

[illegible]

**The GLM Procedure**

Class Level Information		
Class	Levels	Values
A	2	-1 1
B	2	-1 1
C	2	-1 1
D	2	-1 1
AB	2	-1 1
AC	2	-1 1
AD	2	-1 1
BC	2	-1 1
BD	2	-1 1
CD	2	-1 1
ABC	2	-1 1
ABD	2	-1 1
ACD	2	-1 1
BCD	2	-1 1
ABCD	2	-1 1

Number of Observations Read	32
Number of Observations Used	32

## The GLM Procedure

**Dependent Variable: y**

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	1504.968750	100.331250	13.10	<.0001
Error	16	122.500000	7.656250		
Corrected Total	31	1627.468750			

R-Square	Coeff Var	Root MSE	y Mean
0.924730	3.342536	2.766993	82.78125

Source	DF	Type I SS	Mean Square	F Value	Pr > F
A	1	657.0312500	657.0312500	85.82	<.0001
B	1	13.7812500	13.7812500	1.80	0.1984
C	1	57.7812500	57.7812500	7.55	0.0143
D	1	124.0312500	124.0312500	16.20	0.0010
AB	1	132.0312500	132.0312500	17.24	0.0007
AC	1	3.7812500	3.7812500	0.49	0.4923
AD	1	38.2812500	38.2812500	5.00	0.0399
BC	1	2.5312500	2.5312500	0.33	0.5733
BD	1	0.2812500	0.2812500	0.04	0.8504
CD	1	22.7812500	22.7812500	2.98	0.1038
ABC	1	215.2812500	215.2812500	28.12	<.0001
ABD	1	175.7812500	175.7812500	22.96	0.0002
ACD	1	7.0312500	7.0312500	0.92	0.3522
BCD	1	7.0312500	7.0312500	0.92	0.3522
ABCD	1	47.5312500	47.5312500	6.21	0.0241

Source	DF	Type III SS	Mean Square	F Value	Pr > F
A	1	657.0312500	657.0312500	85.82	<.0001
B	1	13.7812500	13.7812500	1.80	0.1984
C	1	57.7812500	57.7812500	7.55	0.0143
D	1	124.0312500	124.0312500	16.20	0.0010
AB	1	132.0312500	132.0312500	17.24	0.0007
AC	1	3.7812500	3.7812500	0.49	0.4923
AD	1	38.2812500	38.2812500	5.00	0.0399
BC	1	2.5312500	2.5312500	0.33	0.5733
BD	1	0.2812500	0.2812500	0.04	0.8504
CD	1	22.7812500	22.7812500	2.98	0.1038

**The GLM Procedure****Dependent Variable: y**

Source	DF	Type III SS	Mean Square	F Value	Pr > F
ABC	1	215.2812500	215.2812500	28.12	<.0001
ABD	1	175.7812500	175.7812500	22.96	0.0002
ACD	1	7.0312500	7.0312500	0.92	0.3522
BCD	1	7.0312500	7.0312500	0.92	0.3522
ABCD	1	47.5312500	47.5312500	6.21	0.0241

**The GLM Procedure****Dependent Variable: y**

Parameter	Estimate	Standard Error	t Value	Pr >  t
A	9.06250000	0.97827974	9.26	<.0001
B	1.31250000	0.97827974	1.34	0.1984
C	2.68750000	0.97827974	2.75	0.0143
D	-3.93750000	0.97827974	-4.02	0.0010
AC	-0.68750000	0.97827974	-0.70	0.4923
AB	-4.06250000	0.97827974	-4.15	0.0007
AD	2.18750000	0.97827974	2.24	0.0399
BC	0.56250000	0.97827974	0.57	0.5733
BD	0.18750000	0.97827974	0.19	0.8504
CD	-1.68750000	0.97827974	-1.72	0.1038
ABC	5.18750000	0.97827974	5.30	<.0001
ABD	-4.68750000	0.97827974	-4.79	0.0002
BCD	0.93750000	0.97827974	0.96	0.3522
ACD	0.93750000	0.97827974	0.96	0.3522
ABCD	-2.43750000	0.97827974	-2.49	0.0241

**The GLM Procedure**

Class Level Information		
Class	Levels	Values
A	2	-1 1
B	2	-1 1
C	2	-1 1
D	2	-1 1
AB	2	-1 1
AC	2	-1 1
AD	2	-1 1

Number of Observations Read	8
Number of Observations Used	8

**The GLM Procedure****Dependent Variable: y**

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	324.0000000	81.0000000	1.96	0.3036
Error	3	124.0000000	41.3333333		
Corrected Total	7	448.0000000			

R-Square	Coeff Var	Root MSE	y Mean
0.723214	7.563648	6.429101	85.00000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
A	1	288.0000000	288.0000000	6.97	0.0777
B	1	2.0000000	2.0000000	0.05	0.8400
C	1	32.0000000	32.0000000	0.77	0.4437
D	1	2.0000000	2.0000000	0.05	0.8400

Source	DF	Type III SS	Mean Square	F Value	Pr > F
A	1	288.0000000	288.0000000	6.97	0.0777
B	1	2.0000000	2.0000000	0.05	0.8400
C	1	32.0000000	32.0000000	0.77	0.4437
D	1	2.0000000	2.0000000	0.05	0.8400

**The GLM Procedure****Dependent Variable: y**

Parameter	Estimate	Standard Error	t Value	Pr >  t
A	-12.0000000	4.54606057	-2.64	0.0777
B	-1.0000000	4.54606057	-0.22	0.8400
C	4.0000000	4.54606057	0.88	0.4437
D	-1.0000000	4.54606057	-0.22	0.8400



**The GLM Procedure**

Class Level Information		
Class	Levels	Values
A	2	-1 1
B	2	-1 1
C	2	-1 1
D	2	-1 1
E	2	-1 1
AC	2	-1 1
DC	2	-1 1

Number of Observations Read	8
Number of Observations Used	8

**The GLM Procedure****Dependent Variable: y**

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	2859.000000	714.750000	306.32	0.0003
Error	3	7.000000	2.333333		
Corrected Total	7	2866.000000			

R-Square	Coeff Var	Root MSE	y Mean
0.997558	4.927501	1.527525	31.00000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
A	1	220.500000	220.500000	94.50	0.0023
B	1	2312.000000	2312.000000	990.86	<.0001
C	1	242.000000	242.000000	103.71	0.0020
D	1	84.500000	84.500000	36.21	0.0092

Source	DF	Type III SS	Mean Square	F Value	Pr > F
A	1	220.500000	220.500000	94.50	0.0023
B	1	2312.000000	2312.000000	990.86	<.0001
C	1	242.000000	242.000000	103.71	0.0020
D	1	84.500000	84.500000	36.21	0.0092

**The GLM Procedure****Dependent Variable: y**

Parameter	Estimate	Standard Error	t Value	Pr >  t
A	10.5000000	1.08012345	9.72	0.0023
B	34.0000000	1.08012345	31.48	<.0001
C	11.0000000	1.08012345	10.18	0.0020
D	6.5000000	1.08012345	6.02	0.0092