	9	57.8871	1.1839	85	48.89	<.0001	<.0001	0.05	55.5331	60.2410
1	5	2	10	56.6371	1.1839	85	47.84	<.0001	<.0001	0.05	54.2831	58.9910
1	5	3	5	66.1371	1.1839	85	55.86	<.0001	<.0001	0.05	63.7831	68.4910
1	5	3	6	64.4612	1.2262	85	52.57	<.0001	<.0001	0.05	62.0231	66.8993
1	5	3	7	64.1371	1.1839	85	54.17	<.0001	<.0001	0.05	61.7831	66.4910
1	5	3	8	63.3871	1.1839	85	53.54	<.0001	<.0001	0.05	61.0331	65.7410
1	5	3	9	62.3782	1.2262	85	50.87	<.0001	<.0001	0.05	59.9402	64.8163
1	5	3	10	60.6371	1.1839	85	51.22	<.0001	<.0001	0.05	58.2831	62.9910
1	5	4	5	64.6371	1.1839	85	54.60	<.0001	<.0001	0.05	62.2831	66.9910
1	5	4	6	63.1371	1.1839	85	53.33	<.0001	<.0001	0.05	60.7831	65.4910
1	5	4	7	62.1371	1.1839	85	52.48	<.0001	<.0001	0.05	59.7831	64.4910
1	5	4	8	60.3871	1.1839	85	51.01	<.0001	<.0001	0.05	58.0331	62.7410
1	5	4	9	58.6371	1.1839	85	49.53	<.0001	<.0001	0.05	56.2831	60.9910
1	5	4	10	58.6371	1.1839	85	49.53	<.0001	<.0001	0.05	56.2831	60.9910
1	5	5	5	69.6371	1.1839	85	58.82	<.0001	<.0001	0.05	67.2831	71.9910
1	5	5	6	68.3871	1.1839	85	57.76	<.0001	<.0001	0.05	66.0331	70.7410
1	5	5	7	67.6371	1.1839	85	57.13	<.0001	<.0001	0.05	65.2831	69.9910
1	5	5	8	67.3871	1.1839	85	56.92	<.0001	<.0001	0.05	65.0331	69.7410
1	5	5	9	65.3871	1.1839	85	55.23	<.0001	<.0001	0.05	63.0331	67.7410
1	5	5	10	63.6371	1.1839	85	53.75	<.0001	<.0001	0.05	61.2831	65.9910
1	5	6	5	69.1371	1.1839	85	58.40	<.0001	<.0001	0.05	66.7831	71.4910
1	5	6	6	67.3871	1.1839	85	56.92	<.0001	<.0001	0.05	65.0331	69.7410
1	5	6	7	66.8871	1.1839	85	56.50	<.0001	<.0001	0.05	64.5331	69.2410
1	5	6	8	66.1613	1.2262	85	53.95	<.0001	<.0001	0.05	63.7232	68.5993
1	5	6	9	66.3871	1.1839	85	56.07	<.0001	<.0001	0.05	64.0331	68.7410

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
1	5	1	6	-4.9949	1.2691
1	5	1	7	-6.7449	-0.4809
1	5	1	8	-7.4949	-1.2309
1	5	1	9	-9.9949	-3.7309
1	5	1	10	-11.2449	-4.9809
1	5	2	5	55.6778	65.0964
1	5	2	6	54.6778	64.0964
1	5	2	7	54.4278	63.8464
1	5	2	8	53.9278	63.3464
1	5	2	9	53.1778	62.5964
1	5	2	10	51.9278	61.3464
1	5	3	5	61.4278	70.8464
1	5	3	6	59.5836	69.3388
1	5	3	7	59.4278	68.8464
1	5	3	8	58.6778	68.0964
1	5	3	9	57.5006	67.2559
1	5	3	10	55.9278	65.3464
1	5	4	5	59.9278	69.3464
1	5	4	6	58.4278	67.8464
1	5	4	7	57.4278	66.8464
1	5	4	8	55.6778	65.0964
1	5	4	9	53.9278	63.3464
1	5	4	10	53.9278	63.3464
1	5	5	5	64.9278	74.3464
1	5	5	6	63.6778	73.0964
1	5	5	7	62.9278	72.3464
1	5	5	8	62.6778	72.0964
1	5	5	9	60.6778	70.0964
1	5	5	10	58.9278	68.3464
1	5	6	5	64.4278	73.8464
1	5	6	6	62.6778	72.0964
1	5	6	7	62.1778	71.5964
1	5	6	8	61.2836	71.0389
1	5	6	9	61.6778	71.0964

The PLM Procedure

Differences of treatment*number Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
1	5	6	10	65.9736	1.2262	85	53.80	<.0001	<.0001	0.05	63.5356	68.4117
1	6	1	7	-1.7500	0.7200	85	-2.43	0.0172	0.8729	0.05	-3.1815	-0.3185
1	6	1	8	-2.5000	0.7200	85	-3.47	0.0008	0.1918	0.05	-3.9315	-1.0685
1	6	1	9	-5.0000	0.7200	85	-6.94	<.0001	<.0001	0.05	-6.4315	-3.5685
1	6	1	10	-6.2500	0.7200	85	-8.68	<.0001	<.0001	0.05	-7.6815	-4.8185
1	6	2	5	62.2500	1.1402	85	54.60	<.0001	<.0001	0.05	59.9830	64.5170
1	6	2	6	61.2500	1.1402	85	53.72	<.0001	<.0001	0.05	58.9830	63.5170
1	6	2	7	61.0000	1.1402	85	53.50	<.0001	<.0001	0.05	58.7330	63.2670
1	6	2	8	60.5000	1.1402	85	53.06	<.0001	<.0001	0.05	58.2330	62.7670
1	6	2	9	59.7500	1.1402	85	52.40	<.0001	<.0001	0.05	57.4830	62.0170
1	6	2	10	58.5000	1.1402	85	51.31	<.0001	<.0001	0.05	56.2330	60.7670
1	6	3	5	68.0000	1.1402	85	59.64	<.0001	<.0001	0.05	65.7330	70.2670
1	6	3	6	66.3241	1.1841	85	56.01	<.0001	<.0001	0.05	63.9699	68.6783
1	6	3	7	66.0000	1.1402	85	57.89	<.0001	<.0001	0.05	63.7330	68.2670
1	6	3	8	65.2500	1.1402	85	57.23	<.0001	<.0001	0.05	62.9830	67.5170
1	6	3	9	64.2412	1.1841	85	54.25	<.0001	<.0001	0.05	61.8869	66.5954
1	6	3	10	62.5000	1.1402	85	54.82	<.0001	<.0001	0.05	60.2330	64.7670
1	6	4	5	66.5000	1.1402	85	58.32	<.0001	<.0001	0.05	64.2330	68.7670
1	6	4	6	65.0000	1.1402	85	57.01	<.0001	<.0001	0.05	62.7330	67.2670
1	6	4	7	64.0000	1.1402	85	56.13	<.0001	<.0001	0.05	61.7330	66.2670
1	6	4	8	62.2500	1.1402	85	54.60	<.0001	<.0001	0.05	59.9830	64.5170
1	6	4	9	60.5000	1.1402	85	53.06	<.0001	<.0001	0.05	58.2330	62.7670
1	6	4	10	60.5000	1.1402	85	53.06	<.0001	<.0001	0.05	58.2330	62.7670
1	6	5	5	71.5000	1.1402	85	62.71	<.0001	<.0001	0.05	69.2330	73.7670
1	6	5	6	70.2500	1.1402	85	61.61	<.0001	<.0001	0.05	67.9830	72.5170
1	6	5	7	69.5000	1.1402	85	60.96	<.0001	<.0001	0.05	67.2330	71.7670
1	6	5	8	69.2500	1.1402	85	60.74	<.0001	<.0001	0.05	66.9830	71.5170
1	6	5	9	67.2500	1.1402	85	58.98	<.0001	<.0001	0.05	64.9830	69.5170
1	6	5	10	65.5000	1.1402	85	57.45	<.0001	<.0001	0.05	63.2330	67.7670
1	6	6	5	71.0000	1.1402	85	62.27	<.0001	<.0001	0.05	68.7330	73.2670
1	6	6	6	69.2500	1.1402	85	60.74	<.0001	<.0001	0.05	66.9830	71.5170
1	6	6	7	68.7500	1.1402	85	60.30	<.0001	<.0001	0.05	66.4830	71.0170
1	6	6	8	68.0242	1.1841	85	57.45	<.0001	<.0001	0.05	65.6699	70.3784
1	6	6	9	68.2500	1.1402	85	59.86	<.0001	<.0001	0.05	65.9830	70.5170

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
1	5	6	10	61.0960	70.8513
1	6	1	7	-4.6138	1.1138
1	6	1	8	-5.3638	0.3638
1	6	1	9	-7.8638	-2.1362
1	6	1	10	-9.1138	-3.3862
1	6	2	5	57.7147	66.7853
1	6	2	6	56.7147	65.7853
1	6	2	7	56.4647	65.5353
1	6	2	8	55.9647	65.0353
1	6	2	9	55.2147	64.2853
1	6	2	10	53.9647	63.0353
1	6	3	5	63.4647	72.5353
1	6	3	6	61.6142	71.0340
1	6	3	7	61.4647	70.5353
1	6	3	8	60.7147	69.7853
1	6	3	9	59.5313	68.9510
1	6	3	10	57.9647	67.0353
1	6	4	5	61.9647	71.0353
1	6	4	6	60.4647	69.5353
1	6	4	7	59.4647	68.5353
1	6	4	8	57.7147	66.7853
1	6	4	9	55.9647	65.0353
1	6	4	10	55.9647	65.0353
1	6	5	5	66.9647	76.0353
1	6	5	6	65.7147	74.7853
1	6	5	7	64.9647	74.0353
1	6	5	8	64.7147	73.7853
1	6	5	9	62.7147	71.7853
1	6	5	10	60.9647	70.0353
1	6	6	5	66.4647	75.5353
1	6	6	6	64.7147	73.7853
1	6	6	7	64.2147	73.2853
1	6	6	8	63.3143	72.7341
1	6	6	9	63.7147	72.7853

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer												
treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
1	6	6	10	67.8366	1.1841	85	57.29	<.0001	<.0001	0.05	65.4823	70.1908
1	7	1	8	-0.7500	0.7200	85	-1.04	0.3005	1.0000	0.05	-2.1815	0.6815
1	7	1	9	-3.2500	0.7200	85	-4.51	<.0001	0.0089	0.05	-4.6815	-1.8185
1	7	1	10	-4.5000	0.7200	85	-6.25	<.0001	<.0001	0.05	-5.9315	-3.0685
1	7	2	5	64.0000	1.1402	85	56.13	<.0001	<.0001	0.05	61.7330	66.2670
1	7	2	6	63.0000	1.1402	85	55.25	<.0001	<.0001	0.05	60.7330	65.2670
1	7	2	7	62.7500	1.1402	85	55.04	<.0001	<.0001	0.05	60.4830	65.0170
1	7	2	8	62.2500	1.1402	85	54.60	<.0001	<.0001	0.05	59.9830	64.5170
1	7	2	9	61.5000	1.1402	85	53.94	<.0001	<.0001	0.05	59.2330	63.7670
1	7	2	10	60.2500	1.1402	85	52.84	<.0001	<.0001	0.05	57.9830	62.5170
1	7	3	5	69.7500	1.1402	85	61.17	<.0001	<.0001	0.05	67.4830	72.0170
1	7	3	6	68.0741	1.1841	85	57.49	<.0001	<.0001	0.05	65.7199	70.4283
1	7	3	7	67.7500	1.1402	85	59.42	<.0001	<.0001	0.05	65.4830	70.0170
1	7	3	8	67.0000	1.1402	85	58.76	<.0001	<.0001	0.05	64.7330	69.2670
1	7	3	9	65.9912	1.1841	85	55.73	<.0001	<.0001	0.05	63.6369	68.3454
1	7	3	10	64.2500	1.1402	85	56.35	<.0001	<.0001	0.05	61.9830	66.5170
1	7	4	5	68.2500	1.1402	85	59.86	<.0001	<.0001	0.05	65.9830	70.5170
1	7	4	6	66.7500	1.1402	85	58.54	<.0001	<.0001	0.05	64.4830	69.0170
1	7	4	7	65.7500	1.1402	85	57.67	<.0001	<.0001	0.05	63.4830	68.0170
1	7	4	8	64.0000	1.1402	85	56.13	<.0001	<.0001	0.05	61.7330	66.2670
1	7	4	9	62.2500	1.1402	85	54.60	<.0001	<.0001	0.05	59.9830	64.5170
1	7	4	10	62.2500	1.1402	85	54.60	<.0001	<.0001	0.05	59.9830	64.5170
1	7	5	5	73.2500	1.1402	85	64.24	<.0001	<.0001	0.05	70.9830	75.5170
1	7	5	6	72.0000	1.1402	85	63.15	<.0001	<.0001	0.05	69.7330	74.2670
1	7	5	7	71.2500	1.1402	85	62.49	<.0001	<.0001	0.05	68.9830	73.5170
1	7	5	8	71.0000	1.1402	85	62.27	<.0001	<.0001	0.05	68.7330	73.2670
1	7	5	9	69.0000	1.1402	85	60.52	<.0001	<.0001	0.05	66.7330	71.2670
1	7	5	10	67.2500	1.1402	85	58.98	<.0001	<.0001	0.05	64.9830	69.5170
1	7	6	5	72.7500	1.1402	85	63.81	<.0001	<.0001	0.05	70.4830	75.0170
1	7	6	6	71.0000	1.1402	85	62.27	<.0001	<.0001	0.05	68.7330	73.2670
1	7	6	7	70.5000	1.1402	85	61.83	<.0001	<.0001	0.05	68.2330	72.7670
1	7	6	8	69.7742	1.1841	85	58.93	<.0001	<.0001	0.05	67.4199	72.1284
1	7	6	9	70.0000	1.1402	85	61.39	<.0001	<.0001	0.05	67.7330	72.2670
1	7	6	10	69.5866	1.1841	85	58.77	<.0001	<.0001	0.05	67.2323	71.9408

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
1	6	6	10	63.1267	72.5464
1	7	1	8	-3.6138	2.1138
1	7	1	9	-6.1138	-0.3862
1	7	1	10	-7.3638	-1.6362
1	7	2	5	59.4647	68.5353
1	7	2	6	58.4647	67.5353
1	7	2	7	58.2147	67.2853
1	7	2	8	57.7147	66.7853
1	7	2	9	56.9647	66.0353
1	7	2	10	55.7147	64.7853
1	7	3	5	65.2147	74.2853
1	7	3	6	63.3642	72.7840
1	7	3	7	63.2147	72.2853
1	7	3	8	62.4647	71.5353
1	7	3	9	61.2813	70.7010
1	7	3	10	59.7147	68.7853
1	7	4	5	63.7147	72.7853
1	7	4	6	62.2147	71.2853
1	7	4	7	61.2147	70.2853
1	7	4	8	59.4647	68.5353
1	7	4	9	57.7147	66.7853
1	7	4	10	57.7147	66.7853
1	7	5	5	68.7147	77.7853
1	7	5	6	67.4647	76.5353
1	7	5	7	66.7147	75.7853
1	7	5	8	66.4647	75.5353
1	7	5	9	64.4647	73.5353
1	7	5	10	62.7147	71.7853
1	7	6	5	68.2147	77.2853
1	7	6	6	66.4647	75.5353
1	7	6	7	65.9647	75.0353
1	7	6	8	65.0643	74.4841
1	7	6	9	65.4647	74.5353
1	7	6	10	64.8767	74.2964

The PLM Procedure

Differences of treatment*number Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
1	8	1	9	-2.5000	0.7200	85	-3.47	0.0008	0.1918	0.05	-3.9315	-1.0685
1	8	1	10	-3.7500	0.7200	85	-5.21	<.0001	0.0007	0.05	-5.1815	-2.3185
1	8	2	5	64.7500	1.1402	85	56.79	<.0001	<.0001	0.05	62.4830	67.0170
1	8	2	6	63.7500	1.1402	85	55.91	<.0001	<.0001	0.05	61.4830	66.0170
1	8	2	7	63.5000	1.1402	85	55.69	<.0001	<.0001	0.05	61.2330	65.7670
1	8	2	8	63.0000	1.1402	85	55.25	<.0001	<.0001	0.05	60.7330	65.2670
1	8	2	9	62.2500	1.1402	85	54.60	<.0001	<.0001	0.05	59.9830	64.5170
1	8	2	10	61.0000	1.1402	85	53.50	<.0001	<.0001	0.05	58.7330	63.2670
1	8	3	5	70.5000	1.1402	85	61.83	<.0001	<.0001	0.05	68.2330	72.7670
1	8	3	6	68.8241	1.1841	85	58.13	<.0001	<.0001	0.05	66.4699	71.1783
1	8	3	7	68.5000	1.1402	85	60.08	<.0001	<.0001	0.05	66.2330	70.7670
1	8	3	8	67.7500	1.1402	85	59.42	<.0001	<.0001	0.05	65.4830	70.0170
1	8	3	9	66.7412	1.1841	85	56.37	<.0001	<.0001	0.05	64.3869	69.0954
1	8	3	10	65.0000	1.1402	85	57.01	<.0001	<.0001	0.05	62.7330	67.2670
1	8	4	5	69.0000	1.1402	85	60.52	<.0001	<.0001	0.05	66.7330	71.2670
1	8	4	6	67.5000	1.1402	85	59.20	<.0001	<.0001	0.05	65.2330	69.7670
1	8	4	7	66.5000	1.1402	85	58.32	<.0001	<.0001	0.05	64.2330	68.7670
1	8	4	8	64.7500	1.1402	85	56.79	<.0001	<.0001	0.05	62.4830	67.0170
1	8	4	9	63.0000	1.1402	85	55.25	<.0001	<.0001	0.05	60.7330	65.2670
1	8	4	10	63.0000	1.1402	85	55.25	<.0001	<.0001	0.05	60.7330	65.2670
1	8	5	5	74.0000	1.1402	85	64.90	<.0001	<.0001	0.05	71.7330	76.2670
1	8	5	6	72.7500	1.1402	85	63.81	<.0001	<.0001	0.05	70.4830	75.0170
1	8	5	7	72.0000	1.1402	85	63.15	<.0001	<.0001	0.05	69.7330	74.2670
1	8	5	8	71.7500	1.1402	85	62.93	<.0001	<.0001	0.05	69.4830	74.0170
1	8	5	9	69.7500	1.1402	85	61.17	<.0001	<.0001	0.05	67.4830	72.0170
1	8	5	10	68.0000	1.1402	85	59.64	<.0001	<.0001	0.05	65.7330	70.2670
1	8	6	5	73.5000	1.1402	85	64.46	<.0001	<.0001	0.05	71.2330	75.7670
1	8	6	6	71.7500	1.1402	85	62.93	<.0001	<.0001	0.05	69.4830	74.0170
1	8	6	7	71.2500	1.1402	85	62.49	<.0001	<.0001	0.05	68.9830	73.5170
1	8	6	8	70.5242	1.1841	85	59.56	<.0001	<.0001	0.05	68.1699	72.8784
1	8	6	9	70.7500	1.1402	85	62.05	<.0001	<.0001	0.05	68.4830	73.0170
1	8	6	10	70.3366	1.1841	85	59.40	<.0001	<.0001	0.05	67.9823	72.6908
1	9	1	10	-1.2500	0.7200	85	-1.74	0.0861	0.9986	0.05	-2.6815	0.1815
1	9	2	5	67.2500	1.1402	85	58.98	<.0001	<.0001	0.05	64.9830	69.5170

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
1	8	1	9	-5.3638	0.3638
1	8	1	10	-6.6138	-0.8862
1	8	2	5	60.2147	69.2853
1	8	2	6	59.2147	68.2853
1	8	2	7	58.9647	68.0353
1	8	2	8	58.4647	67.5353
1	8	2	9	57.7147	66.7853
1	8	2	10	56.4647	65.5353
1	8	3	5	65.9647	75.0353
1	8	3	6	64.1142	73.5340
1	8	3	7	63.9647	73.0353
1	8	3	8	63.2147	72.2853
1	8	3	9	62.0313	71.4510
1	8	3	10	60.4647	69.5353
1	8	4	5	64.4647	73.5353
1	8	4	6	62.9647	72.0353
1	8	4	7	61.9647	71.0353
1	8	4	8	60.2147	69.2853
1	8	4	9	58.4647	67.5353
1	8	4	10	58.4647	67.5353
1	8	5	5	69.4647	78.5353
1	8	5	6	68.2147	77.2853
1	8	5	7	67.4647	76.5353
1	8	5	8	67.2147	76.2853
1	8	5	9	65.2147	74.2853
1	8	5	10	63.4647	72.5353
1	8	6	5	68.9647	78.0353
1	8	6	6	67.2147	76.2853
1	8	6	7	66.7147	75.7853
1	8	6	8	65.8143	75.2341
1	8	6	9	66.2147	75.2853
1	8	6	10	65.6267	75.0464
1	9	1	10	-4.1138	1.6138
1	9	2	5	62.7147	71.7853

The PLM Procedure

Differences of treatment*number Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
1	9	2	6	66.2500	1.1402	85	58.10	<.0001	<.0001	0.05	63.9830	68.5170
1	9	2	7	66.0000	1.1402	85	57.89	<.0001	<.0001	0.05	63.7330	68.2670
1	9	2	8	65.5000	1.1402	85	57.45	<.0001	<.0001	0.05	63.2330	67.7670
1	9	2	9	64.7500	1.1402	85	56.79	<.0001	<.0001	0.05	62.4830	67.0170
1	9	2	10	63.5000	1.1402	85	55.69	<.0001	<.0001	0.05	61.2330	65.7670
1	9	3	5	73.0000	1.1402	85	64.02	<.0001	<.0001	0.05	70.7330	75.2670
1	9	3	6	71.3241	1.1841	85	60.24	<.0001	<.0001	0.05	68.9699	73.6783
1	9	3	7	71.0000	1.1402	85	62.27	<.0001	<.0001	0.05	68.7330	73.2670
1	9	3	8	70.2500	1.1402	85	61.61	<.0001	<.0001	0.05	67.9830	72.5170
1	9	3	9	69.2412	1.1841	85	58.48	<.0001	<.0001	0.05	66.8869	71.5954
1	9	3	10	67.5000	1.1402	85	59.20	<.0001	<.0001	0.05	65.2330	69.7670
1	9	4	5	71.5000	1.1402	85	62.71	<.0001	<.0001	0.05	69.2330	73.7670
1	9	4	6	70.0000	1.1402	85	61.39	<.0001	<.0001	0.05	67.7330	72.2670
1	9	4	7	69.0000	1.1402	85	60.52	<.0001	<.0001	0.05	66.7330	71.2670
1	9	4	8	67.2500	1.1402	85	58.98	<.0001	<.0001	0.05	64.9830	69.5170
1	9	4	9	65.5000	1.1402	85	57.45	<.0001	<.0001	0.05	63.2330	67.7670
1	9	4	10	65.5000	1.1402	85	57.45	<.0001	<.0001	0.05	63.2330	67.7670
1	9	5	5	76.5000	1.1402	85	67.09	<.0001	<.0001	0.05	74.2330	78.7670
1	9	5	6	75.2500	1.1402	85	66.00	<.0001	<.0001	0.05	72.9830	77.5170
1	9	5	7	74.5000	1.1402	85	65.34	<.0001	<.0001	0.05	72.2330	76.7670
1	9	5	8	74.2500	1.1402	85	65.12	<.0001	<.0001	0.05	71.9830	76.5170
1	9	5	9	72.2500	1.1402	85	63.37	<.0001	<.0001	0.05	69.9830	74.5170
1	9	5	10	70.5000	1.1402	85	61.83	<.0001	<.0001	0.05	68.2330	72.7670
1	9	6	5	76.0000	1.1402	85	66.66	<.0001	<.0001	0.05	73.7330	78.2670
1	9	6	6	74.2500	1.1402	85	65.12	<.0001	<.0001	0.05	71.9830	76.5170
1	9	6	7	73.7500	1.1402	85	64.68	<.0001	<.0001	0.05	71.4830	76.0170
1	9	6	8	73.0242	1.1841	85	61.67	<.0001	<.0001	0.05	70.6699	75.3784
1	9	6	9	73.2500	1.1402	85	64.24	<.0001	<.0001	0.05	70.9830	75.5170
1	9	6	10	72.8366	1.1841	85	61.51	<.0001	<.0001	0.05	70.4823	75.1908
1	10	2	5	68.5000	1.1402	85	60.08	<.0001	<.0001	0.05	66.2330	70.7670
1	10	2	6	67.5000	1.1402	85	59.20	<.0001	<.0001	0.05	65.2330	69.7670
1	10	2	7	67.2500	1.1402	85	58.98	<.0001	<.0001	0.05	64.9830	69.5170
1	10	2	8	66.7500	1.1402	85	58.54	<.0001	<.0001	0.05	64.4830	69.0170
1	10	2	9	66.0000	1.1402	85	57.89	<.0001	<.0001	0.05	63.7330	68.2670

