```
options nodate nonumber nocenter;
data one;
      input design store casessold @@;
cards;
1 1 11  1 2 17  1 3 16  1 4 14  1 5 15
2 1 12  2 2 10  2 3 15  2 4 19  2 5 11
3 1 23  3 2 20  3 3 18  3 4 17
4 1 27  4 2 33  4 3 22  4 4 26  4 5 28
run;
proc means data=one;
      class design;
      var casessold;
run;
proc glm data=one;
      class design;
      model casessold=design/noint solution;
      contrast 'Design Effect' design 1 0 0 -1, design 0 1 0 -1, design 0 0 1 -1;
run;
proc glm data=one;
      class design;
      model casessold=design/solution;
run;
```

PROC MEANS OUTPUT:

Analysis Variable : casessold						
design	N Obs	N	Mean	Std Dev	Minimum	Maximum
1	5	5	14.6000000	2.3021729	11.0000000	17.0000000
2	5	5	13.4000000	3.6469165	10.0000000	19.0000000
3	4	4	19.5000000	2.6457513	17.0000000	23.0000000
4	5	5	27.2000000	3.9623226	22.0000000	33.0000000

PROC GLM OUTPUT (with NOINT option):

Class Level Information		
Class	**Levels**	**Values**
design	4	1 2 3 4

Number of Observations Read	19
Number of Observations Used	19

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	7183.800000	1795.950000	170.29	<.0001
Error	15	158.200000	10.546667		
Uncorrected Total	19	7342.000000			

R-Square	Coeff Var	Root MSE	casessold Mean
0.788055	17.43042	3.247563	18.63158

Source	DF	Type I SS	Mean Square	F Value	Pr > F
design	4	7183.800000	1795.950000	170.29	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
design	4	7183.800000	1795.950000	170.29	<.0001

Contrast	DF	Contrast SS	Mean Square	F Value	Pr > F
Design Effect	3	588.2210526	196.0736842	18.59	<.0001

Parameter		Estimate	Standard Error	t Value	Pr > |t|
design	**1**	14.60000000	1.45235441	10.05	<.0001
design	**2**	13.40000000	1.45235441	9.23	<.0001
design	**3**	19.50000000	1.62378159	12.01	<.0001
design	**4**	27.20000000	1.45235441	18.73	<.0001

PROC GLM OUTPUT (withOUT NOINT option):

Class Level Information		
Class	**Levels**	**Values**
design	4	1 2 3 4

Number of Observations Read	19
Number of Observations Used	19

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	588.2210526	196.0736842	18.59	<.0001
Error	15	158.2000000	10.5466667		
Corrected Total	18	746.4210526			

R-Square	Coeff Var	Root MSE	casessold Mean
0.788055	17.43042	3.247563	18.63158

Source	DF	Type I SS	Mean Square	F Value	Pr > F
design	3	588.2210526	196.0736842	18.59	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
design	3	588.2210526	196.0736842	18.59	<.0001

Parameter		Estimate		Standard Error	t Value	Pr > |t|
Intercept		27.20000000	B	1.45235441	18.73	<.0001
design	**1**	-12.60000000	B	2.05393930	-6.13	<.0001
design	**2**	-13.80000000	B	2.05393930	-6.72	<.0001
design	**3**	-7.70000000	B	2.17853162	-3.53	0.0030
design	**4**	0.00000000	B	.	.	.

Note: The X'X matrix has been found to be singular, and a generalized inverse was used to solve the normal equations. Terms whose estimates are followed by the letter 'B' are not uniquely estimable.