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
1	9	2	6	61.7147	70.7853
1	9	2	7	61.4647	70.5353
1	9	2	8	60.9647	70.0353
1	9	2	9	60.2147	69.2853
1	9	2	10	58.9647	68.0353
1	9	3	5	68.4647	77.5353
1	9	3	6	66.6142	76.0340
1	9	3	7	66.4647	75.5353
1	9	3	8	65.7147	74.7853
1	9	3	9	64.5313	73.9510
1	9	3	10	62.9647	72.0353
1	9	4	5	66.9647	76.0353
1	9	4	6	65.4647	74.5353
1	9	4	7	64.4647	73.5353
1	9	4	8	62.7147	71.7853
1	9	4	9	60.9647	70.0353
1	9	4	10	60.9647	70.0353
1	9	5	5	71.9647	81.0353
1	9	5	6	70.7147	79.7853
1	9	5	7	69.9647	79.0353
1	9	5	8	69.7147	78.7853
1	9	5	9	67.7147	76.7853
1	9	5	10	65.9647	75.0353
1	9	6	5	71.4647	80.5353
1	9	6	6	69.7147	78.7853
1	9	6	7	69.2147	78.2853
1	9	6	8	68.3143	77.7341
1	9	6	9	68.7147	77.7853
1	9	6	10	68.1267	77.5464
1	10	2	5	63.9647	73.0353
1	10	2	6	62.9647	72.0353
1	10	2	7	62.7147	71.7853
1	10	2	8	62.2147	71.2853
1	10	2	9	61.4647	70.5353

The PLM Procedure

Differences of treatment*number Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
1	10	2	10	64.7500	1.1402	85	56.79	<.0001	<.0001	0.05	62.4830	67.0170
1	10	3	5	74.2500	1.1402	85	65.12	<.0001	<.0001	0.05	71.9830	76.5170
1	10	3	6	72.5741	1.1841	85	61.29	<.0001	<.0001	0.05	70.2199	74.9283
1	10	3	7	72.2500	1.1402	85	63.37	<.0001	<.0001	0.05	69.9830	74.5170
1	10	3	8	71.5000	1.1402	85	62.71	<.0001	<.0001	0.05	69.2330	73.7670
1	10	3	9	70.4912	1.1841	85	59.53	<.0001	<.0001	0.05	68.1369	72.8454
1	10	3	10	68.7500	1.1402	85	60.30	<.0001	<.0001	0.05	66.4830	71.0170
1	10	4	5	72.7500	1.1402	85	63.81	<.0001	<.0001	0.05	70.4830	75.0170
1	10	4	6	71.2500	1.1402	85	62.49	<.0001	<.0001	0.05	68.9830	73.5170
1	10	4	7	70.2500	1.1402	85	61.61	<.0001	<.0001	0.05	67.9830	72.5170
1	10	4	8	68.5000	1.1402	85	60.08	<.0001	<.0001	0.05	66.2330	70.7670
1	10	4	9	66.7500	1.1402	85	58.54	<.0001	<.0001	0.05	64.4830	69.0170
1	10	4	10	66.7500	1.1402	85	58.54	<.0001	<.0001	0.05	64.4830	69.0170
1	10	5	5	77.7500	1.1402	85	68.19	<.0001	<.0001	0.05	75.4830	80.0170
1	10	5	6	76.5000	1.1402	85	67.09	<.0001	<.0001	0.05	74.2330	78.7670
1	10	5	7	75.7500	1.1402	85	66.44	<.0001	<.0001	0.05	73.4830	78.0170
1	10	5	8	75.5000	1.1402	85	66.22	<.0001	<.0001	0.05	73.2330	77.7670
1	10	5	9	73.5000	1.1402	85	64.46	<.0001	<.0001	0.05	71.2330	75.7670
1	10	5	10	71.7500	1.1402	85	62.93	<.0001	<.0001	0.05	69.4830	74.0170
1	10	6	5	77.2500	1.1402	85	67.75	<.0001	<.0001	0.05	74.9830	79.5170
1	10	6	6	75.5000	1.1402	85	66.22	<.0001	<.0001	0.05	73.2330	77.7670
1	10	6	7	75.0000	1.1402	85	65.78	<.0001	<.0001	0.05	72.7330	77.2670
1	10	6	8	74.2742	1.1841	85	62.73	<.0001	<.0001	0.05	71.9199	76.6284
1	10	6	9	74.5000	1.1402	85	65.34	<.0001	<.0001	0.05	72.2330	76.7670
1	10	6	10	74.0866	1.1841	85	62.57	<.0001	<.0001	0.05	71.7323	76.4408
2	5	2	6	-1.0000	0.7200	85	-1.39	0.1685	1.0000	0.05	-2.4315	0.4315
2	5	2	7	-1.2500	0.7200	85	-1.74	0.0861	0.9986	0.05	-2.6815	0.1815
2	5	2	8	-1.7500	0.7200	85	-2.43	0.0172	0.8729	0.05	-3.1815	-0.3185
2	5	2	9	-2.5000	0.7200	85	-3.47	0.0008	0.1918	0.05	-3.9315	-1.0685
2	5	2	10	-3.7500	0.7200	85	-5.21	<.0001	0.0007	0.05	-5.1815	-2.3185
2	5	3	5	5.7500	1.1402	85	5.04	<.0001	0.0013	0.05	3.4830	8.0170
2	5	3	6	4.0741	1.1841	85	3.44	0.0009	0.2064	0.05	1.7199	6.4283
2	5	3	7	3.7500	1.1402	85	3.29	0.0015	0.2867	0.05	1.4830	6.0170
2	5	3	8	3.0000	1.1402	85	2.63	0.0101	0.7569	0.05	0.7330	5.2670

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
1	10	2	10	60.2147	69.2853
1	10	3	5	69.7147	78.7853
1	10	3	6	67.8642	77.2840
1	10	3	7	67.7147	76.7853
1	10	3	8	66.9647	76.0353
1	10	3	9	65.7813	75.2010
1	10	3	10	64.2147	73.2853
1	10	4	5	68.2147	77.2853
1	10	4	6	66.7147	75.7853
1	10	4	7	65.7147	74.7853
1	10	4	8	63.9647	73.0353
1	10	4	9	62.2147	71.2853
1	10	4	10	62.2147	71.2853
1	10	5	5	73.2147	82.2853
1	10	5	6	71.9647	81.0353
1	10	5	7	71.2147	80.2853
1	10	5	8	70.9647	80.0353
1	10	5	9	68.9647	78.0353
1	10	5	10	67.2147	76.2853
1	10	6	5	72.7147	81.7853
1	10	6	6	70.9647	80.0353
1	10	6	7	70.4647	79.5353
1	10	6	8	69.5643	78.9841
1	10	6	9	69.9647	79.0353
1	10	6	10	69.3767	78.7964
2	5	2	6	-3.8638	1.8638
2	5	2	7	-4.1138	1.6138
2	5	2	8	-4.6138	1.1138
2	5	2	9	-5.3638	0.3638
2	5	2	10	-6.6138	-0.8862
2	5	3	5	1.2147	10.2853
2	5	3	6	-0.6358	8.7840
2	5	3	7	-0.7853	8.2853
2	5	3	8	-1.5353	7.5353

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer												
treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
2	5	3	9	1.9912	1.1841	85	1.68	0.0963	0.9992	0.05	-0.3631	4.3454
2	5	3	10	0.2500	1.1402	85	0.22	0.8270	1.0000	0.05	-2.0170	2.5170
2	5	4	5	4.2500	1.1402	85	3.73	0.0003	0.1013	0.05	1.9830	6.5170
2	5	4	6	2.7500	1.1402	85	2.41	0.0180	0.8817	0.05	0.4830	5.0170
2	5	4	7	1.7500	1.1402	85	1.53	0.1285	0.9999	0.05	-0.5170	4.0170
2	5	4	8	2.93E-14	1.1402	85	0.00	1.0000	1.0000	0.05	-2.2670	2.2670
2	5	4	9	-1.7500	1.1402	85	-1.53	0.1285	0.9999	0.05	-4.0170	0.5170
2	5	4	10	-1.7500	1.1402	85	-1.53	0.1285	0.9999	0.05	-4.0170	0.5170
2	5	5	5	9.2500	1.1402	85	8.11	<.0001	<.0001	0.05	6.9830	11.5170
2	5	5	6	8.0000	1.1402	85	7.02	<.0001	<.0001	0.05	5.7330	10.2670
2	5	5	7	7.2500	1.1402	85	6.36	<.0001	<.0001	0.05	4.9830	9.5170
2	5	5	8	7.0000	1.1402	85	6.14	<.0001	<.0001	0.05	4.7330	9.2670
2	5	5	9	5.0000	1.1402	85	4.39	<.0001	0.0138	0.05	2.7330	7.2670
2	5	5	10	3.2500	1.1402	85	2.85	0.0055	0.5971	0.05	0.9830	5.5170
2	5	6	5	8.7500	1.1402	85	7.67	<.0001	<.0001	0.05	6.4830	11.0170
2	5	6	6	7.0000	1.1402	85	6.14	<.0001	<.0001	0.05	4.7330	9.2670
2	5	6	7	6.5000	1.1402	85	5.70	<.0001	<.0001	0.05	4.2330	8.7670
2	5	6	8	5.7742	1.1841	85	4.88	<.0001	0.0024	0.05	3.4199	8.1284
2	5	6	9	6.0000	1.1402	85	5.26	<.0001	0.0006	0.05	3.7330	8.2670
2	5	6	10	5.5866	1.1841	85	4.72	<.0001	0.0043	0.05	3.2323	7.9408
2	6	2	7	-0.2500	0.7200	85	-0.35	0.7293	1.0000	0.05	-1.6815	1.1815
2	6	2	8	-0.7500	0.7200	85	-1.04	0.3005	1.0000	0.05	-2.1815	0.6815
2	6	2	9	-1.5000	0.7200	85	-2.08	0.0402	0.9770	0.05	-2.9315	-0.06854
2	6	2	10	-2.7500	0.7200	85	-3.82	0.0003	0.0788	0.05	-4.1815	-1.3185
2	6	3	5	6.7500	1.1402	85	5.92	<.0001	<.0001	0.05	4.4830	9.0170
2	6	3	6	5.0741	1.1841	85	4.29	<.0001	0.0192	0.05	2.7199	7.4283
2	6	3	7	4.7500	1.1402	85	4.17	<.0001	0.0281	0.05	2.4830	7.0170
2	6	3	8	4.0000	1.1402	85	3.51	0.0007	0.1764	0.05	1.7330	6.2670
2	6	3	9	2.9912	1.1841	85	2.53	0.0134	0.8224	0.05	0.6369	5.3454
2	6	3	10	1.2500	1.1402	85	1.10	0.2760	1.0000	0.05	-1.0170	3.5170
2	6	4	5	5.2500	1.1402	85	4.60	<.0001	0.0065	0.05	2.9830	7.5170
2	6	4	6	3.7500	1.1402	85	3.29	0.0015	0.2867	0.05	1.4830	6.0170
2	6	4	7	2.7500	1.1402	85	2.41	0.0180	0.8817	0.05	0.4830	5.0170
2	6	4	8	1.0000	1.1402	85	0.88	0.3829	1.0000	0.05	-1.2670	3.2670

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
2	5	3	9	-2.7187	6.7010
2	5	3	10	-4.2853	4.7853
2	5	4	5	-0.2853	8.7853
2	5	4	6	-1.7853	7.2853
2	5	4	7	-2.7853	6.2853
2	5	4	8	-4.5353	4.5353
2	5	4	9	-6.2853	2.7853
2	5	4	10	-6.2853	2.7853
2	5	5	5	4.7147	13.7853
2	5	5	6	3.4647	12.5353
2	5	5	7	2.7147	11.7853
2	5	5	8	2.4647	11.5353
2	5	5	9	0.4647	9.5353
2	5	5	10	-1.2853	7.7853
2	5	6	5	4.2147	13.2853
2	5	6	6	2.4647	11.5353
2	5	6	7	1.9647	11.0353
2	5	6	8	1.0643	10.4841
2	5	6	9	1.4647	10.5353
2	5	6	10	0.8767	10.2964
2	6	2	7	-3.1138	2.6138
2	6	2	8	-3.6138	2.1138
2	6	2	9	-4.3638	1.3638
2	6	2	10	-5.6138	0.1138
2	6	3	5	2.2147	11.2853
2	6	3	6	0.3642	9.7840
2	6	3	7	0.2147	9.2853
2	6	3	8	-0.5353	8.5353
2	6	3	9	-1.7187	7.7010
2	6	3	10	-3.2853	5.7853
2	6	4	5	0.7147	9.7853
2	6	4	6	-0.7853	8.2853
2	6	4	7	-1.7853	7.2853
2	6	4	8	-3.5353	5.5353

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer												
treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
2	6	4	9	-0.7500	1.1402	85	-0.66	0.5125	1.0000	0.05	-3.0170	1.5170
2	6	4	10	-0.7500	1.1402	85	-0.66	0.5125	1.0000	0.05	-3.0170	1.5170
2	6	5	5	10.2500	1.1402	85	8.99	<.0001	<.0001	0.05	7.9830	12.5170
2	6	5	6	9.0000	1.1402	85	7.89	<.0001	<.0001	0.05	6.7330	11.2670
2	6	5	7	8.2500	1.1402	85	7.24	<.0001	<.0001	0.05	5.9830	10.5170
2	6	5	8	8.0000	1.1402	85	7.02	<.0001	<.0001	0.05	5.7330	10.2670
2	6	5	9	6.0000	1.1402	85	5.26	<.0001	0.0006	0.05	3.7330	8.2670
2	6	5	10	4.2500	1.1402	85	3.73	0.0003	0.1013	0.05	1.9830	6.5170
2	6	6	5	9.7500	1.1402	85	8.55	<.0001	<.0001	0.05	7.4830	12.0170
2	6	6	6	8.0000	1.1402	85	7.02	<.0001	<.0001	0.05	5.7330	10.2670
2	6	6	7	7.5000	1.1402	85	6.58	<.0001	<.0001	0.05	5.2330	9.7670
2	6	6	8	6.7742	1.1841	85	5.72	<.0001	<.0001	0.05	4.4199	9.1284
2	6	6	9	7.0000	1.1402	85	6.14	<.0001	<.0001	0.05	4.7330	9.2670
2	6	6	10	6.5866	1.1841	85	5.56	<.0001	0.0002	0.05	4.2323	8.9408
2	7	2	8	-0.5000	0.7200	85	-0.69	0.4893	1.0000	0.05	-1.9315	0.9315
2	7	2	9	-1.2500	0.7200	85	-1.74	0.0861	0.9986	0.05	-2.6815	0.1815
2	7	2	10	-2.5000	0.7200	85	-3.47	0.0008	0.1918	0.05	-3.9315	-1.0685
2	7	3	5	7.0000	1.1402	85	6.14	<.0001	<.0001	0.05	4.7330	9.2670
2	7	3	6	5.3241	1.1841	85	4.50	<.0001	0.0094	0.05	2.9699	7.6783
2	7	3	7	5.0000	1.1402	85	4.39	<.0001	0.0138	0.05	2.7330	7.2670
2	7	3	8	4.2500	1.1402	85	3.73	0.0003	0.1013	0.05	1.9830	6.5170
2	7	3	9	3.2412	1.1841	85	2.74	0.0075	0.6822	0.05	0.8869	5.5954
2	7	3	10	1.5000	1.1402	85	1.32	0.1919	1.0000	0.05	-0.7670	3.7670
2	7	4	5	5.5000	1.1402	85	4.82	<.0001	0.0029	0.05	3.2330	7.7670
2	7	4	6	4.0000	1.1402	85	3.51	0.0007	0.1764	0.05	1.7330	6.2670
2	7	4	7	3.0000	1.1402	85	2.63	0.0101	0.7569	0.05	0.7330	5.2670
2	7	4	8	1.2500	1.1402	85	1.10	0.2760	1.0000	0.05	-1.0170	3.5170
2	7	4	9	-0.5000	1.1402	85	-0.44	0.6621	1.0000	0.05	-2.7670	1.7670
2	7	4	10	-0.5000	1.1402	85	-0.44	0.6621	1.0000	0.05	-2.7670	1.7670
2	7	5	5	10.5000	1.1402	85	9.21	<.0001	<.0001	0.05	8.2330	12.7670
2	7	5	6	9.2500	1.1402	85	8.11	<.0001	<.0001	0.05	6.9830	11.5170
2	7	5	7	8.5000	1.1402	85	7.45	<.0001	<.0001	0.05	6.2330	10.7670
2	7	5	8	8.2500	1.1402	85	7.24	<.0001	<.0001	0.05	5.9830	10.5170
2	7	5	9	6.2500	1.1402	85	5.48	<.0001	0.0002	0.05	3.9830	8.5170

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
2	6	4	9	-5.2853	3.7853
2	6	4	10	-5.2853	3.7853
2	6	5	5	5.7147	14.7853
2	6	5	6	4.4647	13.5353
2	6	5	7	3.7147	12.7853
2	6	5	8	3.4647	12.5353
2	6	5	9	1.4647	10.5353
2	6	5	10	-0.2853	8.7853
2	6	6	5	5.2147	14.2853
2	6	6	6	3.4647	12.5353
2	6	6	7	2.9647	12.0353
2	6	6	8	2.0643	11.4841
2	6	6	9	2.4647	11.5353
2	6	6	10	1.8767	11.2964
2	7	2	8	-3.3638	2.3638
2	7	2	9	-4.1138	1.6138
2	7	2	10	-5.3638	0.3638
2	7	3	5	2.4647	11.5353
2	7	3	6	0.6142	10.0340
2	7	3	7	0.4647	9.5353
2	7	3	8	-0.2853	8.7853
2	7	3	9	-1.4687	7.9510
2	7	3	10	-3.0353	6.0353
2	7	4	5	0.9647	10.0353
2	7	4	6	-0.5353	8.5353
2	7	4	7	-1.5353	7.5353
2	7	4	8	-3.2853	5.7853
2	7	4	9	-5.0353	4.0353
2	7	4	10	-5.0353	4.0353
2	7	5	5	5.9647	15.0353
2	7	5	6	4.7147	13.7853
2	7	5	7	3.9647	13.0353
2	7	5	8	3.7147	12.7853
2	7	5	9	1.7147	10.7853

The PLM Procedure

Differences of treatment*number Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
2	7	5	10	4.5000	1.1402	85	3.95	0.0002	0.0548	0.05	2.2330	6.7670
2	7	6	5	10.0000	1.1402	85	8.77	<.0001	<.0001	0.05	7.7330	12.2670
2	7	6	6	8.2500	1.1402	85	7.24	<.0001	<.0001	0.05	5.9830	10.5170
2	7	6	7	7.7500	1.1402	85	6.80	<.0001	<.0001	0.05	5.4830	10.0170
2	7	6	8	7.0242	1.1841	85	5.93	<.0001	<.0001	0.05	4.6699	9.3784
2	7	6	9	7.2500	1.1402	85	6.36	<.0001	<.0001	0.05	4.9830	9.5170
2	7	6	10	6.8366	1.1841	85	5.77	<.0001	<.0001	0.05	4.4823	9.1908
2	8	2	9	-0.7500	0.7200	85	-1.04	0.3005	1.0000	0.05	-2.1815	0.6815
2	8	2	10	-2.0000	0.7200	85	-2.78	0.0067	0.6521	0.05	-3.4315	-0.5685
2	8	3	5	7.5000	1.1402	85	6.58	<.0001	<.0001	0.05	5.2330	9.7670
2	8	3	6	5.8241	1.1841	85	4.92	<.0001	0.0021	0.05	3.4699	8.1783
2	8	3	7	5.5000	1.1402	85	4.82	<.0001	0.0029	0.05	3.2330	7.7670
2	8	3	8	4.7500	1.1402	85	4.17	<.0001	0.0281	0.05	2.4830	7.0170
2	8	3	9	3.7412	1.1841	85	3.16	0.0022	0.3685	0.05	1.3869	6.0954
2	8	3	10	2.0000	1.1402	85	1.75	0.0830	0.9983	0.05	-0.2670	4.2670
2	8	4	5	6.0000	1.1402	85	5.26	<.0001	0.0006	0.05	3.7330	8.2670
2	8	4	6	4.5000	1.1402	85	3.95	0.0002	0.0548	0.05	2.2330	6.7670
2	8	4	7	3.5000	1.1402	85	3.07	0.0029	0.4315	0.05	1.2330	5.7670
2	8	4	8	1.7500	1.1402	85	1.53	0.1285	0.9999	0.05	-0.5170	4.0170
2	8	4	9	3.16E-14	1.1402	85	0.00	1.0000	1.0000	0.05	-2.2670	2.2670
2	8	4	10	2.5E-7	1.1402	85	0.00	1.0000	1.0000	0.05	-2.2670	2.2670
2	8	5	5	11.0000	1.1402	85	9.65	<.0001	<.0001	0.05	8.7330	13.2670
2	8	5	6	9.7500	1.1402	85	8.55	<.0001	<.0001	0.05	7.4830	12.0170
2	8	5	7	9.0000	1.1402	85	7.89	<.0001	<.0001	0.05	6.7330	11.2670
2	8	5	8	8.7500	1.1402	85	7.67	<.0001	<.0001	0.05	6.4830	11.0170
2	8	5	9	6.7500	1.1402	85	5.92	<.0001	<.0001	0.05	4.4830	9.0170
2	8	5	10	5.0000	1.1402	85	4.39	<.0001	0.0138	0.05	2.7330	7.2670
2	8	6	5	10.5000	1.1402	85	9.21	<.0001	<.0001	0.05	8.2330	12.7670
2	8	6	6	8.7500	1.1402	85	7.67	<.0001	<.0001	0.05	6.4830	11.0170
2	8	6	7	8.2500	1.1402	85	7.24	<.0001	<.0001	0.05	5.9830	10.5170
2	8	6	8	7.5242	1.1841	85	6.35	<.0001	<.0001	0.05	5.1699	9.8784
2	8	6	9	7.7500	1.1402	85	6.80	<.0001	<.0001	0.05	5.4830	10.0170
2	8	6	10	7.3366	1.1841	85	6.20	<.0001	<.0001	0.05	4.9823	9.6908
2	9	2	10	-1.2500	0.7200	85	-1.74	0.0861	0.9986	0.05	-2.6815	0.1815

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
2	7	5	10	-0.03532	9.0353
2	7	6	5	5.4647	14.5353
2	7	6	6	3.7147	12.7853
2	7	6	7	3.2147	12.2853
2	7	6	8	2.3143	11.7341
2	7	6	9	2.7147	11.7853
2	7	6	10	2.1267	11.5464
2	8	2	9	-3.6138	2.1138
2	8	2	10	-4.8638	0.8638
2	8	3	5	2.9647	12.0353
2	8	3	6	1.1142	10.5340
2	8	3	7	0.9647	10.0353
2	8	3	8	0.2147	9.2853
2	8	3	9	-0.9687	8.4510
2	8	3	10	-2.5353	6.5353
2	8	4	5	1.4647	10.5353
2	8	4	6	-0.03532	9.0353
2	8	4	7	-1.0353	8.0353
2	8	4	8	-2.7853	6.2853
2	8	4	9	-4.5353	4.5353
2	8	4	10	-4.5353	4.5353
2	8	5	5	6.4647	15.5353
2	8	5	6	5.2147	14.2853
2	8	5	7	4.4647	13.5353
2	8	5	8	4.2147	13.2853
2	8	5	9	2.2147	11.2853
2	8	5	10	0.4647	9.5353
2	8	6	5	5.9647	15.0353
2	8	6	6	4.2147	13.2853
2	8	6	7	3.7147	12.7853
2	8	6	8	2.8143	12.2341
2	8	6	9	3.2147	12.2853
2	8	6	10	2.6267	12.0464
2	9	2	10	-4.1138	1.6138

The PLM Procedure

Differences of treatment*number Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
2	9	3	5	8.2500	1.1402	85	7.24	<.0001	<.0001	0.05	5.9830	10.5170
2	9	3	6	6.5741	1.1841	85	5.55	<.0001	0.0002	0.05	4.2199	8.9283
2	9	3	7	6.2500	1.1402	85	5.48	<.0001	0.0002	0.05	3.9830	8.5170
2	9	3	8	5.5000	1.1402	85	4.82	<.0001	0.0029	0.05	3.2330	7.7670
2	9	3	9	4.4912	1.1841	85	3.79	0.0003	0.0848	0.05	2.1369	6.8454
2	9	3	10	2.7500	1.1402	85	2.41	0.0180	0.8817	0.05	0.4830	5.0170
2	9	4	5	6.7500	1.1402	85	5.92	<.0001	<.0001	0.05	4.4830	9.0170
2	9	4	6	5.2500	1.1402	85	4.60	<.0001	0.0065	0.05	2.9830	7.5170
2	9	4	7	4.2500	1.1402	85	3.73	0.0003	0.1013	0.05	1.9830	6.5170
2	9	4	8	2.5000	1.1402	85	2.19	0.0311	0.9567	0.05	0.2330	4.7670
2	9	4	9	0.7500	1.1402	85	0.66	0.5125	1.0000	0.05	-1.5170	3.0170
2	9	4	10	0.7500	1.1402	85	0.66	0.5125	1.0000	0.05	-1.5170	3.0170
2	9	5	5	11.7500	1.1402	85	10.31	<.0001	<.0001	0.05	9.4830	14.0170
2	9	5	6	10.5000	1.1402	85	9.21	<.0001	<.0001	0.05	8.2330	12.7670
2	9	5	7	9.7500	1.1402	85	8.55	<.0001	<.0001	0.05	7.4830	12.0170
2	9	5	8	9.5000	1.1402	85	8.33	<.0001	<.0001	0.05	7.2330	11.7670
2	9	5	9	7.5000	1.1402	85	6.58	<.0001	<.0001	0.05	5.2330	9.7670
2	9	5	10	5.7500	1.1402	85	5.04	<.0001	0.0013	0.05	3.4830	8.0170
2	9	6	5	11.2500	1.1402	85	9.87	<.0001	<.0001	0.05	8.9830	13.5170
2	9	6	6	9.5000	1.1402	85	8.33	<.0001	<.0001	0.05	7.2330	11.7670
2	9	6	7	9.0000	1.1402	85	7.89	<.0001	<.0001	0.05	6.7330	11.2670
2	9	6	8	8.2742	1.1841	85	6.99	<.0001	<.0001	0.05	5.9199	10.6284
2	9	6	9	8.5000	1.1402	85	7.45	<.0001	<.0001	0.05	6.2330	10.7670
2	9	6	10	8.0866	1.1841	85	6.83	<.0001	<.0001	0.05	5.7323	10.4408
2	10	3	5	9.5000	1.1402	85	8.33	<.0001	<.0001	0.05	7.2330	11.7670
2	10	3	6	7.8241	1.1841	85	6.61	<.0001	<.0001	0.05	5.4699	10.1783
2	10	3	7	7.5000	1.1402	85	6.58	<.0001	<.0001	0.05	5.2330	9.7670
2	10	3	8	6.7500	1.1402	85	5.92	<.0001	<.0001	0.05	4.4830	9.0170
2	10	3	9	5.7412	1.1841	85	4.85	<.0001	0.0027	0.05	3.3869	8.0954
2	10	3	10	4.0000	1.1402	85	3.51	0.0007	0.1764	0.05	1.7330	6.2670
2	10	4	5	8.0000	1.1402	85	7.02	<.0001	<.0001	0.05	5.7330	10.2670
2	10	4	6	6.5000	1.1402	85	5.70	<.0001	<.0001	0.05	4.2330	8.7670
2	10	4	7	5.5000	1.1402	85	4.82	<.0001	0.0029	0.05	3.2330	7.7670
2	10	4	8	3.7500	1.1402	85	3.29	0.0015	0.2867	0.05	1.4830	6.0170

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
2	9	3	5	3.7147	12.7853
2	9	3	6	1.8642	11.2840
2	9	3	7	1.7147	10.7853
2	9	3	8	0.9647	10.0353
2	9	3	9	-0.2187	9.2010
2	9	3	10	-1.7853	7.2853
2	9	4	5	2.2147	11.2853
2	9	4	6	0.7147	9.7853
2	9	4	7	-0.2853	8.7853
2	9	4	8	-2.0353	7.0353
2	9	4	9	-3.7853	5.2853
2	9	4	10	-3.7853	5.2853
2	9	5	5	7.2147	16.2853
2	9	5	6	5.9647	15.0353
2	9	5	7	5.2147	14.2853
2	9	5	8	4.9647	14.0353
2	9	5	9	2.9647	12.0353
2	9	5	10	1.2147	10.2853
2	9	6	5	6.7147	15.7853
2	9	6	6	4.9647	14.0353
2	9	6	7	4.4647	13.5353
2	9	6	8	3.5643	12.9841
2	9	6	9	3.9647	13.0353
2	9	6	10	3.3767	12.7964
2	10	3	5	4.9647	14.0353
2	10	3	6	3.1142	12.5340
2	10	3	7	2.9647	12.0353
2	10	3	8	2.2147	11.2853
2	10	3	9	1.0313	10.4510
2	10	3	10	-0.5353	8.5353
2	10	4	5	3.4647	12.5353
2	10	4	6	1.9647	11.0353
2	10	4	7	0.9647	10.0353
2	10	4	8	-0.7853	8.2853

The PLM Procedure

Differences of treatment*number Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
2	10	4	9	2.0000	1.1402	85	1.75	0.0830	0.9983	0.05	-0.2670	4.2670
2	10	4	10	2.0000	1.1402	85	1.75	0.0830	0.9983	0.05	-0.2670	4.2670
2	10	5	5	13.0000	1.1402	85	11.40	<.0001	<.0001	0.05	10.7330	15.2670
2	10	5	6	11.7500	1.1402	85	10.31	<.0001	<.0001	0.05	9.4830	14.0170
2	10	5	7	11.0000	1.1402	85	9.65	<.0001	<.0001	0.05	8.7330	13.2670
2	10	5	8	10.7500	1.1402	85	9.43	<.0001	<.0001	0.05	8.4830	13.0170
2	10	5	9	8.7500	1.1402	85	7.67	<.0001	<.0001	0.05	6.4830	11.0170
2	10	5	10	7.0000	1.1402	85	6.14	<.0001	<.0001	0.05	4.7330	9.2670
2	10	6	5	12.5000	1.1402	85	10.96	<.0001	<.0001	0.05	10.2330	14.7670
2	10	6	6	10.7500	1.1402	85	9.43	<.0001	<.0001	0.05	8.4830	13.0170
2	10	6	7	10.2500	1.1402	85	8.99	<.0001	<.0001	0.05	7.9830	12.5170
2	10	6	8	9.5242	1.1841	85	8.04	<.0001	<.0001	0.05	7.1699	11.8784
2	10	6	9	9.7500	1.1402	85	8.55	<.0001	<.0001	0.05	7.4830	12.0170
2	10	6	10	9.3366	1.1841	85	7.89	<.0001	<.0001	0.05	6.9823	11.6908
3	5	3	6	-1.6759	0.7876	85	-2.13	0.0362	0.9699	0.05	-3.2419	-0.1099
3	5	3	7	-2.0000	0.7200	85	-2.78	0.0067	0.6521	0.05	-3.4315	-0.5685
3	5	3	8	-2.7500	0.7200	85	-3.82	0.0003	0.0788	0.05	-4.1815	-1.3185
3	5	3	9	-3.7588	0.7876	85	-4.77	<.0001	0.0035	0.05	-5.3248	-2.1929
3	5	3	10	-5.5000	0.7200	85	-7.64	<.0001	<.0001	0.05	-6.9315	-4.0685
3	5	4	5	-1.5000	1.1402	85	-1.32	0.1919	1.0000	0.05	-3.7670	0.7670
3	5	4	6	-3.0000	1.1402	85	-2.63	0.0101	0.7569	0.05	-5.2670	-0.7330
3	5	4	7	-4.0000	1.1402	85	-3.51	0.0007	0.1764	0.05	-6.2670	-1.7330
3	5	4	8	-5.7500	1.1402	85	-5.04	<.0001	0.0013	0.05	-8.0170	-3.4830
3	5	4	9	-7.5000	1.1402	85	-6.58	<.0001	<.0001	0.05	-9.7670	-5.2330
3	5	4	10	-7.5000	1.1402	85	-6.58	<.0001	<.0001	0.05	-9.7670	-5.2330
3	5	5	5	3.5000	1.1402	85	3.07	0.0029	0.4315	0.05	1.2330	5.7670
3	5	5	6	2.2500	1.1402	85	1.97	0.0517	0.9891	0.05	-0.01699	4.5170
3	5	5	7	1.5000	1.1402	85	1.32	0.1919	1.0000	0.05	-0.7670	3.7670
3	5	5	8	1.2500	1.1402	85	1.10	0.2760	1.0000	0.05	-1.0170	3.5170
3	5	5	9	-0.7500	1.1402	85	-0.66	0.5125	1.0000	0.05	-3.0170	1.5170
3	5	5	10	-2.5000	1.1402	85	-2.19	0.0311	0.9567	0.05	-4.7670	-0.2330
3	5	6	5	3.0000	1.1402	85	2.63	0.0101	0.7569	0.05	0.7330	5.2670
3	5	6	6	1.2500	1.1402	85	1.10	0.2760	1.0000	0.05	-1.0170	3.5170
3	5	6	7	0.7500	1.1402	85	0.66	0.5125	1.0000	0.05	-1.5170	3.0170

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
2	10	4	9	-2.5353	6.5353
2	10	4	10	-2.5353	6.5353
2	10	5	5	8.4647	17.5353
2	10	5	6	7.2147	16.2853
2	10	5	7	6.4647	15.5353
2	10	5	8	6.2147	15.2853
2	10	5	9	4.2147	13.2853
2	10	5	10	2.4647	11.5353
2	10	6	5	7.9647	17.0353
2	10	6	6	6.2147	15.2853
2	10	6	7	5.7147	14.7853
2	10	6	8	4.8143	14.2341
2	10	6	9	5.2147	14.2853
2	10	6	10	4.6267	14.0464
3	5	3	6	-4.8088	1.4570
3	5	3	7	-4.8638	0.8638
3	5	3	8	-5.6138	0.1138
3	5	3	9	-6.8917	-0.6260
3	5	3	10	-8.3638	-2.6362
3	5	4	5	-6.0353	3.0353
3	5	4	6	-7.5353	1.5353
3	5	4	7	-8.5353	0.5353
3	5	4	8	-10.2853	-1.2147
3	5	4	9	-12.0353	-2.9647
3	5	4	10	-12.0353	-2.9647
3	5	5	5	-1.0353	8.0353
3	5	5	6	-2.2853	6.7853
3	5	5	7	-3.0353	6.0353
3	5	5	8	-3.2853	5.7853
3	5	5	9	-5.2853	3.7853
3	5	5	10	-7.0353	2.0353
3	5	6	5	-1.5353	7.5353
3	5	6	6	-3.2853	5.7853
3	5	6	7	-3.7853	5.2853

The PLM Procedure

Differences of treatment*number Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
3	5	6	8	0.02418	1.1841	85	0.02	0.9838	1.0000	0.05	-2.3301	2.3784
3	5	6	9	0.2500	1.1402	85	0.22	0.8270	1.0000	0.05	-2.0170	2.5170
3	5	6	10	-0.1634	1.1841	85	-0.14	0.8905	1.0000	0.05	-2.5177	2.1908
3	6	3	7	-0.3241	0.7876	85	-0.41	0.6817	1.0000	0.05	-1.8901	1.2419
3	6	3	8	-1.0741	0.7876	85	-1.36	0.1762	1.0000	0.05	-2.6401	0.4919
3	6	3	9	-2.0829	0.8569	85	-2.43	0.0172	0.8729	0.05	-3.7868	-0.3791
3	6	3	10	-3.8241	0.7876	85	-4.86	<.0001	0.0026	0.05	-5.3901	-2.2581
3	6	4	5	0.1759	1.1841	85	0.15	0.8823	1.0000	0.05	-2.1783	2.5301
3	6	4	6	-1.3241	1.1841	85	-1.12	0.2666	1.0000	0.05	-3.6783	1.0301
3	6	4	7	-2.3241	1.1841	85	-1.96	0.0529	0.9899	0.05	-4.6783	0.03014
3	6	4	8	-4.0741	1.1841	85	-3.44	0.0009	0.2064	0.05	-6.4283	-1.7199
3	6	4	9	-5.8241	1.1841	85	-4.92	<.0001	0.0021	0.05	-8.1783	-3.4699
3	6	4	10	-5.8241	1.1841	85	-4.92	<.0001	0.0021	0.05	-8.1783	-3.4699
3	6	5	5	5.1759	1.1841	85	4.37	<.0001	0.0144	0.05	2.8217	7.5301
3	6	5	6	3.9259	1.1841	85	3.32	0.0013	0.2713	0.05	1.5717	6.2801
3	6	5	7	3.1759	1.1841	85	2.68	0.0088	0.7218	0.05	0.8217	5.5301
3	6	5	8	2.9259	1.1841	85	2.47	0.0155	0.8527	0.05	0.5717	5.2801
3	6	5	9	0.9259	1.1841	85	0.78	0.4364	1.0000	0.05	-1.4283	3.2801
3	6	5	10	-0.8241	1.1841	85	-0.70	0.4883	1.0000	0.05	-3.1783	1.5301
3	6	6	5	4.6759	1.1841	85	3.95	0.0002	0.0544	0.05	2.3217	7.0301
3	6	6	6	2.9259	1.1841	85	2.47	0.0155	0.8527	0.05	0.5717	5.2801
3	6	6	7	2.4259	1.1841	85	2.05	0.0436	0.9816	0.05	0.07166	4.7801
3	6	6	8	1.7001	1.2264	85	1.39	0.1693	1.0000	0.05	-0.7383	4.1385
3	6	6	9	1.9259	1.1841	85	1.63	0.1075	0.9996	0.05	-0.4283	4.2801
3	6	6	10	1.5125	1.2264	85	1.23	0.2209	1.0000	0.05	-0.9259	3.9508
3	7	3	8	-0.7500	0.7200	85	-1.04	0.3005	1.0000	0.05	-2.1815	0.6815
3	7	3	9	-1.7588	0.7876	85	-2.23	0.0282	0.9465	0.05	-3.3248	-0.1929
3	7	3	10	-3.5000	0.7200	85	-4.86	<.0001	0.0026	0.05	-4.9315	-2.0685
3	7	4	5	0.5000	1.1402	85	0.44	0.6621	1.0000	0.05	-1.7670	2.7670
3	7	4	6	-1.0000	1.1402	85	-0.88	0.3829	1.0000	0.05	-3.2670	1.2670
3	7	4	7	-2.0000	1.1402	85	-1.75	0.0830	0.9983	0.05	-4.2670	0.2670
3	7	4	8	-3.7500	1.1402	85	-3.29	0.0015	0.2867	0.05	-6.0170	-1.4830
3	7	4	9	-5.5000	1.1402	85	-4.82	<.0001	0.0029	0.05	-7.7670	-3.2330
3	7	4	10	-5.5000	1.1402	85	-4.82	<.0001	0.0029	0.05	-7.7670	-3.2330

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
3	5	6	8	-4.6857	4.7341
3	5	6	9	-4.2853	4.7853
3	5	6	10	-4.8733	4.5464
3	6	3	7	-3.4570	2.8088
3	6	3	8	-4.2070	2.0588
3	6	3	9	-5.4916	1.3257
3	6	3	10	-6.9570	-0.6912
3	6	4	5	-4.5340	4.8858
3	6	4	6	-6.0340	3.3858
3	6	4	7	-7.0340	2.3858
3	6	4	8	-8.7840	0.6358
3	6	4	9	-10.5340	-1.1142
3	6	4	10	-10.5340	-1.1142
3	6	5	5	0.4660	9.8858
3	6	5	6	-0.7840	8.6358
3	6	5	7	-1.5340	7.8858
3	6	5	8	-1.7840	7.6358
3	6	5	9	-3.7840	5.6358
3	6	5	10	-5.5340	3.8858
3	6	6	5	-0.03397	9.3858
3	6	6	6	-1.7840	7.6358
3	6	6	7	-2.2840	7.1358
3	6	6	8	-3.1781	6.5783
3	6	6	9	-2.7840	6.6358
3	6	6	10	-3.3657	6.3906
3	7	3	8	-3.6138	2.1138
3	7	3	9	-4.8917	1.3740
3	7	3	10	-6.3638	-0.6362
3	7	4	5	-4.0353	5.0353
3	7	4	6	-5.5353	3.5353
3	7	4	7	-6.5353	2.5353
3	7	4	8	-8.2853	0.7853
3	7	4	9	-10.0353	-0.9647
3	7	4	10	-10.0353	-0.9647

The PLM Procedure

Differences of treatment*number Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
3	7	5	5	5.5000	1.1402	85	4.82	<.0001	0.0029	0.05	3.2330	7.7670
3	7	5	6	4.2500	1.1402	85	3.73	0.0003	0.1013	0.05	1.9830	6.5170
3	7	5	7	3.5000	1.1402	85	3.07	0.0029	0.4315	0.05	1.2330	5.7670
3	7	5	8	3.2500	1.1402	85	2.85	0.0055	0.5971	0.05	0.9830	5.5170
3	7	5	9	1.2500	1.1402	85	1.10	0.2760	1.0000	0.05	-1.0170	3.5170
3	7	5	10	-0.5000	1.1402	85	-0.44	0.6621	1.0000	0.05	-2.7670	1.7670
3	7	6	5	5.0000	1.1402	85	4.39	<.0001	0.0138	0.05	2.7330	7.2670
3	7	6	6	3.2500	1.1402	85	2.85	0.0055	0.5971	0.05	0.9830	5.5170
3	7	6	7	2.7500	1.1402	85	2.41	0.0180	0.8817	0.05	0.4830	5.0170
3	7	6	8	2.0242	1.1841	85	1.71	0.0910	0.9989	0.05	-0.3301	4.3784
3	7	6	9	2.2500	1.1402	85	1.97	0.0517	0.9891	0.05	-0.01699	4.5170
3	7	6	10	1.8366	1.1841	85	1.55	0.1246	0.9998	0.05	-0.5177	4.1908
3	8	3	9	-1.0088	0.7876	85	-1.28	0.2037	1.0000	0.05	-2.5748	0.5571
3	8	3	10	-2.7500	0.7200	85	-3.82	0.0003	0.0788	0.05	-4.1815	-1.3185
3	8	4	5	1.2500	1.1402	85	1.10	0.2760	1.0000	0.05	-1.0170	3.5170
3	8	4	6	-0.2500	1.1402	85	-0.22	0.8270	1.0000	0.05	-2.5170	2.0170
3	8	4	7	-1.2500	1.1402	85	-1.10	0.2760	1.0000	0.05	-3.5170	1.0170
3	8	4	8	-3.0000	1.1402	85	-2.63	0.0101	0.7569	0.05	-5.2670	-0.7330
3	8	4	9	-4.7500	1.1402	85	-4.17	<.0001	0.0281	0.05	-7.0170	-2.4830
3	8	4	10	-4.7500	1.1402	85	-4.17	<.0001	0.0281	0.05	-7.0170	-2.4830
3	8	5	5	6.2500	1.1402	85	5.48	<.0001	0.0002	0.05	3.9830	8.5170
3	8	5	6	5.0000	1.1402	85	4.39	<.0001	0.0138	0.05	2.7330	7.2670
3	8	5	7	4.2500	1.1402	85	3.73	0.0003	0.1013	0.05	1.9830	6.5170
3	8	5	8	4.0000	1.1402	85	3.51	0.0007	0.1764	0.05	1.7330	6.2670
3	8	5	9	2.0000	1.1402	85	1.75	0.0830	0.9983	0.05	-0.2670	4.2670
3	8	5	10	0.2500	1.1402	85	0.22	0.8270	1.0000	0.05	-2.0170	2.5170
3	8	6	5	5.7500	1.1402	85	5.04	<.0001	0.0013	0.05	3.4830	8.0170
3	8	6	6	4.0000	1.1402	85	3.51	0.0007	0.1764	0.05	1.7330	6.2670
3	8	6	7	3.5000	1.1402	85	3.07	0.0029	0.4315	0.05	1.2330	5.7670
3	8	6	8	2.7742	1.1841	85	2.34	0.0215	0.9107	0.05	0.4199	5.1284
3	8	6	9	3.0000	1.1402	85	2.63	0.0101	0.7569	0.05	0.7330	5.2670
3	8	6	10	2.5866	1.1841	85	2.18	0.0317	0.9585	0.05	0.2323	4.9408
3	9	3	10	-1.7412	0.7876	85	-2.21	0.0297	0.9523	0.05	-3.3071	-0.1752
3	9	4	5	2.2588	1.1841	85	1.91	0.0598	0.9934	0.05	-0.09539	4.6131

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
3	7	5	5	0.9647	10.0353
3	7	5	6	-0.2853	8.7853
3	7	5	7	-1.0353	8.0353
3	7	5	8	-1.2853	7.7853
3	7	5	9	-3.2853	5.7853
3	7	5	10	-5.0353	4.0353
3	7	6	5	0.4647	9.5353
3	7	6	6	-1.2853	7.7853
3	7	6	7	-1.7853	7.2853
3	7	6	8	-2.6857	6.7341
3	7	6	9	-2.2853	6.7853
3	7	6	10	-2.8733	6.5464
3	8	3	9	-4.1417	2.1240
3	8	3	10	-5.6138	0.1138
3	8	4	5	-3.2853	5.7853
3	8	4	6	-4.7853	4.2853
3	8	4	7	-5.7853	3.2853
3	8	4	8	-7.5353	1.5353
3	8	4	9	-9.2853	-0.2147
3	8	4	10	-9.2853	-0.2147
3	8	5	5	1.7147	10.7853
3	8	5	6	0.4647	9.5353
3	8	5	7	-0.2853	8.7853
3	8	5	8	-0.5353	8.5353
3	8	5	9	-2.5353	6.5353
3	8	5	10	-4.2853	4.7853
3	8	6	5	1.2147	10.2853
3	8	6	6	-0.5353	8.5353
3	8	6	7	-1.0353	8.0353
3	8	6	8	-1.9357	7.4841
3	8	6	9	-1.5353	7.5353
3	8	6	10	-2.1233	7.2964
3	9	3	10	-4.8740	1.3917
3	9	4	5	-2.4510	6.9687

The PLM Procedure

Differences of treatment*number Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
3	9	4	6	0.7588	1.1841	85	0.64	0.5233	1.0000	0.05	-1.5954	3.1131
3	9	4	7	-0.2412	1.1841	85	-0.20	0.8391	1.0000	0.05	-2.5954	2.1131
3	9	4	8	-1.9912	1.1841	85	-1.68	0.0963	0.9992	0.05	-4.3454	0.3631
3	9	4	9	-3.7412	1.1841	85	-3.16	0.0022	0.3685	0.05	-6.0954	-1.3869
3	9	4	10	-3.7412	1.1841	85	-3.16	0.0022	0.3685	0.05	-6.0954	-1.3869
3	9	5	5	7.2588	1.1841	85	6.13	<.0001	<.0001	0.05	4.9046	9.6131
3	9	5	6	6.0088	1.1841	85	5.07	<.0001	0.0011	0.05	3.6546	8.3631
3	9	5	7	5.2588	1.1841	85	4.44	<.0001	0.0114	0.05	2.9046	7.6131
3	9	5	8	5.0088	1.1841	85	4.23	<.0001	0.0229	0.05	2.6546	7.3631
3	9	5	9	3.0088	1.1841	85	2.54	0.0129	0.8137	0.05	0.6546	5.3631
3	9	5	10	1.2588	1.1841	85	1.06	0.2907	1.0000	0.05	-1.0954	3.6131
3	9	6	5	6.7588	1.1841	85	5.71	<.0001	<.0001	0.05	4.4046	9.1131
3	9	6	6	5.0088	1.1841	85	4.23	<.0001	0.0229	0.05	2.6546	7.3631
3	9	6	7	4.5088	1.1841	85	3.81	0.0003	0.0814	0.05	2.1546	6.8631
3	9	6	8	3.7830	1.2264	85	3.08	0.0027	0.4207	0.05	1.3447	6.2214
3	9	6	9	4.0088	1.1841	85	3.39	0.0011	0.2335	0.05	1.6546	6.3631
3	9	6	10	3.5954	1.2264	85	2.93	0.0043	0.5347	0.05	1.1570	6.0338
3	10	4	5	4.0000	1.1402	85	3.51	0.0007	0.1764	0.05	1.7330	6.2670
3	10	4	6	2.5000	1.1402	85	2.19	0.0311	0.9567	0.05	0.2330	4.7670
3	10	4	7	1.5000	1.1402	85	1.32	0.1919	1.0000	0.05	-0.7670	3.7670
3	10	4	8	-0.2500	1.1402	85	-0.22	0.8270	1.0000	0.05	-2.5170	2.0170
3	10	4	9	-2.0000	1.1402	85	-1.75	0.0830	0.9983	0.05	-4.2670	0.2670
3	10	4	10	-2.0000	1.1402	85	-1.75	0.0830	0.9983	0.05	-4.2670	0.2670
3	10	5	5	9.0000	1.1402	85	7.89	<.0001	<.0001	0.05	6.7330	11.2670
3	10	5	6	7.7500	1.1402	85	6.80	<.0001	<.0001	0.05	5.4830	10.0170
3	10	5	7	7.0000	1.1402	85	6.14	<.0001	<.0001	0.05	4.7330	9.2670
3	10	5	8	6.7500	1.1402	85	5.92	<.0001	<.0001	0.05	4.4830	9.0170
3	10	5	9	4.7500	1.1402	85	4.17	<.0001	0.0281	0.05	2.4830	7.0170
3	10	5	10	3.0000	1.1402	85	2.63	0.0101	0.7569	0.05	0.7330	5.2670
3	10	6	5	8.5000	1.1402	85	7.45	<.0001	<.0001	0.05	6.2330	10.7670
3	10	6	6	6.7500	1.1402	85	5.92	<.0001	<.0001	0.05	4.4830	9.0170
3	10	6	7	6.2500	1.1402	85	5.48	<.0001	0.0002	0.05	3.9830	8.5170
3	10	6	8	5.5242	1.1841	85	4.67	<.0001	0.0052	0.05	3.1699	7.8784
3	10	6	9	5.7500	1.1402	85	5.04	<.0001	0.0013	0.05	3.4830	8.0170

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
3	9	4	6	-3.9510	5.4687
3	9	4	7	-4.9510	4.4687
3	9	4	8	-6.7010	2.7187
3	9	4	9	-8.4510	0.9687
3	9	4	10	-8.4510	0.9687
3	9	5	5	2.5490	11.9687
3	9	5	6	1.2990	10.7187
3	9	5	7	0.5490	9.9687
3	9	5	8	0.2990	9.7187
3	9	5	9	-1.7010	7.7187
3	9	5	10	-3.4510	5.9687
3	9	6	5	2.0490	11.4687
3	9	6	6	0.2990	9.7187
3	9	6	7	-0.2010	9.2187
3	9	6	8	-1.0952	8.6612
3	9	6	9	-0.7010	8.7187
3	9	6	10	-1.2828	8.4736
3	10	4	5	-0.5353	8.5353
3	10	4	6	-2.0353	7.0353
3	10	4	7	-3.0353	6.0353
3	10	4	8	-4.7853	4.2853
3	10	4	9	-6.5353	2.5353
3	10	4	10	-6.5353	2.5353
3	10	5	5	4.4647	13.5353
3	10	5	6	3.2147	12.2853
3	10	5	7	2.4647	11.5353
3	10	5	8	2.2147	11.2853
3	10	5	9	0.2147	9.2853
3	10	5	10	-1.5353	7.5353
3	10	6	5	3.9647	13.0353
3	10	6	6	2.2147	11.2853
3	10	6	7	1.7147	10.7853
3	10	6	8	0.8143	10.2341
3	10	6	9	1.2147	10.2853

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer												
treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
3	10	6	10	5.3366	1.1841	85	4.51	<.0001	0.0091	0.05	2.9823	7.6908
4	5	4	6	-1.5000	0.7200	85	-2.08	0.0402	0.9770	0.05	-2.9315	-0.06854
4	5	4	7	-2.5000	0.7200	85	-3.47	0.0008	0.1918	0.05	-3.9315	-1.0685
4	5	4	8	-4.2500	0.7200	85	-5.90	<.0001	<.0001	0.05	-5.6815	-2.8185
4	5	4	9	-6.0000	0.7200	85	-8.33	<.0001	<.0001	0.05	-7.4315	-4.5685
4	5	4	10	-6.0000	0.7200	85	-8.33	<.0001	<.0001	0.05	-7.4315	-4.5685
4	5	5	5	5.0000	1.1402	85	4.39	<.0001	0.0138	0.05	2.7330	7.2670
4	5	5	6	3.7500	1.1402	85	3.29	0.0015	0.2867	0.05	1.4830	6.0170
4	5	5	7	3.0000	1.1402	85	2.63	0.0101	0.7569	0.05	0.7330	5.2670
4	5	5	8	2.7500	1.1402	85	2.41	0.0180	0.8817	0.05	0.4830	5.0170
4	5	5	9	0.7500	1.1402	85	0.66	0.5125	1.0000	0.05	-1.5170	3.0170
4	5	5	10	-1.0000	1.1402	85	-0.88	0.3829	1.0000	0.05	-3.2670	1.2670
4	5	6	5	4.5000	1.1402	85	3.95	0.0002	0.0548	0.05	2.2330	6.7670
4	5	6	6	2.7500	1.1402	85	2.41	0.0180	0.8817	0.05	0.4830	5.0170
4	5	6	7	2.2500	1.1402	85	1.97	0.0517	0.9891	0.05	-0.01699	4.5170
4	5	6	8	1.5242	1.1841	85	1.29	0.2015	1.0000	0.05	-0.8301	3.8784
4	5	6	9	1.7500	1.1402	85	1.53	0.1285	0.9999	0.05	-0.5170	4.0170
4	5	6	10	1.3366	1.1841	85	1.13	0.2622	1.0000	0.05	-1.0177	3.6908
4	6	4	7	-1.0000	0.7200	85	-1.39	0.1685	1.0000	0.05	-2.4315	0.4315
4	6	4	8	-2.7500	0.7200	85	-3.82	0.0003	0.0788	0.05	-4.1815	-1.3185
4	6	4	9	-4.5000	0.7200	85	-6.25	<.0001	<.0001	0.05	-5.9315	-3.0685
4	6	4	10	-4.5000	0.7200	85	-6.25	<.0001	<.0001	0.05	-5.9315	-3.0685
4	6	5	5	6.5000	1.1402	85	5.70	<.0001	<.0001	0.05	4.2330	8.7670
4	6	5	6	5.2500	1.1402	85	4.60	<.0001	0.0065	0.05	2.9830	7.5170
4	6	5	7	4.5000	1.1402	85	3.95	0.0002	0.0548	0.05	2.2330	6.7670
4	6	5	8	4.2500	1.1402	85	3.73	0.0003	0.1013	0.05	1.9830	6.5170
4	6	5	9	2.2500	1.1402	85	1.97	0.0517	0.9891	0.05	-0.01699	4.5170
4	6	5	10	0.5000	1.1402	85	0.44	0.6621	1.0000	0.05	-1.7670	2.7670
4	6	6	5	6.0000	1.1402	85	5.26	<.0001	0.0006	0.05	3.7330	8.2670
4	6	6	6	4.2500	1.1402	85	3.73	0.0003	0.1013	0.05	1.9830	6.5170
4	6	6	7	3.7500	1.1402	85	3.29	0.0015	0.2867	0.05	1.4830	6.0170
4	6	6	8	3.0242	1.1841	85	2.55	0.0124	0.8060	0.05	0.6699	5.3784
4	6	6	9	3.2500	1.1402	85	2.85	0.0055	0.5971	0.05	0.9830	5.5170
4	6	6	10	2.8366	1.1841	85	2.40	0.0188	0.8890	0.05	0.4823	5.1908

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
3	10	6	10	0.6267	10.0464
4	5	4	6	-4.3638	1.3638
4	5	4	7	-5.3638	0.3638
4	5	4	8	-7.1138	-1.3862
4	5	4	9	-8.8638	-3.1362
4	5	4	10	-8.8638	-3.1362
4	5	5	5	0.4647	9.5353
4	5	5	6	-0.7853	8.2853
4	5	5	7	-1.5353	7.5353
4	5	5	8	-1.7853	7.2853
4	5	5	9	-3.7853	5.2853
4	5	5	10	-5.5353	3.5353
4	5	6	5	-0.03532	9.0353
4	5	6	6	-1.7853	7.2853
4	5	6	7	-2.2853	6.7853
4	5	6	8	-3.1857	6.2341
4	5	6	9	-2.7853	6.2853
4	5	6	10	-3.3733	6.0464
4	6	4	7	-3.8638	1.8638
4	6	4	8	-5.6138	0.1138
4	6	4	9	-7.3638	-1.6362
4	6	4	10	-7.3638	-1.6362
4	6	5	5	1.9647	11.0353
4	6	5	6	0.7147	9.7853
4	6	5	7	-0.03532	9.0353
4	6	5	8	-0.2853	8.7853
4	6	5	9	-2.2853	6.7853
4	6	5	10	-4.0353	5.0353
4	6	6	5	1.4647	10.5353
4	6	6	6	-0.2853	8.7853
4	6	6	7	-0.7853	8.2853
4	6	6	8	-1.6857	7.7341
4	6	6	9	-1.2853	7.7853
4	6	6	10	-1.8733	7.5464

The PLM Procedure

Differences of treatment*number Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
4	7	4	8	-1.7500	0.7200	85	-2.43	0.0172	0.8729	0.05	-3.1815	-0.3185
4	7	4	9	-3.5000	0.7200	85	-4.86	<.0001	0.0026	0.05	-4.9315	-2.0685
4	7	4	10	-3.5000	0.7200	85	-4.86	<.0001	0.0026	0.05	-4.9315	-2.0685
4	7	5	5	7.5000	1.1402	85	6.58	<.0001	<.0001	0.05	5.2330	9.7670
4	7	5	6	6.2500	1.1402	85	5.48	<.0001	0.0002	0.05	3.9830	8.5170
4	7	5	7	5.5000	1.1402	85	4.82	<.0001	0.0029	0.05	3.2330	7.7670
4	7	5	8	5.2500	1.1402	85	4.60	<.0001	0.0065	0.05	2.9830	7.5170
4	7	5	9	3.2500	1.1402	85	2.85	0.0055	0.5971	0.05	0.9830	5.5170
4	7	5	10	1.5000	1.1402	85	1.32	0.1919	1.0000	0.05	-0.7670	3.7670
4	7	6	5	7.0000	1.1402	85	6.14	<.0001	<.0001	0.05	4.7330	9.2670
4	7	6	6	5.2500	1.1402	85	4.60	<.0001	0.0065	0.05	2.9830	7.5170
4	7	6	7	4.7500	1.1402	85	4.17	<.0001	0.0281	0.05	2.4830	7.0170
4	7	6	8	4.0242	1.1841	85	3.40	0.0010	0.2269	0.05	1.6699	6.3784
4	7	6	9	4.2500	1.1402	85	3.73	0.0003	0.1013	0.05	1.9830	6.5170
4	7	6	10	3.8366	1.1841	85	3.24	0.0017	0.3162	0.05	1.4823	6.1908
4	8	4	9	-1.7500	0.7200	85	-2.43	0.0172	0.8729	0.05	-3.1815	-0.3185
4	8	4	10	-1.7500	0.7200	85	-2.43	0.0172	0.8729	0.05	-3.1815	-0.3185
4	8	5	5	9.2500	1.1402	85	8.11	<.0001	<.0001	0.05	6.9830	11.5170
4	8	5	6	8.0000	1.1402	85	7.02	<.0001	<.0001	0.05	5.7330	10.2670
4	8	5	7	7.2500	1.1402	85	6.36	<.0001	<.0001	0.05	4.9830	9.5170
4	8	5	8	7.0000	1.1402	85	6.14	<.0001	<.0001	0.05	4.7330	9.2670
4	8	5	9	5.0000	1.1402	85	4.39	<.0001	0.0138	0.05	2.7330	7.2670
4	8	5	10	3.2500	1.1402	85	2.85	0.0055	0.5971	0.05	0.9830	5.5170
4	8	6	5	8.7500	1.1402	85	7.67	<.0001	<.0001	0.05	6.4830	11.0170
4	8	6	6	7.0000	1.1402	85	6.14	<.0001	<.0001	0.05	4.7330	9.2670
4	8	6	7	6.5000	1.1402	85	5.70	<.0001	<.0001	0.05	4.2330	8.7670
4	8	6	8	5.7742	1.1841	85	4.88	<.0001	0.0024	0.05	3.4199	8.1284
4	8	6	9	6.0000	1.1402	85	5.26	<.0001	0.0006	0.05	3.7330	8.2670
4	8	6	10	5.5866	1.1841	85	4.72	<.0001	0.0043	0.05	3.2323	7.9408
4	9	4	10	2.5E-7	0.7200	85	0.00	1.0000	1.0000	0.05	-1.4315	1.4315
4	9	5	5	11.0000	1.1402	85	9.65	<.0001	<.0001	0.05	8.7330	13.2670
4	9	5	6	9.7500	1.1402	85	8.55	<.0001	<.0001	0.05	7.4830	12.0170
4	9	5	7	9.0000	1.1402	85	7.89	<.0001	<.0001	0.05	6.7330	11.2670
4	9	5	8	8.7500	1.1402	85	7.67	<.0001	<.0001	0.05	6.4830	11.0170

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
4	7	4	8	-4.6138	1.1138
4	7	4	9	-6.3638	-0.6362
4	7	4	10	-6.3638	-0.6362
4	7	5	5	2.9647	12.0353
4	7	5	6	1.7147	10.7853
4	7	5	7	0.9647	10.0353
4	7	5	8	0.7147	9.7853
4	7	5	9	-1.2853	7.7853
4	7	5	10	-3.0353	6.0353
4	7	6	5	2.4647	11.5353
4	7	6	6	0.7147	9.7853
4	7	6	7	0.2147	9.2853
4	7	6	8	-0.6857	8.7341
4	7	6	9	-0.2853	8.7853
4	7	6	10	-0.8733	8.5464
4	8	4	9	-4.6138	1.1138
4	8	4	10	-4.6138	1.1138
4	8	5	5	4.7147	13.7853
4	8	5	6	3.4647	12.5353
4	8	5	7	2.7147	11.7853
4	8	5	8	2.4647	11.5353
4	8	5	9	0.4647	9.5353
4	8	5	10	-1.2853	7.7853
4	8	6	5	4.2147	13.2853
4	8	6	6	2.4647	11.5353
4	8	6	7	1.9647	11.0353
4	8	6	8	1.0643	10.4841
4	8	6	9	1.4647	10.5353
4	8	6	10	0.8767	10.2964
4	9	4	10	-2.8638	2.8638
4	9	5	5	6.4647	15.5353
4	9	5	6	5.2147	14.2853
4	9	5	7	4.4647	13.5353
4	9	5	8	4.2147	13.2853

The PLM Procedure

Differences of treatment*number Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
4	9	5	9	6.7500	1.1402	85	5.92	<.0001	<.0001	0.05	4.4830	9.0170
4	9	5	10	5.0000	1.1402	85	4.39	<.0001	0.0138	0.05	2.7330	7.2670
4	9	6	5	10.5000	1.1402	85	9.21	<.0001	<.0001	0.05	8.2330	12.7670
4	9	6	6	8.7500	1.1402	85	7.67	<.0001	<.0001	0.05	6.4830	11.0170
4	9	6	7	8.2500	1.1402	85	7.24	<.0001	<.0001	0.05	5.9830	10.5170
4	9	6	8	7.5242	1.1841	85	6.35	<.0001	<.0001	0.05	5.1699	9.8784
4	9	6	9	7.7500	1.1402	85	6.80	<.0001	<.0001	0.05	5.4830	10.0170
4	9	6	10	7.3366	1.1841	85	6.20	<.0001	<.0001	0.05	4.9823	9.6908
4	10	5	5	11.0000	1.1402	85	9.65	<.0001	<.0001	0.05	8.7330	13.2670
4	10	5	6	9.7500	1.1402	85	8.55	<.0001	<.0001	0.05	7.4830	12.0170
4	10	5	7	9.0000	1.1402	85	7.89	<.0001	<.0001	0.05	6.7330	11.2670
4	10	5	8	8.7500	1.1402	85	7.67	<.0001	<.0001	0.05	6.4830	11.0170
4	10	5	9	6.7500	1.1402	85	5.92	<.0001	<.0001	0.05	4.4830	9.0170
4	10	5	10	5.0000	1.1402	85	4.39	<.0001	0.0138	0.05	2.7330	7.2670
4	10	6	5	10.5000	1.1402	85	9.21	<.0001	<.0001	0.05	8.2330	12.7670
4	10	6	6	8.7500	1.1402	85	7.67	<.0001	<.0001	0.05	6.4830	11.0170
4	10	6	7	8.2500	1.1402	85	7.24	<.0001	<.0001	0.05	5.9830	10.5170
4	10	6	8	7.5242	1.1841	85	6.35	<.0001	<.0001	0.05	5.1699	9.8784
4	10	6	9	7.7500	1.1402	85	6.80	<.0001	<.0001	0.05	5.4830	10.0170
4	10	6	10	7.3366	1.1841	85	6.20	<.0001	<.0001	0.05	4.9823	9.6908
5	5	5	6	-1.2500	0.7200	85	-1.74	0.0861	0.9986	0.05	-2.6815	0.1815
5	5	5	7	-2.0000	0.7200	85	-2.78	0.0067	0.6521	0.05	-3.4315	-0.5685
5	5	5	8	-2.2500	0.7200	85	-3.13	0.0024	0.3920	0.05	-3.6815	-0.8185
5	5	5	9	-4.2500	0.7200	85	-5.90	<.0001	<.0001	0.05	-5.6815	-2.8185
5	5	5	10	-6.0000	0.7200	85	-8.33	<.0001	<.0001	0.05	-7.4315	-4.5685
5	5	6	5	-0.5000	1.1402	85	-0.44	0.6621	1.0000	0.05	-2.7670	1.7670
5	5	6	6	-2.2500	1.1402	85	-1.97	0.0517	0.9891	0.05	-4.5170	0.01699
5	5	6	7	-2.7500	1.1402	85	-2.41	0.0180	0.8817	0.05	-5.0170	-0.4830
5	5	6	8	-3.4758	1.1841	85	-2.94	0.0043	0.5318	0.05	-5.8301	-1.1216
5	5	6	9	-3.2500	1.1402	85	-2.85	0.0055	0.5971	0.05	-5.5170	-0.9830
5	5	6	10	-3.6634	1.1841	85	-3.09	0.0027	0.4140	0.05	-6.0177	-1.3092
5	6	5	7	-0.7500	0.7200	85	-1.04	0.3005	1.0000	0.05	-2.1815	0.6815
5	6	5	8	-1.0000	0.7200	85	-1.39	0.1685	1.0000	0.05	-2.4315	0.4315
5	6	5	9	-3.0000	0.7200	85	-4.17	<.0001	0.0280	0.05	-4.4315	-1.5685

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
4	9	5	9	2.2147	11.2853
4	9	5	10	0.4647	9.5353
4	9	6	5	5.9647	15.0353
4	9	6	6	4.2147	13.2853
4	9	6	7	3.7147	12.7853
4	9	6	8	2.8143	12.2341
4	9	6	9	3.2147	12.2853
4	9	6	10	2.6267	12.0464
4	10	5	5	6.4647	15.5353
4	10	5	6	5.2147	14.2853
4	10	5	7	4.4647	13.5353
4	10	5	8	4.2147	13.2853
4	10	5	9	2.2147	11.2853
4	10	5	10	0.4647	9.5353
4	10	6	5	5.9647	15.0353
4	10	6	6	4.2147	13.2853
4	10	6	7	3.7147	12.7853
4	10	6	8	2.8143	12.2341
4	10	6	9	3.2147	12.2853
4	10	6	10	2.6267	12.0464
5	5	5	6	-4.1138	1.6138
5	5	5	7	-4.8638	0.8638
5	5	5	8	-5.1138	0.6138
5	5	5	9	-7.1138	-1.3862
5	5	5	10	-8.8638	-3.1362
5	5	6	5	-5.0353	4.0353
5	5	6	6	-6.7853	2.2853
5	5	6	7	-7.2853	1.7853
5	5	6	8	-8.1857	1.2341
5	5	6	9	-7.7853	1.2853
5	5	6	10	-8.3733	1.0464
5	6	5	7	-3.6138	2.1138
5	6	5	8	-3.8638	1.8638
5	6	5	9	-5.8638	-0.1362

The PLM Procedure

Differences of treatment*number Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
5	6	5	10	-4.7500	0.7200	85	-6.60	<.0001	<.0001	0.05	-6.1815	-3.3185
5	6	6	5	0.7500	1.1402	85	0.66	0.5125	1.0000	0.05	-1.5170	3.0170
5	6	6	6	-1.0000	1.1402	85	-0.88	0.3829	1.0000	0.05	-3.2670	1.2670
5	6	6	7	-1.5000	1.1402	85	-1.32	0.1919	1.0000	0.05	-3.7670	0.7670
5	6	6	8	-2.2258	1.1841	85	-1.88	0.0636	0.9947	0.05	-4.5801	0.1284
5	6	6	9	-2.0000	1.1402	85	-1.75	0.0830	0.9983	0.05	-4.2670	0.2670
5	6	6	10	-2.4134	1.1841	85	-2.04	0.0446	0.9828	0.05	-4.7677	-0.05921
5	7	5	8	-0.2500	0.7200	85	-0.35	0.7293	1.0000	0.05	-1.6815	1.1815
5	7	5	9	-2.2500	0.7200	85	-3.13	0.0024	0.3920	0.05	-3.6815	-0.8185
5	7	5	10	-4.0000	0.7200	85	-5.56	<.0001	0.0002	0.05	-5.4315	-2.5685
5	7	6	5	1.5000	1.1402	85	1.32	0.1919	1.0000	0.05	-0.7670	3.7670
5	7	6	6	-0.2500	1.1402	85	-0.22	0.8270	1.0000	0.05	-2.5170	2.0170
5	7	6	7	-0.7500	1.1402	85	-0.66	0.5125	1.0000	0.05	-3.0170	1.5170
5	7	6	8	-1.4758	1.1841	85	-1.25	0.2160	1.0000	0.05	-3.8301	0.8784
5	7	6	9	-1.2500	1.1402	85	-1.10	0.2760	1.0000	0.05	-3.5170	1.0170
5	7	6	10	-1.6634	1.1841	85	-1.40	0.1637	1.0000	0.05	-4.0177	0.6908
5	8	5	9	-2.0000	0.7200	85	-2.78	0.0067	0.6521	0.05	-3.4315	-0.5685
5	8	5	10	-3.7500	0.7200	85	-5.21	<.0001	0.0007	0.05	-5.1815	-2.3185
5	8	6	5	1.7500	1.1402	85	1.53	0.1285	0.9999	0.05	-0.5170	4.0170
5	8	6	6	-574E-14	1.1402	85	-0.00	1.0000	1.0000	0.05	-2.2670	2.2670
5	8	6	7	-0.5000	1.1402	85	-0.44	0.6621	1.0000	0.05	-2.7670	1.7670
5	8	6	8	-1.2258	1.1841	85	-1.04	0.3035	1.0000	0.05	-3.5801	1.1284
5	8	6	9	-1.0000	1.1402	85	-0.88	0.3829	1.0000	0.05	-3.2670	1.2670
5	8	6	10	-1.4134	1.1841	85	-1.19	0.2359	1.0000	0.05	-3.7677	0.9408
5	9	5	10	-1.7500	0.7200	85	-2.43	0.0172	0.8729	0.05	-3.1815	-0.3185
5	9	6	5	3.7500	1.1402	85	3.29	0.0015	0.2867	0.05	1.4830	6.0170
5	9	6	6	2.0000	1.1402	85	1.75	0.0830	0.9983	0.05	-0.2670	4.2670
5	9	6	7	1.5000	1.1402	85	1.32	0.1919	1.0000	0.05	-0.7670	3.7670
5	9	6	8	0.7742	1.1841	85	0.65	0.5150	1.0000	0.05	-1.5801	3.1284
5	9	6	9	1.0000	1.1402	85	0.88	0.3829	1.0000	0.05	-1.2670	3.2670
5	9	6	10	0.5866	1.1841	85	0.50	0.6216	1.0000	0.05	-1.7677	2.9408
5	10	6	5	5.5000	1.1402	85	4.82	<.0001	0.0029	0.05	3.2330	7.7670
5	10	6	6	3.7500	1.1402	85	3.29	0.0015	0.2867	0.05	1.4830	6.0170
5	10	6	7	3.2500	1.1402	85	2.85	0.0055	0.5971	0.05	0.9830	5.5170

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
5	6	5	10	-7.6138	-1.8862
5	6	6	5	-3.7853	5.2853
5	6	6	6	-5.5353	3.5353
5	6	6	7	-6.0353	3.0353
5	6	6	8	-6.9357	2.4841
5	6	6	9	-6.5353	2.5353
5	6	6	10	-7.1233	2.2964
5	7	5	8	-3.1138	2.6138
5	7	5	9	-5.1138	0.6138
5	7	5	10	-6.8638	-1.1362
5	7	6	5	-3.0353	6.0353
5	7	6	6	-4.7853	4.2853
5	7	6	7	-5.2853	3.7853
5	7	6	8	-6.1857	3.2341
5	7	6	9	-5.7853	3.2853
5	7	6	10	-6.3733	3.0464
5	8	5	9	-4.8638	0.8638
5	8	5	10	-6.6138	-0.8862
5	8	6	5	-2.7853	6.2853
5	8	6	6	-4.5353	4.5353
5	8	6	7	-5.0353	4.0353
5	8	6	8	-5.9357	3.4841
5	8	6	9	-5.5353	3.5353
5	8	6	10	-6.1233	3.2964
5	9	5	10	-4.6138	1.1138
5	9	6	5	-0.7853	8.2853
5	9	6	6	-2.5353	6.5353
5	9	6	7	-3.0353	6.0353
5	9	6	8	-3.9357	5.4841
5	9	6	9	-3.5353	5.5353
5	9	6	10	-4.1233	5.2964
5	10	6	5	0.9647	10.0353
5	10	6	6	-0.7853	8.2853
5	10	6	7	-1.2853	7.7853

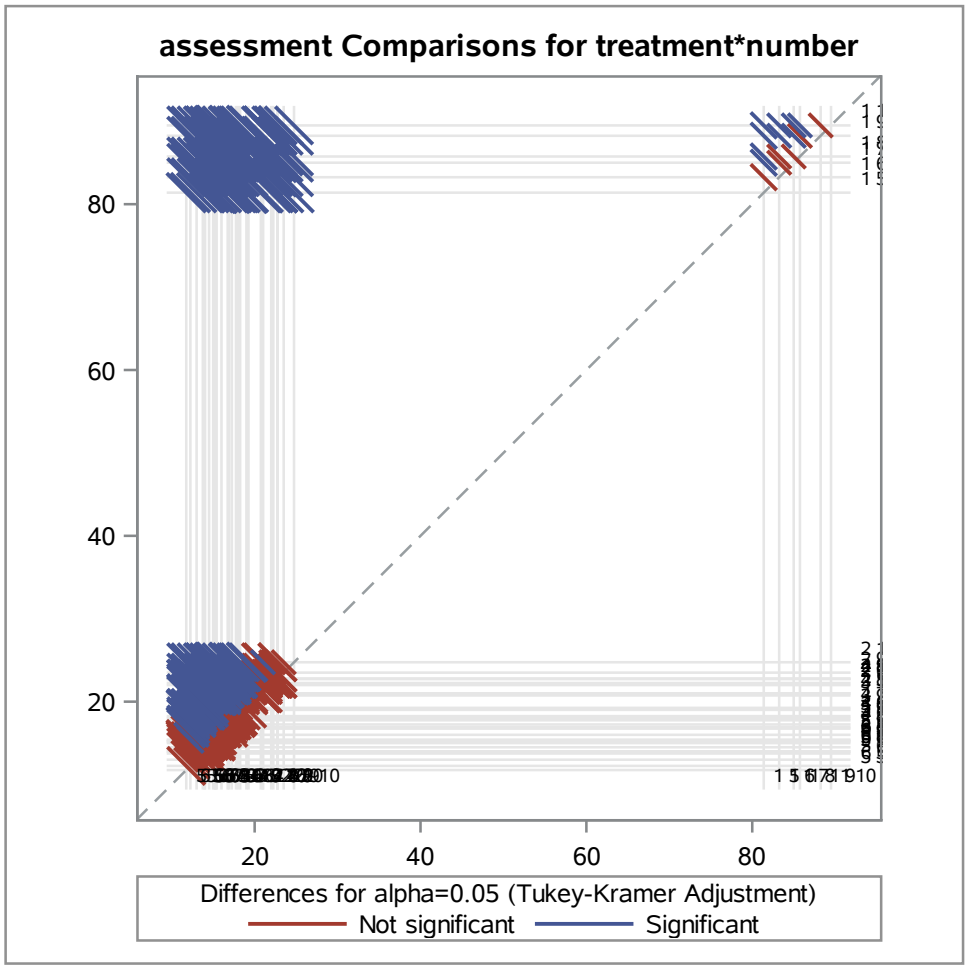
The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer												
treatment	number	_treatment	_number	Estimate	Standard Error	DF	t Value	Pr > |t|	Adj P	Alpha	Lower	Upper
5	10	6	8	2.5242	1.1841	85	2.13	0.0359	0.9692	0.05	0.1699	4.8784
5	10	6	9	2.7500	1.1402	85	2.41	0.0180	0.8817	0.05	0.4830	5.0170
5	10	6	10	2.3366	1.1841	85	1.97	0.0517	0.9891	0.05	-0.01769	4.6908
6	5	6	6	-1.7500	0.7200	85	-2.43	0.0172	0.8729	0.05	-3.1815	-0.3185
6	5	6	7	-2.2500	0.7200	85	-3.13	0.0024	0.3920	0.05	-3.6815	-0.8185
6	5	6	8	-2.9758	0.7876	85	-3.78	0.0003	0.0883	0.05	-4.5418	-1.4098
6	5	6	9	-2.7500	0.7200	85	-3.82	0.0003	0.0788	0.05	-4.1815	-1.3185
6	5	6	10	-3.1634	0.7876	85	-4.02	0.0001	0.0445	0.05	-4.7294	-1.5975
6	6	6	7	-0.5000	0.7200	85	-0.69	0.4893	1.0000	0.05	-1.9315	0.9315
6	6	6	8	-1.2258	0.7876	85	-1.56	0.1233	0.9998	0.05	-2.7918	0.3402
6	6	6	9	-1.0000	0.7200	85	-1.39	0.1685	1.0000	0.05	-2.4315	0.4315
6	6	6	10	-1.4134	0.7876	85	-1.79	0.0763	0.9975	0.05	-2.9794	0.1525
6	7	6	8	-0.7258	0.7876	85	-0.92	0.3594	1.0000	0.05	-2.2918	0.8402
6	7	6	9	-0.5000	0.7200	85	-0.69	0.4893	1.0000	0.05	-1.9315	0.9315
6	7	6	10	-0.9134	0.7876	85	-1.16	0.2494	1.0000	0.05	-2.4794	0.6525
6	8	6	9	0.2258	0.7876	85	0.29	0.7750	1.0000	0.05	-1.3402	1.7918
6	8	6	10	-0.1876	0.8569	85	-0.22	0.8272	1.0000	0.05	-1.8914	1.5162
6	9	6	10	-0.4134	0.7876	85	-0.52	0.6010	1.0000	0.05	-1.9794	1.1525

The PLM Procedure

Differences of treatment*number Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
treatment	number	_treatment	_number	Adj Lower	Adj Upper
5	10	6	8	-2.1857	7.2341
5	10	6	9	-1.7853	7.2853
5	10	6	10	-2.3733	7.0464
6	5	6	6	-4.6138	1.1138
6	5	6	7	-5.1138	0.6138
6	5	6	8	-6.1087	0.1571
6	5	6	9	-5.6138	0.1138
6	5	6	10	-6.2963	-0.03056
6	6	6	7	-3.3638	2.3638
6	6	6	8	-4.3587	1.9071
6	6	6	9	-3.8638	1.8638
6	6	6	10	-4.5463	1.7194
6	7	6	8	-3.8587	2.4071
6	7	6	9	-3.3638	2.3638
6	7	6	10	-4.0463	2.2194
6	8	6	9	-2.9071	3.3587
6	8	6	10	-3.5963	3.2210
6	9	6	10	-3.5463	2.7194

The PLM Procedure



Conservative Tukey-Kramer Grouping for treatment*number Least Squares Means (Alpha=0.05)								
LS-means with the same letter are not significantly different.								
treatment	number	Estimate						
1	10	89.5000				A		
						A		
1	9	88.2500		B		A		
				B				
1	8	85.7500		B		C		
						C		
1	7	85.0000				C		
						C		
1	6	83.2500		D		C		
				D				
1	5	81.3871		D				
2	10	24.7500				E		
						E		

The PLM Procedure

Conservative Tukey-Kramer Grouping for treatment*number Least Squares Means (Alpha=0.05)								
LS-means with the same letter are not significantly different.								
treatment	number	Estimate						
2	9	23.5000		F		E		
				F		E		
2	8	22.7500		F		E	G	
				F		E	G	
4	9	22.7500		F		E	G	
				F		E	G	
4	10	22.7500		F		E	G	
				F		E	G	
2	7	22.2500		F	H	E	G	
				F	H	E	G	
2	6	22.0000		F	H	E	G	
				F	H	E	G	
2	5	21.0000	I	F	H	E	G	
			I	F	H	E	G	
4	8	21.0000	I	F	H	E	G	
			I	F	H	E	G	
3	10	20.7500	I	F	H	E	G	
			I	F	H		G	
4	7	19.2500	I	F	H	J	G	
			I	F	H	J	G	
3	9	19.0088	I	F	H	J	G	K
			I		H	J	G	K
4	6	18.2500	I	L	H	J	G	K
			I	L	H	J		K
3	8	18.0000	I	L	H	J		K
			I	L	H	J		K
5	10	17.7500	I	L	H	J		K
			I	L		J		K
3	7	17.2500	I	L		J	M	K
			I	L		J	M	K
3	6	16.9259	I	L	N	J	M	K
			I	L	N	J	M	K
4	5	16.7500	I	L	N	J	M	K
				L	N	J	M	K

The PLM Procedure

Conservative Tukey-Kramer Grouping for treatment*number Least Squares Means (Alpha=0.05)								
LS-means with the same letter are not significantly different.								
treatment	number	Estimate						
5	9	16.0000		L	N	J	M	K
				L	N	J	M	K
6	10	15.4134	O	L	N	J	M	K
			O	L	N	J	M	K
3	5	15.2500	O	L	N	J	M	K
			O	L	N	J	M	K
6	8	15.2258	O	L	N	J	M	K
			O	L	N	J	M	K
6	9	15.0000	O	L	N	J	M	K
			O	L	N		M	K
6	7	14.5000	O	L	N		M	K
			O	L	N		M	
6	6	14.0000	O	L	N		M	
			O	L	N		M	
5	8	14.0000	O	L	N		M	
			O	L	N		M	
5	7	13.7500	O	L	N		M	
			O		N		M	
5	6	13.0000	O		N		M	
			O		N			
6	5	12.2500	O		N			
			O					
5	5	11.7500	O					

Split Plot - MIVQUE Variance components

Variance Components Estimation Procedure

Class Level Information		
Class	**Levels**	**Values**
replicate	4	1 2 3 4
treatment	6	1 2 3 4 5 6
number	6	5 6 7 8 9 10

Number of Observations Read	144
Number of Observations Used	139

MIVQUE(0) SSQ Matrix				
Source	**replicate**	**replicate*treatment**	**Error**	**assessment**
replicate	3537.0	593.44444	103.00000	1006.4
replicate*treatment	593.44444	593.44444	103.00000	1008.5
Error	103.00000	103.00000	103.00000	265.83342

MIVQUE(0) Estimates	
Variance Component	**assessment**
Var(replicate)	-0.0006984
Var(replicate*treatment)	1.51497
Var(Error)	1.06663

The GLM Procedure

Class Level Information		
Class	**Levels**	**Values**
replicate	4	1 2 3 4
treatment	6	1 2 3 4 5 6

Number of Observations Read	24
Number of Observations Used	19

The GLM Procedure

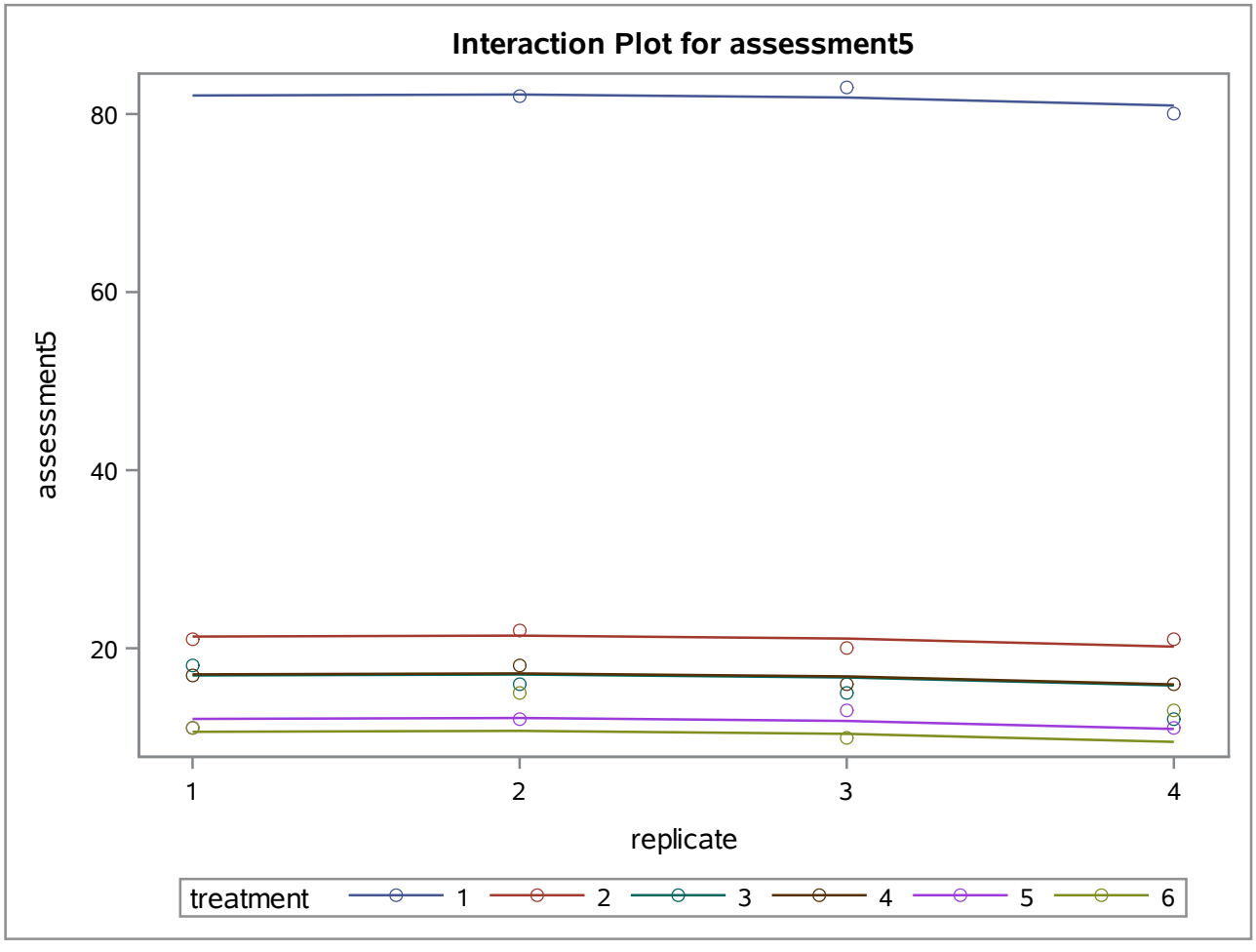
Dependent Variable: assessment5

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	11196.19278	1399.52410	1276.09	<.0001
Error	10	10.96729	1.09673		
Corrected Total	18	11207.16007			

R-Square	Coeff Var	Root MSE	assessment5 Mean
0.999021	3.995525	1.047248	26.21053

Source	DF	Type I SS	Mean Square	F Value	Pr > F
replicate	3	792.75805	264.25268	240.95	<.0001
treatment	5	10403.43473	2080.68695	1897.18	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
replicate	3	3.69938	1.23313	1.12	0.3851
treatment	5	10403.43473	2080.68695	1897.18	<.0001



The GLM Procedure

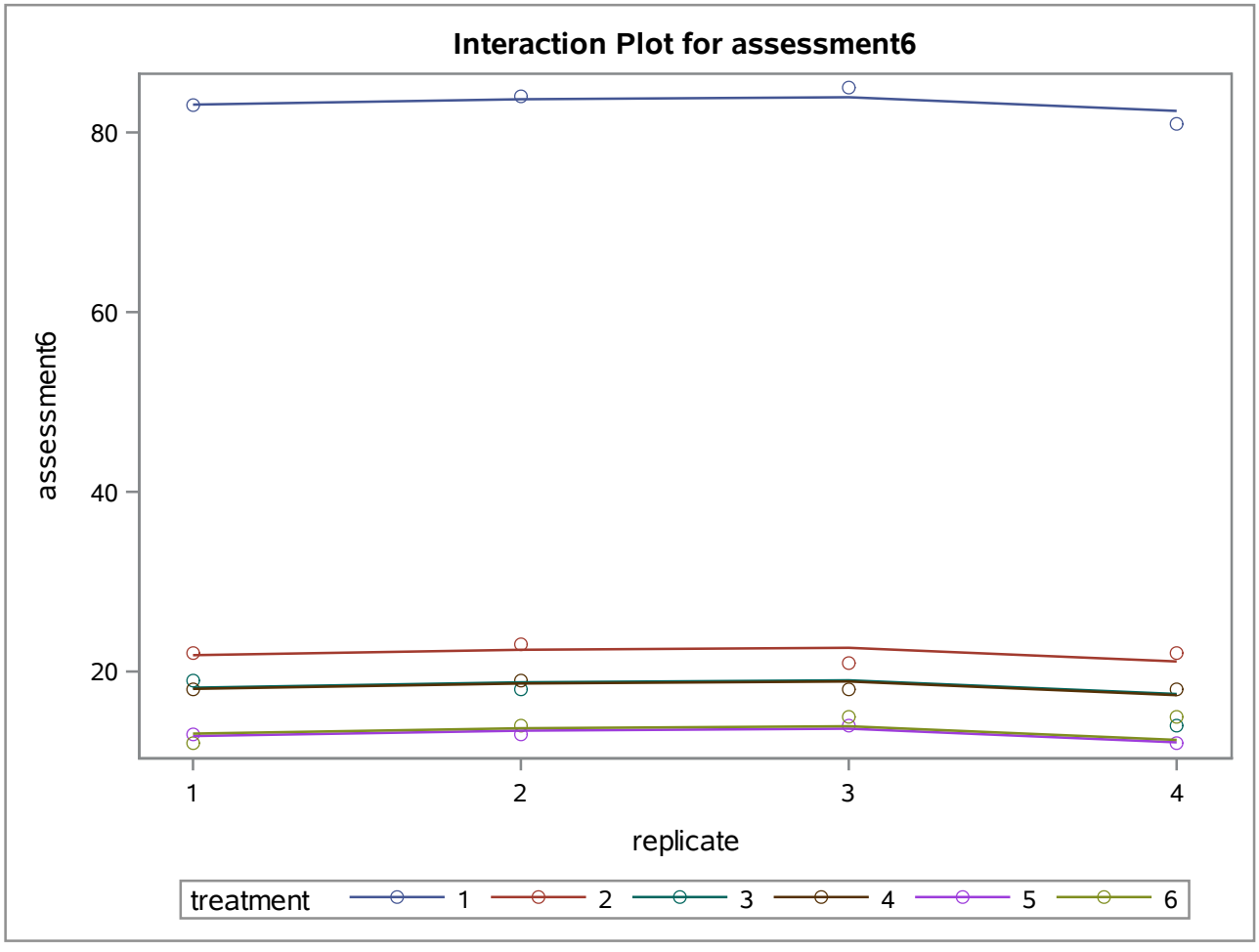
Dependent Variable: assessment6

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	11215.32562	1401.91570	1134.16	<.0001
Error	10	12.36086	1.23609		
Corrected Total	18	11227.68648			

R-Square	Coeff Var	Root MSE	assessment6 Mean
0.998899	4.008365	1.111794	27.73684

Source	DF	Type I SS	Mean Square	F Value	Pr > F
replicate	3	827.73438	275.91146	223.21	<.0001
treatment	5	10387.59124	2077.51825	1680.72	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
replicate	3	6.05582	2.01861	1.63	0.2435
treatment	5	10387.59124	2077.51825	1680.72	<.0001



The GLM Procedure

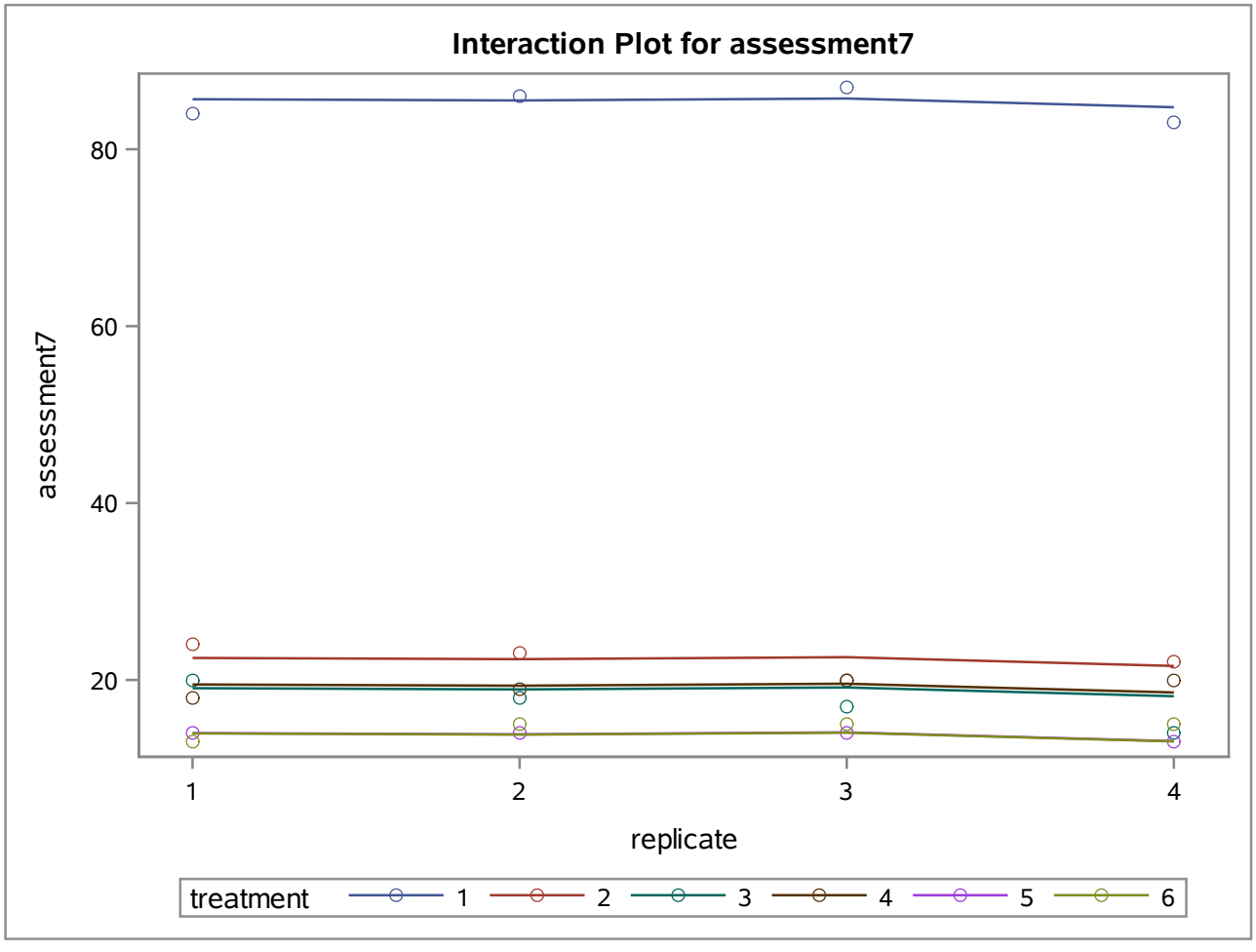
Dependent Variable: assessment7

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	11662.11894	1457.76487	647.46	<.0001
Error	10	22.51506	2.25151		
Corrected Total	18	11684.63400			

R-Square	Coeff Var	Root MSE	assessment7 Mean
0.998073	5.250375	1.500502	28.57895

Source	DF	Type I SS	Mean Square	F Value	Pr > F
replicate	3	814.03175	271.34392	120.52	<.0001
treatment	5	10848.08719	2169.61744	963.63	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
replicate	3	2.40161	0.80054	0.36	0.7863
treatment	5	10848.08719	2169.61744	963.63	<.0001



The GLM Procedure

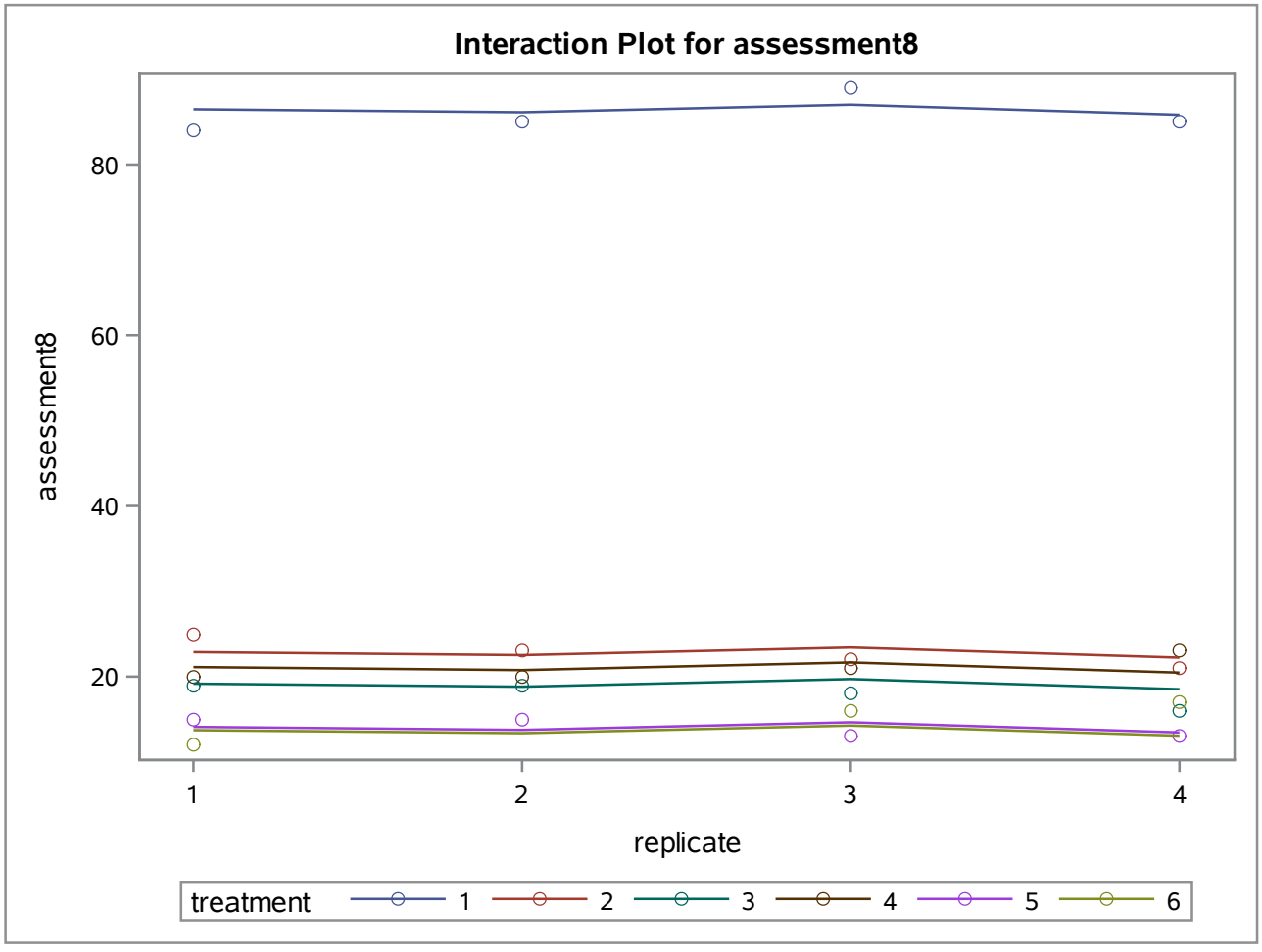
Dependent Variable: assessment8

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	11825.56260	1478.19532	433.18	<.0001
Error	10	34.12410	3.41241		
Corrected Total	18	11859.68670			

R-Square	Coeff Var	Root MSE	assessment8 Mean
0.997123	6.312616	1.847271	29.26316

Source	DF	Type I SS	Mean Square	F Value	Pr > F
replicate	3	859.88436	286.62812	84.00	<.0001
treatment	5	10965.67823	2193.13565	642.69	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
replicate	3	3.29258	1.09753	0.32	0.8097
treatment	5	10965.67823	2193.13565	642.69	<.0001



The GLM Procedure

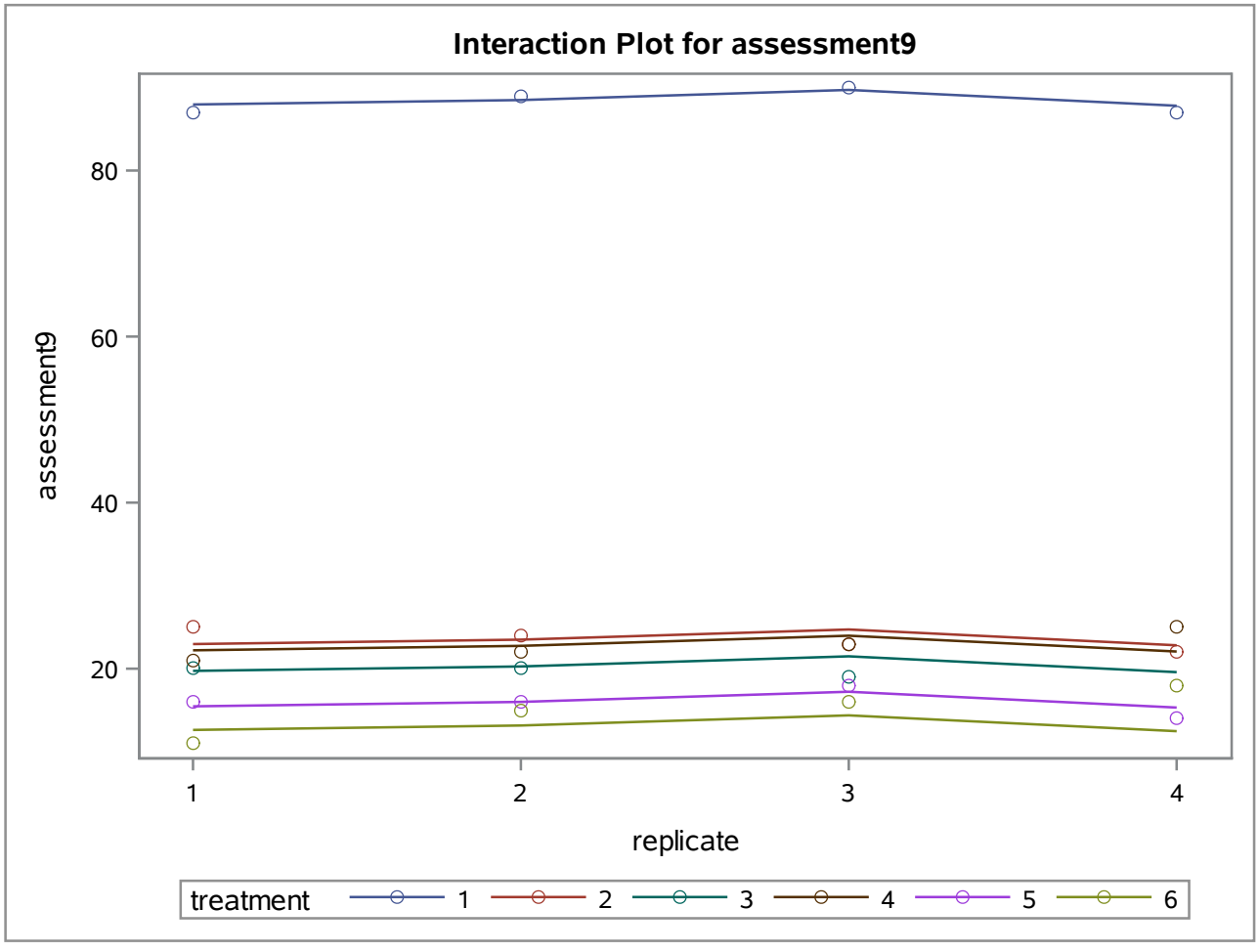
Dependent Variable: assessment9

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	12235.79164	1529.47396	534.19	<.0001
Error	10	28.63190	2.86319		
Corrected Total	18	12264.42354			

R-Square	Coeff Var	Root MSE	assessment9 Mean
0.997665	5.524025	1.692096	30.63158

Source	DF	Type I SS	Mean Square	F Value	Pr > F
replicate	3	1006.42124	335.47375	117.17	<.0001
treatment	5	11229.37041	2245.87408	784.40	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
replicate	3	10.28479	3.42826	1.20	0.3600
treatment	5	11229.37041	2245.87408	784.40	<.0001



The GLM Procedure

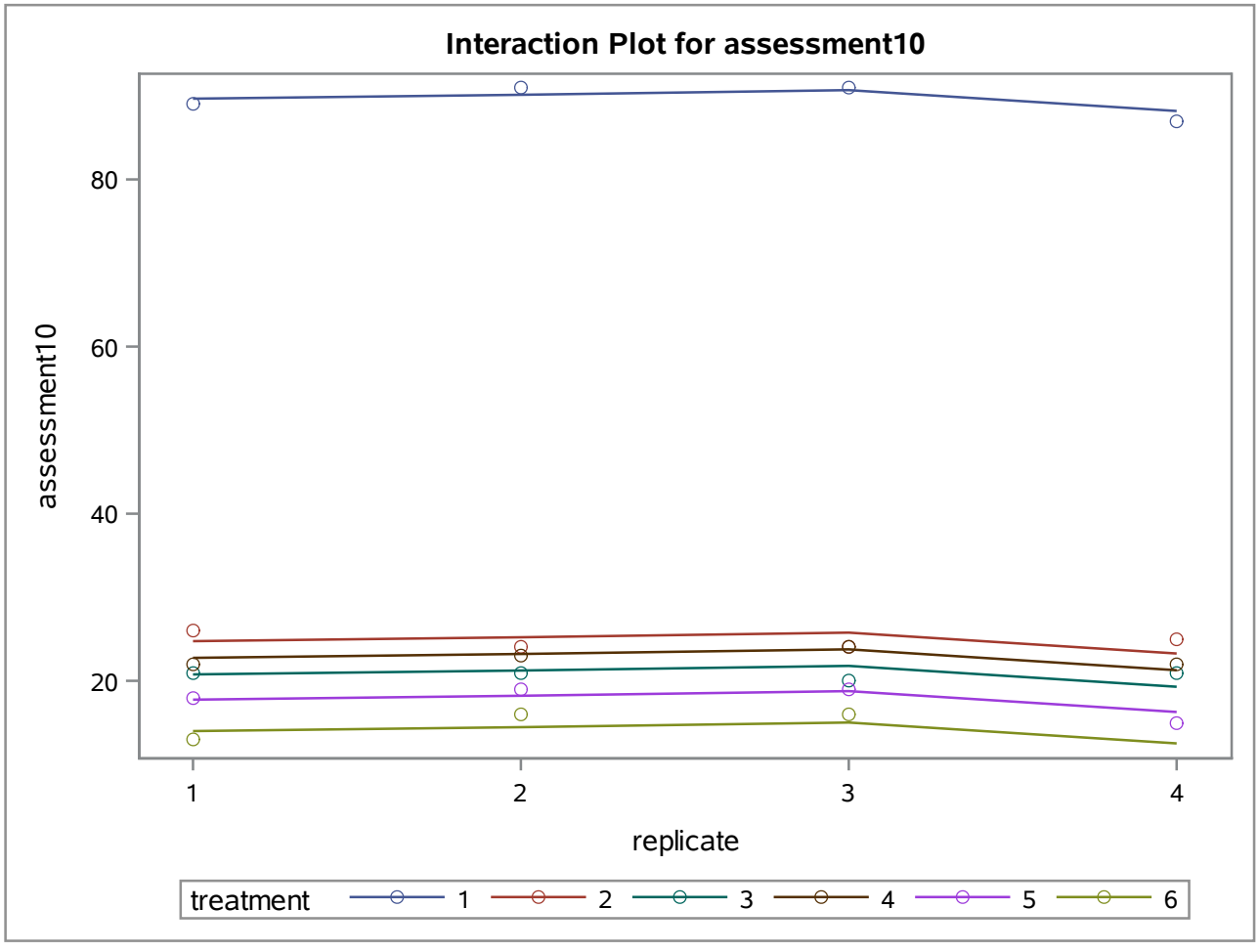
Dependent Variable: assessment10

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	12207.39130	1525.92391	895.91	<.0001
Error	10	17.03220	1.70322		
Corrected Total	18	12224.42350			

R-Square	Coeff Var	Root MSE	assessment10 Mean
0.998607	4.125860	1.305075	31.63158

Source	DF	Type I SS	Mean Square	F Value	Pr > F
replicate	3	931.67124	310.55708	182.34	<.0001
treatment	5	11275.72006	2255.14401	1324.05	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
replicate	3	14.38447	4.79482	2.82	0.0937
treatment	5	11275.72006	2255.14401	1324.05	<.0001



The GLM Procedure
Repeated Measures Analysis of Variance

Repeated Measures Level Information						
Dependent Variable	**assessment5**	**assessment6**	**assessment7**	**assessment8**	**assessment9**	**assessment10**
Level of time	1	2	3	4	5	6

Partial Correlation Coefficients from the Error SSCP Matrix / Prob > |r|						
DF = 10	**assessment5**	**assessment6**	**assessment7**	**assessment8**	**assessment9**	**assessment10**
assessment5	1.000000	0.643415 0.0327	0.425738 0.1917	-0.064333 0.8509	0.106052 0.7563	0.204685 0.5460
assessment6	0.643415 0.0327	1.000000	0.790807 0.0038	0.460602 0.1539	0.606131 0.0481	0.614977 0.0440
assessment7	0.425738 0.1917	0.790807 0.0038	1.000000	0.672299 0.0234	0.747817 0.0081	0.721493 0.0122
assessment8	-0.064333 0.8509	0.460602 0.1539	0.672299 0.0234	1.000000	0.767124 0.0059	0.436935 0.1790
assessment9	0.106052 0.7563	0.606131 0.0481	0.747817 0.0081	0.767124 0.0059	1.000000	0.605520 0.0484
assessment10	0.204685 0.5460	0.614977 0.0440	0.721493 0.0122	0.436935 0.1790	0.605520 0.0484	1.000000

time_N represents the contrast between the nth level of time and the last M Matrix Describing Transformed Variables						
	assessment5	**assessment6**	**assessment7**	**assessment8**	**assessment9**	**assessment10**
time_1	1.000000000	0.000000000	0.000000000	0.000000000	0.000000000	-1.000000000
time_2	0.000000000	1.000000000	0.000000000	0.000000000	0.000000000	-1.000000000
time_3	0.000000000	0.000000000	1.000000000	0.000000000	0.000000000	-1.000000000
time_4	0.000000000	0.000000000	0.000000000	1.000000000	0.000000000	-1.000000000
time_5	0.000000000	0.000000000	0.000000000	0.000000000	1.000000000	-1.000000000

E = Error SSCP Matrix time_N represents the contrast between the nth level of time and the last					
	time_1	**time_2**	**time_3**	**time_4**	**time_5**
time_1	22.4045	12.8030	6.7960	2.4564	2.7422
time_2	12.8030	11.5467	7.1729	7.0351	6.1402
time_3	6.7960	7.1729	11.2897	11.0047	8.5187
time_4	2.4564	7.0351	11.0047	30.0888	17.1051
time_5	2.7422	6.1402	8.5187	17.1051	18.9206

The GLM Procedure
Repeated Measures Analysis of Variance

Partial Correlation Coefficients from the Error SSCP Matrix of the Variables Defined by the Specified Transformation / Prob > |r|					
DF = 10	**time_1**	**time_2**	**time_3**	**time_4**	**time_5**
time_1	1.000000	0.796001 0.0034	0.427308 0.1899	0.094608 0.7820	0.133188 0.6962
time_2	0.796001 0.0034	1.000000	0.628237 0.0385	0.377429 0.2525	0.415418 0.2039
time_3	0.427308 0.1899	0.628237 0.0385	1.000000	0.597081 0.0524	0.582860 0.0599
time_4	0.094608 0.7820	0.377429 0.2525	0.597081 0.0524	1.000000	0.716898 0.0130
time_5	0.133188 0.6962	0.415418 0.2039	0.582860 0.0599	0.716898 0.0130	1.000000

Sphericity Tests				
Variables	**DF**	**Mauchly's Criterion**	**Chi-Square**	**Pr > ChiSq**
Transformed Variates	14	0.0371647	26.668397	0.0213
Orthogonal Components	14	0.1298644	16.534241	0.2818

MANOVA Test Criteria and Exact F Statistics for the Hypothesis of no time Effect
H = Type III SSCP Matrix for time
E = Error SSCP Matrix

S=1 M=1.5 N=2

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.03890530	29.64	5	6	0.0004
Pillai's Trace	0.96109470	29.64	5	6	0.0004
Hotelling-Lawley Trace	24.70343562	29.64	5	6	0.0004
Roy's Greatest Root	24.70343562	29.64	5	6	0.0004

MANOVA Test Criteria and F Approximations for the Hypothesis of no time*replicate Effect
H = Type III SSCP Matrix for time*replicate
E = Error SSCP Matrix

S=3 M=0.5 N=2

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.36500023	0.50	15	16.965	0.9091
Pillai's Trace	0.78107115	0.56	15	24	0.8745
Hotelling-Lawley Trace	1.35937506	0.50	15	7.2075	0.8770
Roy's Greatest Root	1.02723860	1.64	5	8	0.2533

NOTE: F Statistic for Roy's Greatest Root is an upper bound.

The GLM Procedure
Repeated Measures Analysis of Variance

MANOVA Test Criteria and F Approximations for the Hypothesis of no time*treatment Effect
H = Type III SSCP Matrix for time*treatment
E = Error SSCP Matrix

S=5 M=-0.5 N=2

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.05022491	1.18	25	23.791	0.3464
Pillai's Trace	1.68271771	1.01	25	50	0.4681
Hotelling-Lawley Trace	7.65821738	1.65	25	7.8028	0.2401
Roy's Greatest Root	6.45367405	12.91	5	10	0.0004

NOTE: F Statistic for Roy's Greatest Root is an upper bound.

The GLM Procedure
Repeated Measures Analysis of Variance
Tests of Hypotheses for Between Subjects Effects

Source	DF	Type III SS	Mean Square	F Value	Pr > F
replicate	3	29.77748	9.92583	1.34	0.3175
treatment	5	65053.16568	13010.63314	1749.97	<.0001
Error	10	74.34755	7.43476		

The GLM Procedure
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source	DF	Type III SS	Mean Square	F Value	Pr > F	Adj Pr > F	
						G - G	H-F-L
time	5	295.1775584	59.0355117	57.56	<.0001	<.0001	<.0001
time*replicate	15	10.3411623	0.6894108	0.67	0.7985	0.7076	0.7518
time*treatment	25	56.7161772	2.2686471	2.21	0.0085	0.0413	0.0212
Error(time)	50	51.2838544	1.0256771				

Greenhouse-Geisser Epsilon	0.5191
Huynh-Feldt-Lecoutre Epsilon	0.7171

The GLM Procedure
Repeated Measures Analysis of Variance
Analysis of Variance of Contrast Variables

time_N represents the contrast between the nth level of time and the last

Contrast Variable: time_1

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Mean	1	460.7906729	460.7906729	205.67	<.0001
replicate	3	6.3455341	2.1151780	0.94	0.4556
treatment	5	37.9455432	7.5891086	3.39	0.0476
Error	10	22.4044729	2.2404473		

Contrast Variable: time_2

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Mean	1	215.1402726	215.1402726	186.32	<.0001
replicate	3	2.1199360	0.7066453	0.61	0.6225
treatment	5	46.8532816	9.3706563	8.12	0.0027
Error	10	11.5467344	1.1546734		

Contrast Variable: time_3

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Mean	1	126.1537887	126.1537887	111.74	<.0001
replicate	3	5.8769431	1.9589810	1.74	0.2228
treatment	5	24.6602874	4.9320575	4.37	0.0228
Error	10	11.2897229	1.1289723		

Contrast Variable: time_4

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Mean	1	77.15905241	77.15905241	25.64	0.0005
replicate	3	6.57787856	2.19262619	0.73	0.5579
treatment	5	19.46121869	3.89224374	1.29	0.3399
Error	10	30.08879311	3.00887931		

Contrast Variable: time_5

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Mean	1	14.14465849	14.14465849	7.48	0.0210
replicate	3	4.57943766	1.52647922	0.81	0.5184
treatment	5	7.02944316	1.40588863	0.74	0.6088
Error	10	18.92057034	1.89205703		

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

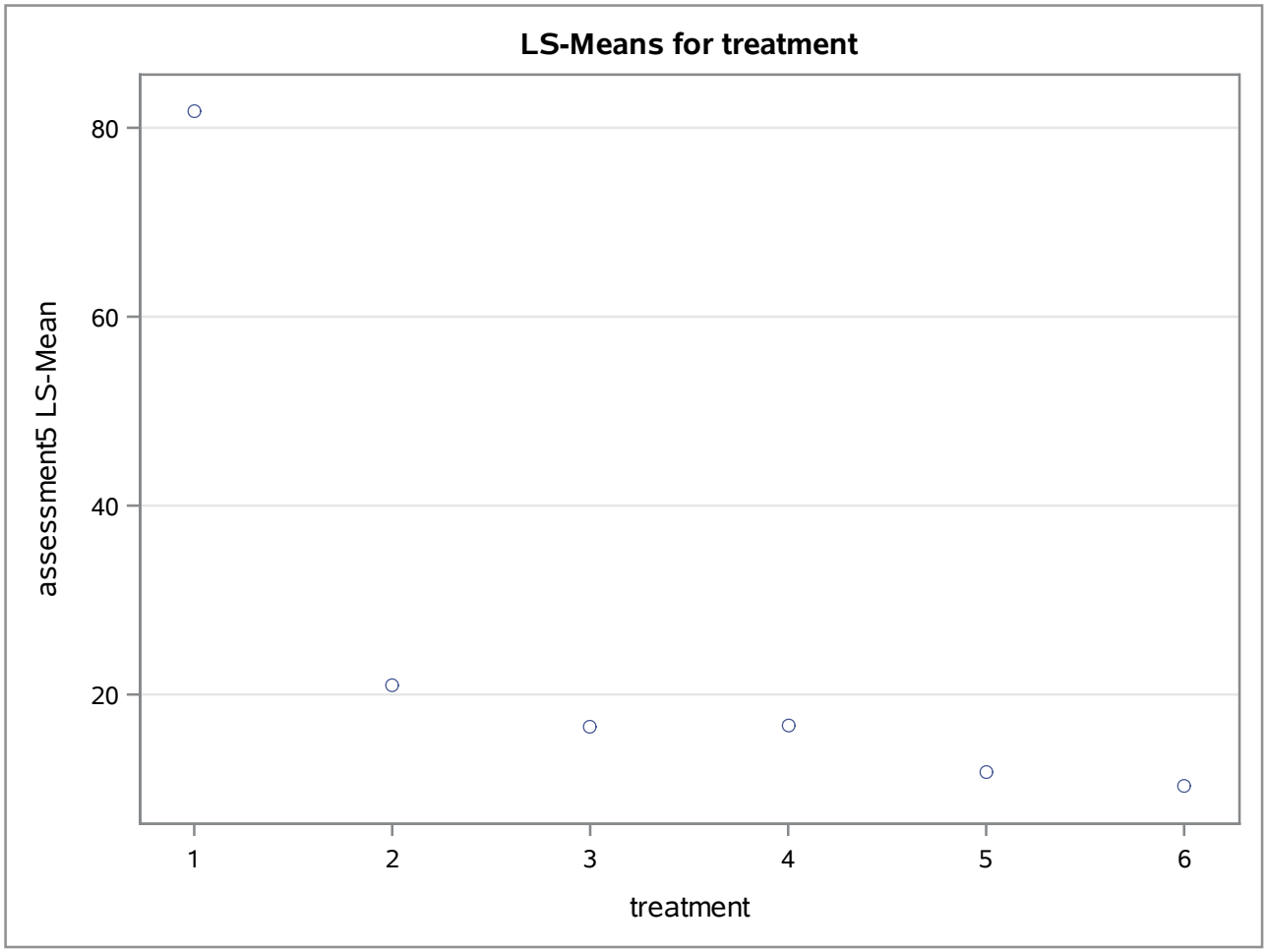
treatment	assessment5 LSMEAN	Standard Error	Pr > |t|	LSMEAN Number
1	81.7710360	0.6220370	<.0001	1
2	21.0000020	0.5236241	<.0001	2
3	16.6339584	0.7840303	<.0001	3
4	16.7500020	0.5236241	<.0001	4
5	11.7500010	0.5236241	<.0001	5
6	10.3006241	0.7840303	<.0001	6

Least Squares Means for effect treatment
Pr > |t| for H0: LSMean(i)=LSMean(j)

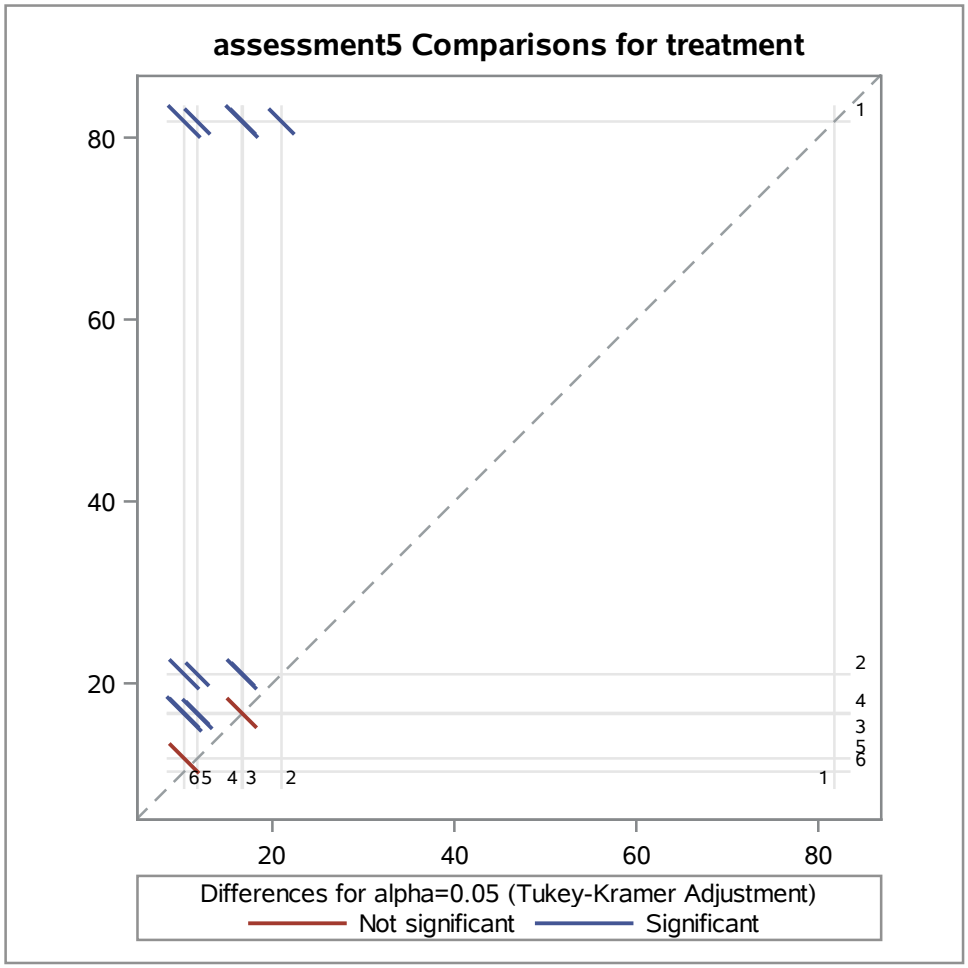
Dependent Variable: assessment5

i/j	1	2	3	4	5	6
1		<.0001	<.0001	<.0001	<.0001	<.0001
2	<.0001		0.0088	0.0019	<.0001	<.0001
3	<.0001	0.0088		1.0000	0.0040	0.0019
4	<.0001	0.0019	1.0000		0.0005	0.0005
5	<.0001	<.0001	0.0040	0.0005		0.6512
6	<.0001	<.0001	0.0019	0.0005	0.6512	

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



Tukey-Kramer Comparison Lines for Least Squares Means of treatment			
LS-means with the same letter are not significantly different.			
	assessment5 LSMEAN	treatment	LSMEAN Number
A	81.77104	**1**	1
B	21.00000	**2**	2
C	16.75000	**4**	4
C			
C	16.63396	**3**	3
D	11.75000	**5**	5
D			
D	10.30062	**6**	6

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

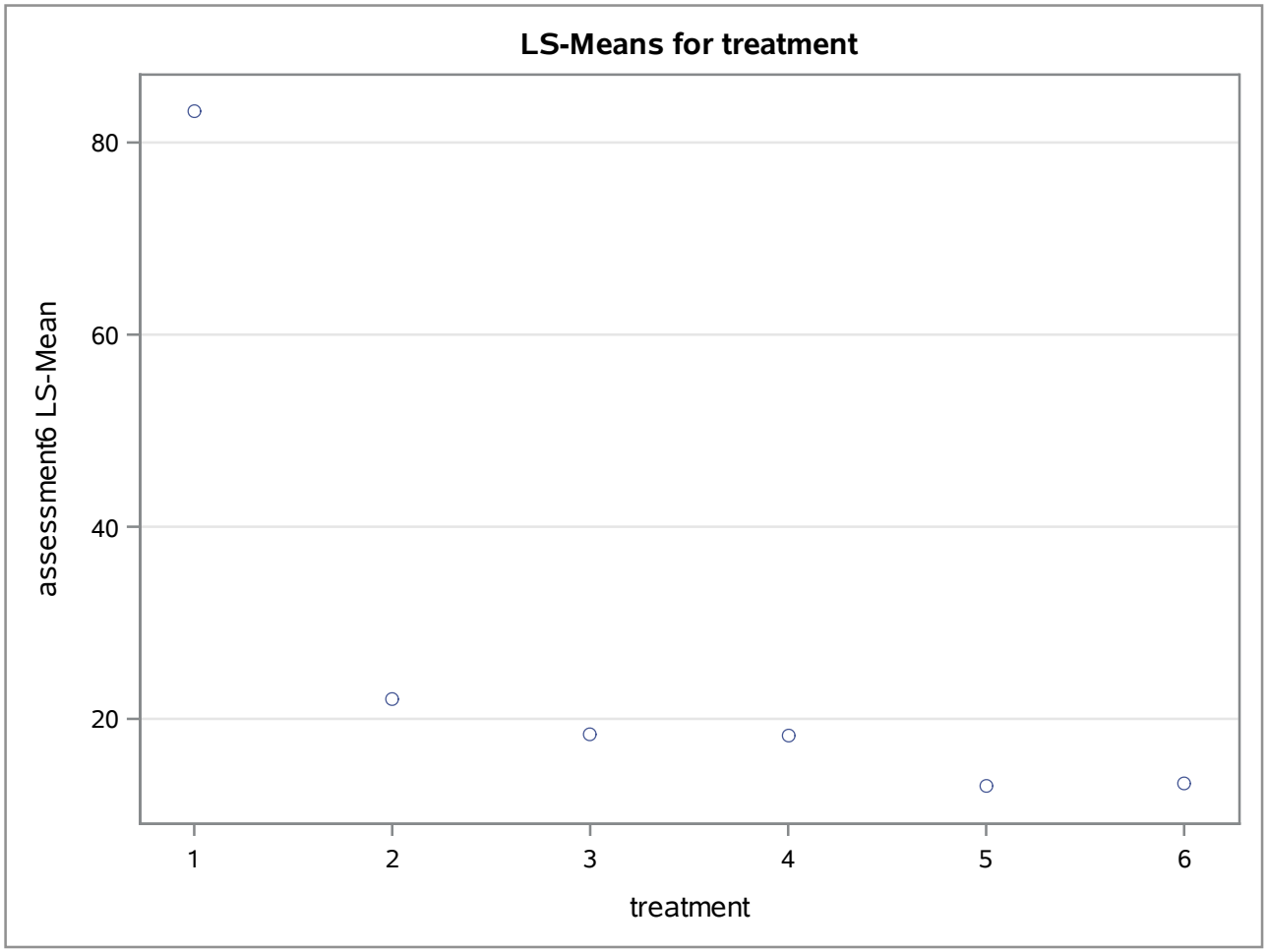
treatment	assessment6 LSMEAN	Standard Error	Pr > |t|	LSMEAN Number
1	83.2733728	0.6603754	<.0001	1
2	22.0000020	0.5558969	<.0001	2
3	18.3803240	0.8323528	<.0001	3
4	18.2500020	0.5558969	<.0001	4
5	13.0000010	0.5558969	<.0001	5
6	13.2692122	0.8323528	<.0001	6

Least Squares Means for effect treatment
Pr > |t| for H0: LSMean(i)=LSMean(j)

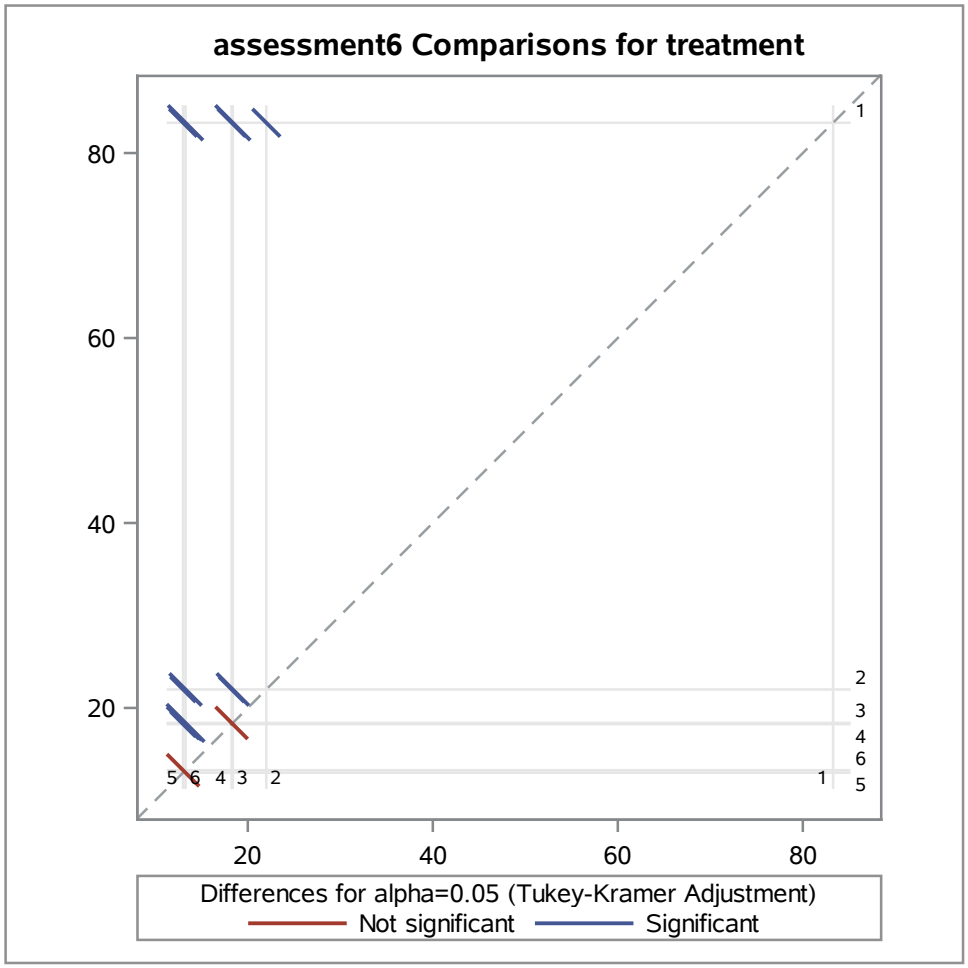
Dependent Variable: assessment6

i/j	1	2	3	4	5	6
1		<.0001	<.0001	<.0001	<.0001	<.0001
2	<.0001		0.0402	0.0072	<.0001	<.0001
3	<.0001	0.0402		1.0000	0.0031	0.0131
4	<.0001	0.0072	1.0000		0.0006	0.0054
5	<.0001	<.0001	0.0031	0.0006		0.9997
6	<.0001	<.0001	0.0131	0.0054	0.9997	

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



Tukey-Kramer Comparison Lines for Least Squares Means of treatment			
LS-means with the same letter are not significantly different.			
	assessment6 LSMEAN	treatment	LSMEAN Number
A	83.27337	**1**	1
B	22.00000	**2**	2
C	18.38032	**3**	3
C			
C	18.25000	**4**	4
D	13.26921	**6**	6
D			
D	13.00000	**5**	5

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

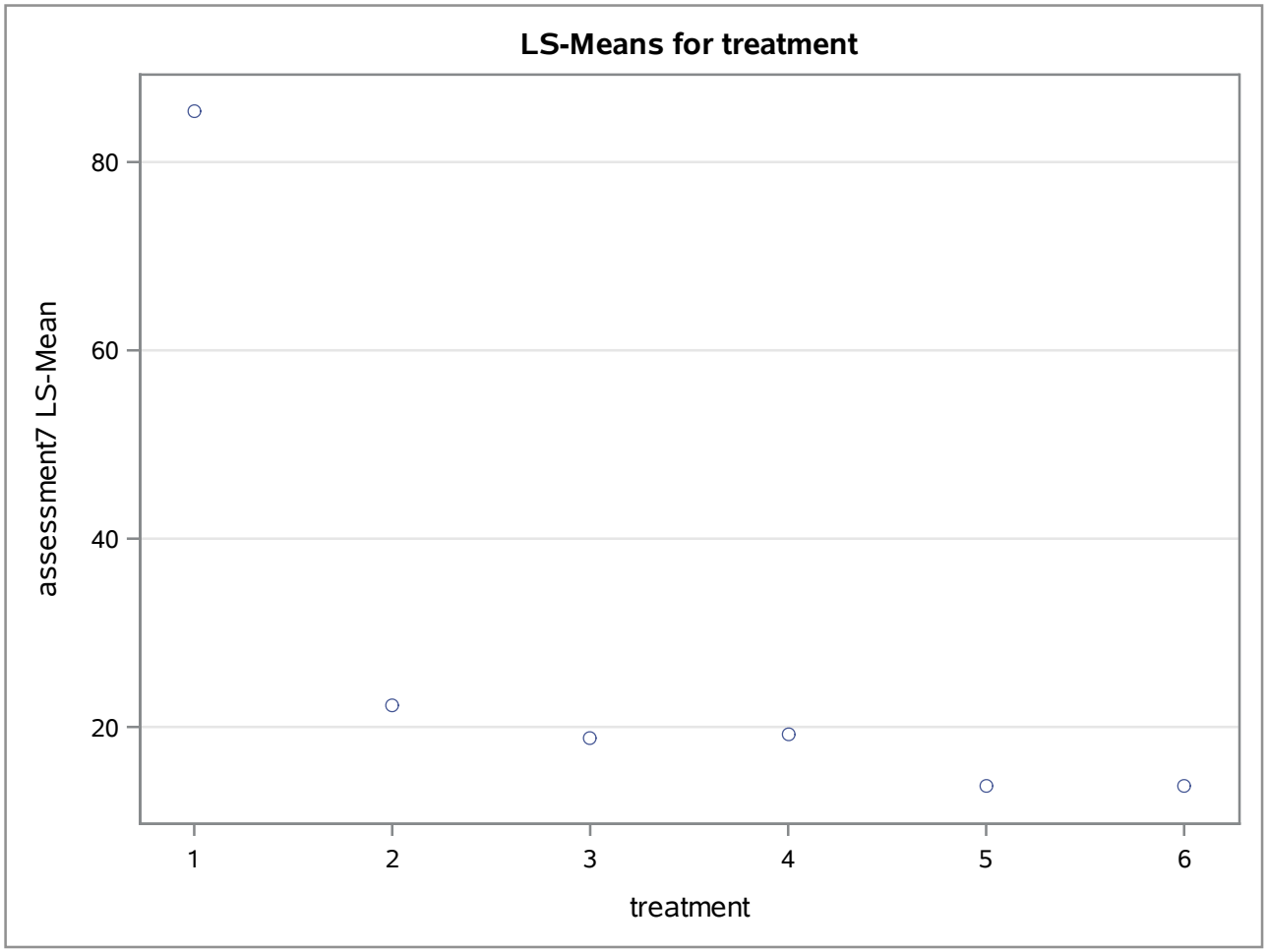
treatment	assessment7 LSMEAN	Standard Error	Pr > |t|	LSMEAN Number
1	85.4135600	0.8912574	<.0001	1
2	22.2500020	0.7502510	<.0001	2
3	18.8289221	1.1233621	<.0001	3
4	19.2500020	0.7502510	<.0001	4
5	13.7500010	0.7502510	<.0001	5
6	13.7178104	1.1233621	<.0001	6

Least Squares Means for effect treatment
Pr > |t| for H0: LSMean(i)=LSMean(j)

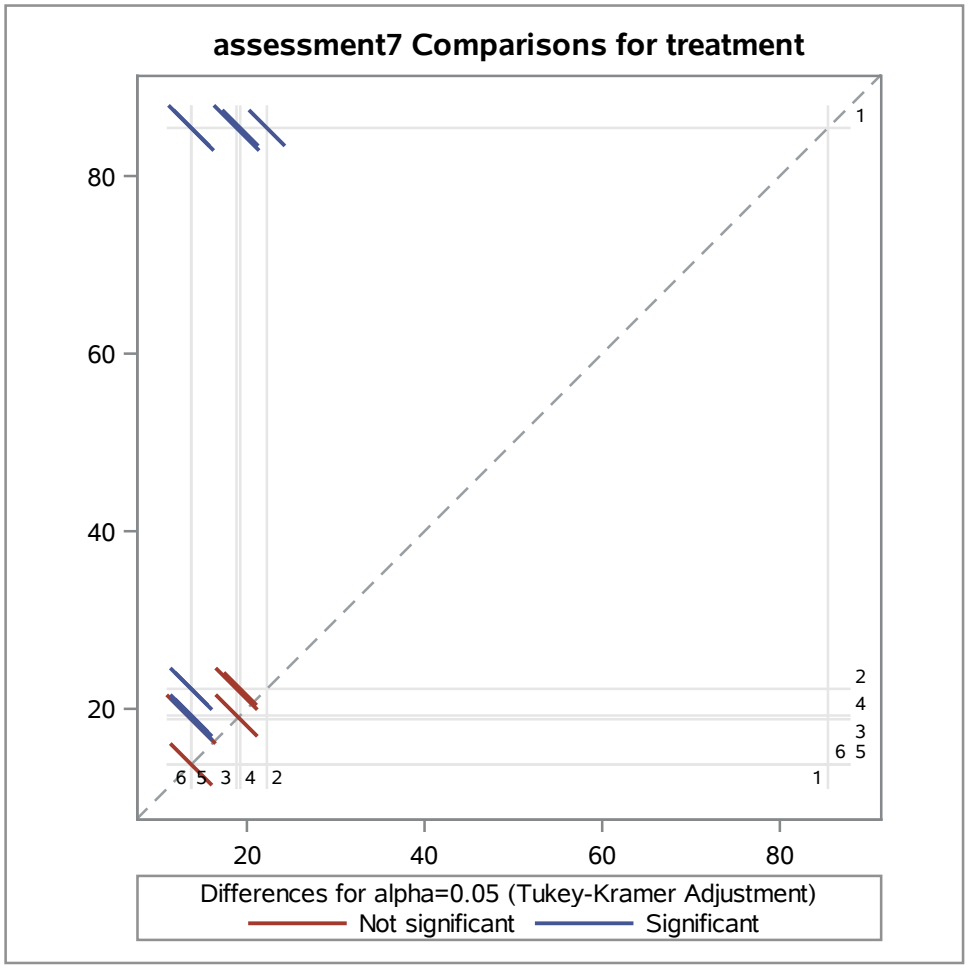
Dependent Variable: assessment7

i/j	1	2	3	4	5	6
1		<.0001	<.0001	<.0001	<.0001	<.0001
2	<.0001		0.2018	0.1320	0.0001	0.0009
3	<.0001	0.2018		0.9995	0.0323	0.0722
4	<.0001	0.1320	0.9995		0.0040	0.0195
5	<.0001	0.0001	0.0323	0.0040		1.0000
6	<.0001	0.0009	0.0722	0.0195	1.0000	

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



Tukey-Kramer Comparison Lines for Least Squares Means of treatment				
LS-means with the same letter are not significantly different.				
		assessment7 LSMEAN	treatment	LSMEAN Number
	A	85.41356	**1**	1
	B	22.25000	**2**	2
	B			
	B	19.25000	**4**	4
	B			
C	B	18.82892	**3**	3
C				
C		13.75000	**5**	5
C				
C		13.71781	**6**	6
The LINES display does not reflect all significant comparisons. The following additional pairs are significantly different: (3,5)				

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

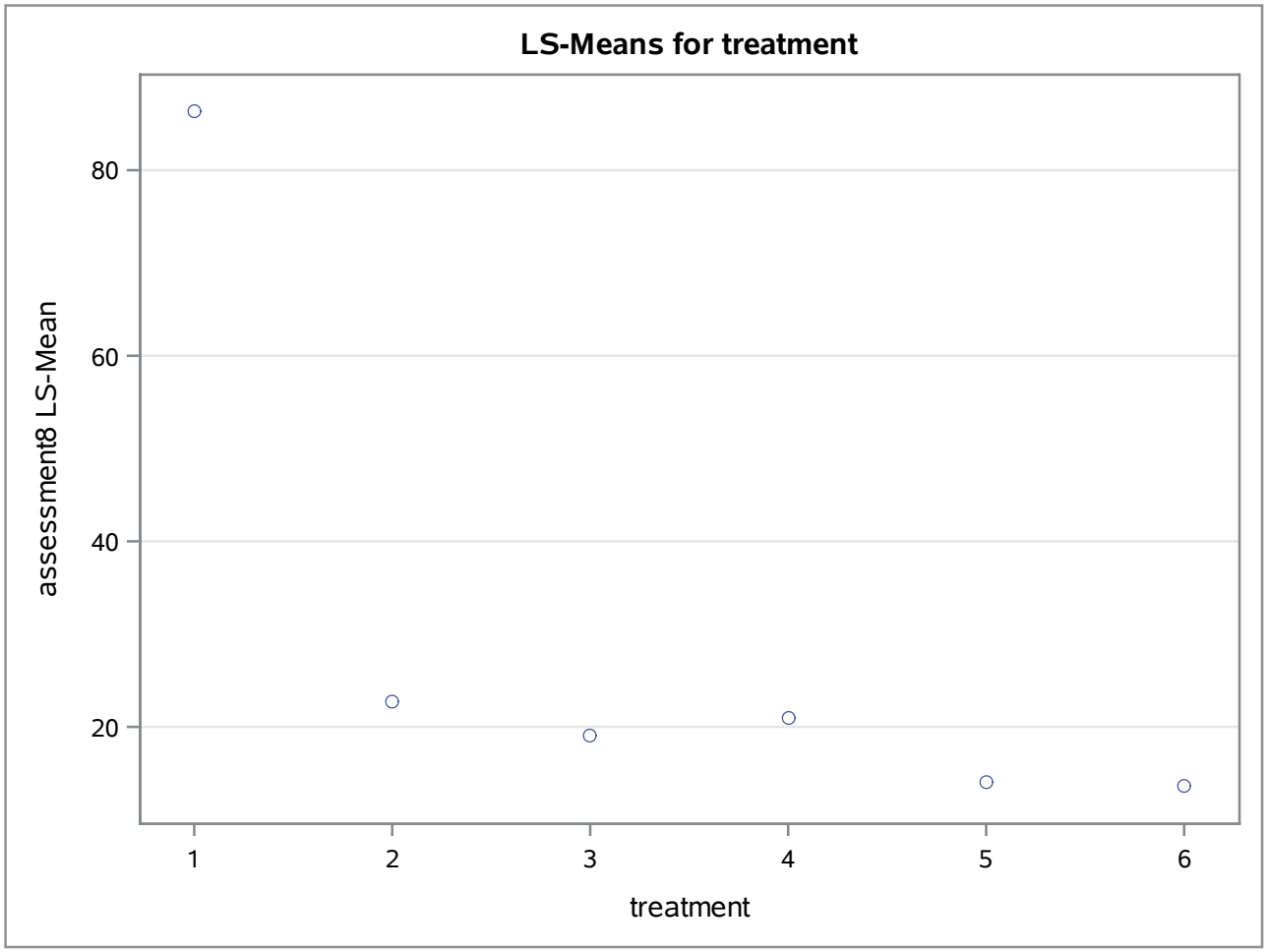
treatment	assessment8 LSMEAN	Standard Error	Pr > |t|	LSMEAN Number
1	86.3715044	1.0972288	<.0001	1
2	22.7500022	0.9236355	<.0001	2
3	19.0610091	1.3829733	<.0001	3
4	21.0000020	0.9236355	<.0001	4
5	14.0000015	0.9236355	<.0001	5
6	13.6165643	1.3829733	<.0001	6

Least Squares Means for effect treatment
Pr > |t| for H0: LSMean(i)=LSMean(j)

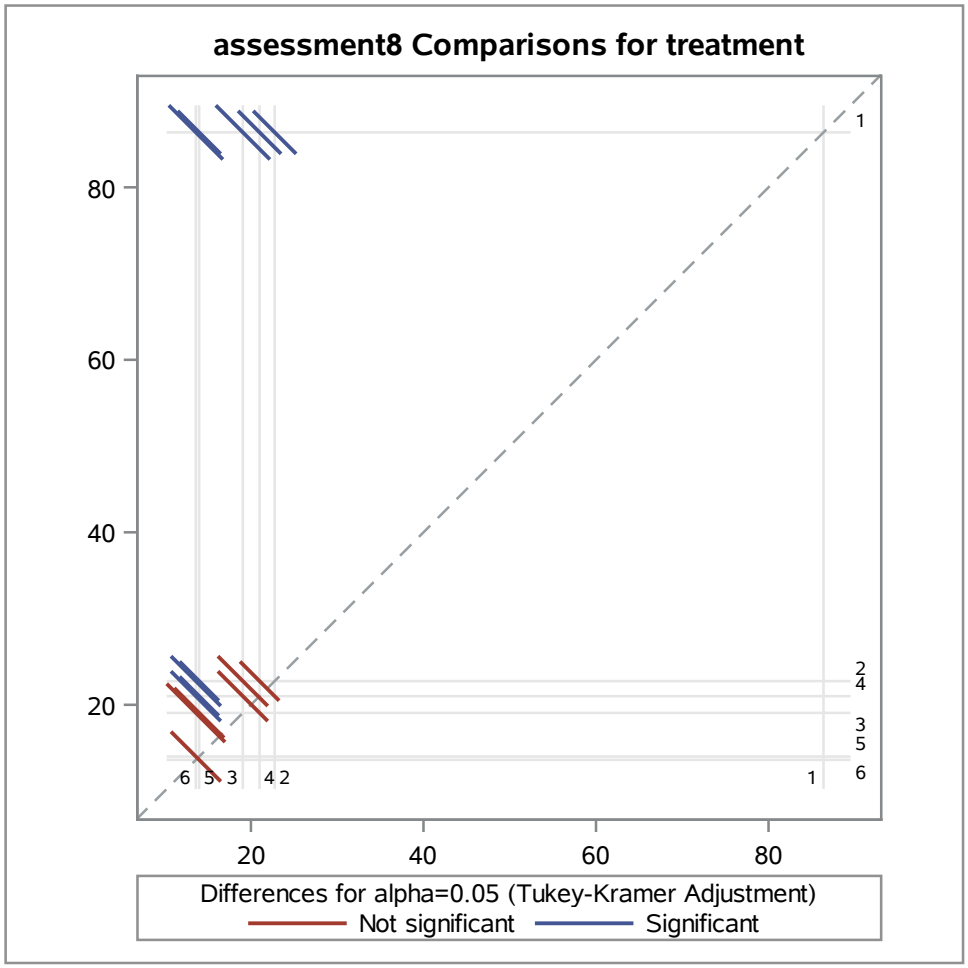
Dependent Variable: assessment8

i/j	1	2	3	4	5	6
1		<.0001	<.0001	<.0001	<.0001	<.0001
2	<.0001		0.3084	0.7588	0.0006	0.0026
3	<.0001	0.3084		0.8429	0.0958	0.1383
4	<.0001	0.7588	0.8429		0.0031	0.0117
5	<.0001	0.0006	0.0958	0.0031		0.9999
6	<.0001	0.0026	0.1383	0.0117	0.9999	

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



Tukey-Kramer Comparison Lines for Least Squares Means of treatment				
LS-means with the same letter are not significantly different.				
		assessment8 LSMEAN	treatment	LSMEAN Number
	A	86.37150	**1**	1
	B	22.75000	**2**	2
	B			
	B	21.00000	**4**	4
	B			
C	B	19.06101	**3**	3
C				
C		14.00000	**5**	5
C				
C		13.61656	**6**	6

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

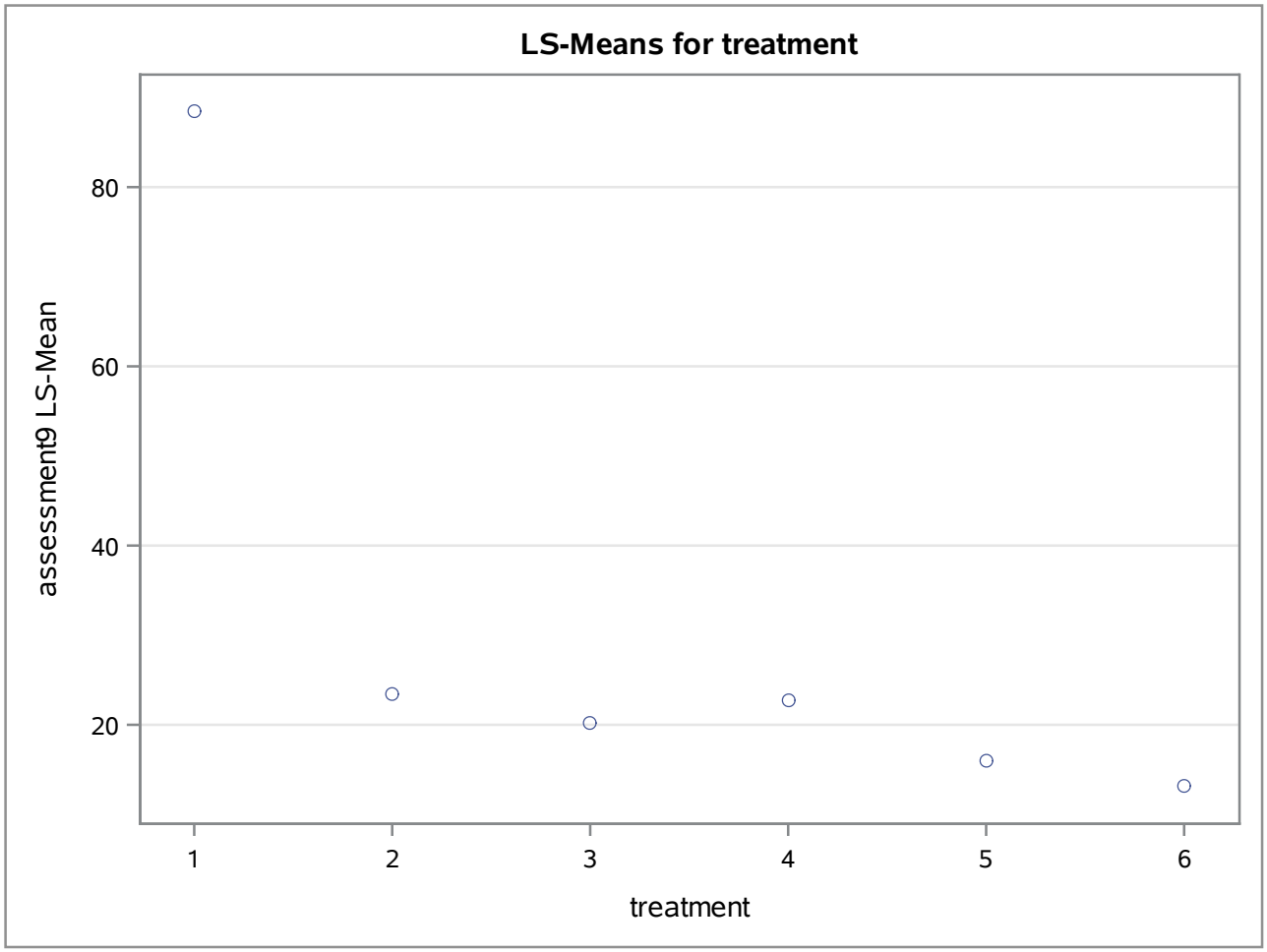
treatment	assessment9 LSMEAN	Standard Error	Pr > |t|	LSMEAN Number
1	88.4883268	1.0050592	<.0001	1
2	23.5000022	0.8460481	<.0001	2
3	20.2681744	1.2668005	<.0001	3
4	22.7500022	0.8460481	<.0001	4
5	16.0000017	0.8460481	<.0001	5
6	13.1570627	1.2668005	<.0001	6

Least Squares Means for effect treatment
Pr > |t| for H0: LSMean(i)=LSMean(j)

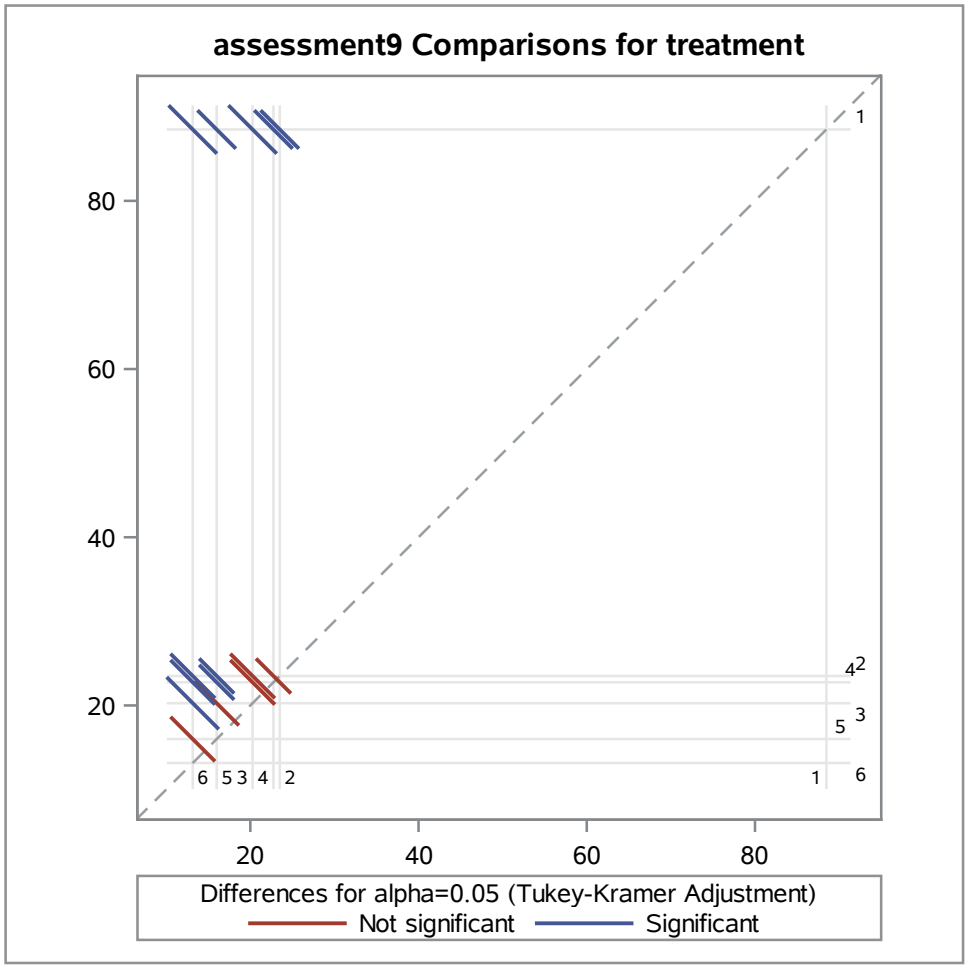
Dependent Variable: assessment9

i/j	1	2	3	4	5	6
1		<.0001	<.0001	<.0001	<.0001	<.0001
2	<.0001		0.3487	0.9862	0.0009	0.0005
3	<.0001	0.3487		0.5997	0.1371	0.0229
4	<.0001	0.9862	0.5997		0.0021	0.0009
5	<.0001	0.0009	0.1371	0.0021		0.4709
6	<.0001	0.0005	0.0229	0.0009	0.4709	

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



Tukey-Kramer Comparison Lines for Least Squares Means of treatment				
LS-means with the same letter are not significantly different.				
		assessment9 LSMEAN	treatment	LSMEAN Number
	A	88.48833	**1**	1
	B	23.50000	**2**	2
	B			
	B	22.75000	**4**	4
	B			
C	B	20.26817	**3**	3
C				
C	D	16.00000	**5**	5
	D			
	D	13.15706	**6**	6

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

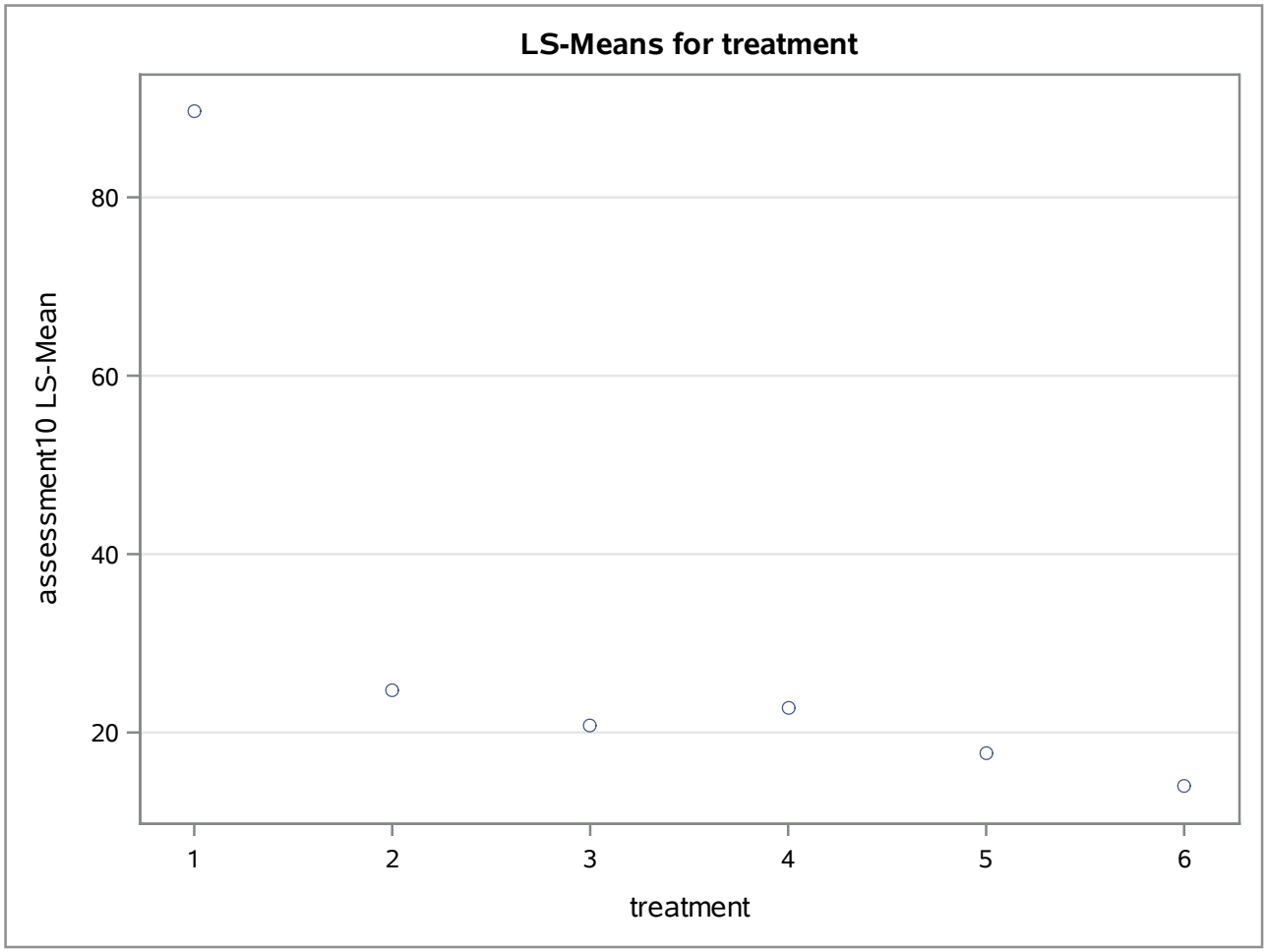
treatment	assessment10 LSMEAN	Standard Error	Pr > |t|	LSMEAN Number
1	89.6658968	0.7751789	<.0001	1
2	24.7500025	0.6525373	<.0001	2
3	20.7697321	0.9770539	<.0001	3
4	22.7500020	0.6525373	<.0001	4
5	17.7500020	0.6525373	<.0001	5
6	13.9919537	0.9770539	<.0001	6

Least Squares Means for effect treatment
Pr > |t| for H0: LSMean(i)=LSMean(j)

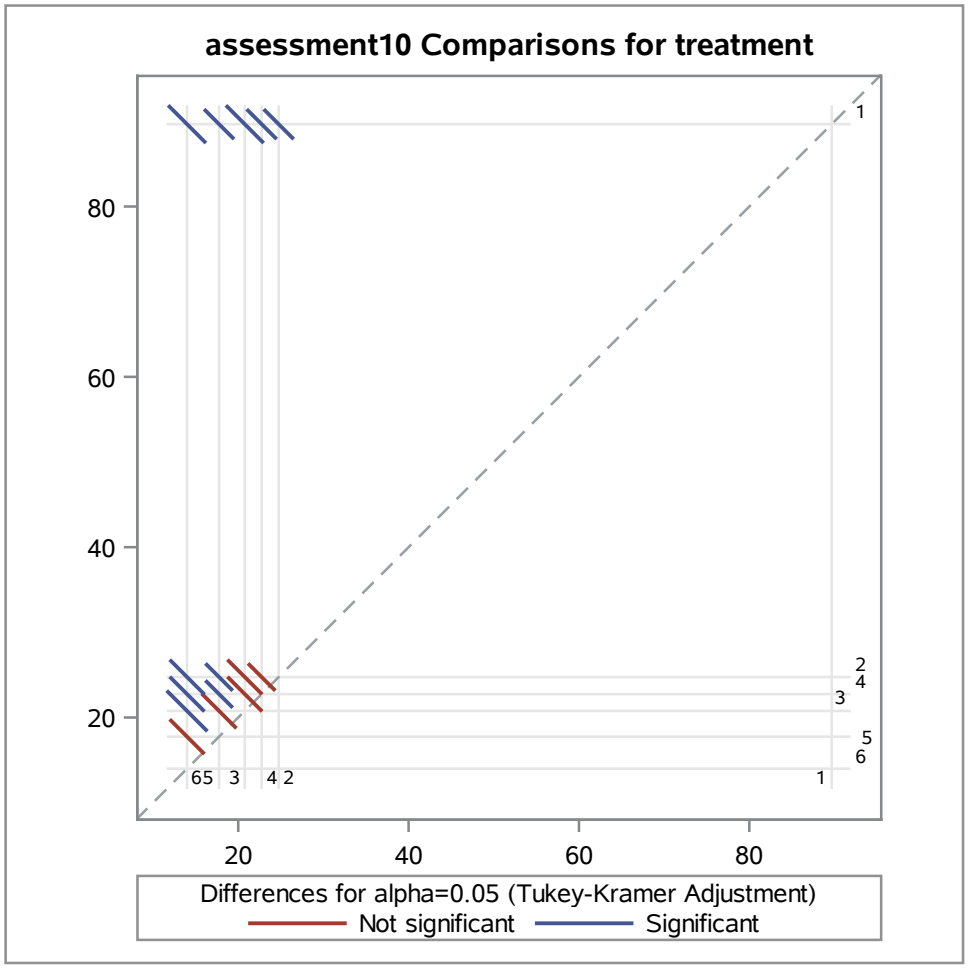
Dependent Variable: assessment10

i/j	1	2	3	4	5	6
1		<.0001	<.0001	<.0001	<.0001	<.0001
2	<.0001		0.0570	0.3292	0.0002	<.0001
3	<.0001	0.0570		0.5684	0.1914	0.0058
4	<.0001	0.3292	0.5684		0.0029	0.0002
5	<.0001	0.0002	0.1914	0.0029		0.0759
6	<.0001	<.0001	0.0058	0.0002	0.0759	

The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



The GLM Procedure
Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



Tukey-Kramer Comparison Lines for Least Squares Means of treatment				
LS-means with the same letter are not significantly different.				
		assessment10 LSMEAN	treatment	LSMEAN Number
	A	89.66590	**1**	1
	B	24.75000	**2**	2
	B			
	B	22.75000	**4**	4
	B			
C	B	20.76973	**3**	3
C				
C	D	17.75000	**5**	5
	D			
	D	13.99195	**6**	6