

Analysis of Variance for leadlev

Source	DF	SS	MS	F	P
site	4	3230.5833	807.6458	7.367	0.005
area	10	1096.3333	109.6333	39.988	0.000
Error	15	41.1250	2.7417		
Total	29	4368.0417			

Variance Components

Source	Var Comp.	% of Total	StDev
site	116.335	67.43	10.786
area	53.446	30.98	7.311
Error	2.742	1.59	1.656
Total	172.523		13.135

Expected Mean Squares

```
1 site      1.00(3) + 2.00(2) + 6.00(1)
2 area     1.00(3) + 2.00(2)
3 Error    1.00(3)
```

One-way ANOVA: leadlev2 versus site2

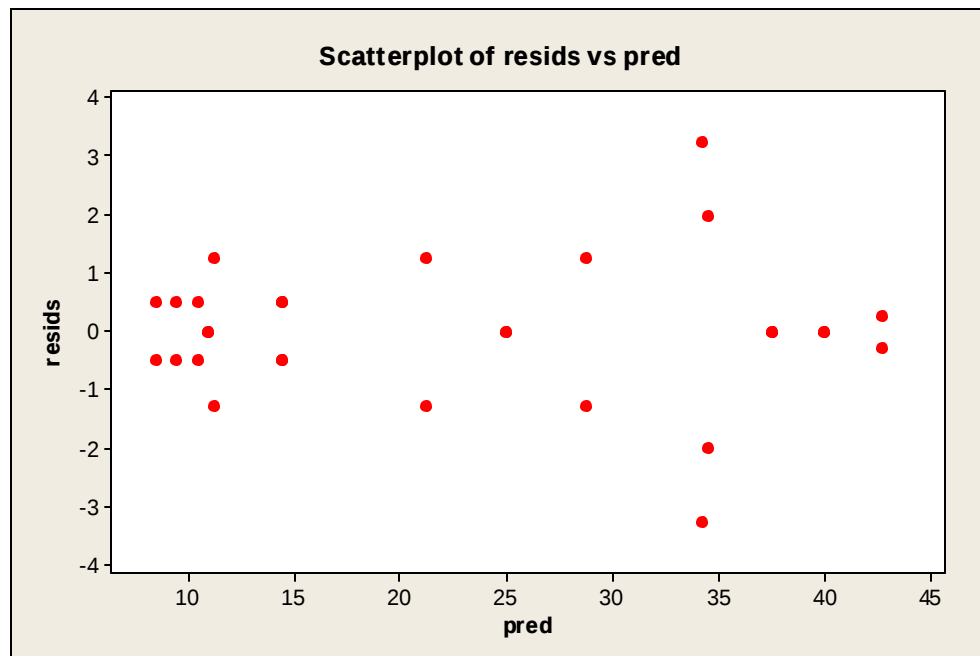
Source	DF	SS	MS	F	P
site2	4	1615.3	403.8	7.37	0.005
Error	10	548.2	54.8		
Total	14	2163.5			

$S = 7.404$ $R\text{-Sq} = 74.66\%$ $R\text{-Sq}(\text{adj}) = 64.53\%$

Individual 95% CIs For Mean Based on Pooled StDev

Level	N	Mean	StDev
a	3	32.917	10.181
b	3	37.167	4.837
c	3	17.917	9.593
d	3	16.833	7.286
e	3	9.750	1.392

Pooled StDev = 7.404



```
data two;  
do site='a','b','c','d','e';  
do area=1,2,3;
```

```

input leadlev @@; output;
end; end; datalines;
40.0 37.5 21.25 34.25 42.75 34.5 28.75 10.5 14.5 25.0 11.0 14.5 11.25 8.5 9.5
;
proc glm;
class site;
model leadlev=site;
means site/snk;
run;

```

The GLM Procedure
Class Level Information

Class	Levels	Values
site	5	a b c d e

Number of Observations Read 15
Number of Observations Used 15

The GLM Procedure

Dependent Variable: leadlev

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	1615.291667	403.822917	7.37	0.0049
Error	10	548.166667	54.816667		
Corrected Total	14	2163.458333			

R-Square	Coeff Var	Root MSE	leadlev Mean
0.746625	32.30761	7.403828	22.91667

Source	DF	Type I SS	Mean Square	F Value	Pr > F
site	4	1615.291667	403.822917	7.37	0.0049

Source	DF	Type III SS	Mean Square	F Value	Pr > F
site	4	1615.291667	403.822917	7.37	0.0049

The GLM Procedure
Student-Newman-Keuls Test for leadlev

NOTE: This test controls the Type I experimentwise error rate under the complete null hypothesis but not under partial null hypotheses.

Alpha	0.05
Error Degrees of Freedom	10
Error Mean Square	54.81667

Number of Means	2	3	4	5
Critical Range	13.469509	16.571621	18.494397	19.895249

Means with the same letter are not significantly different.

SNK Grouping	Mean	N	site
A	37.167	3	b
A			
B A	32.917	3	a
B			
B C	17.917	3	c
B			
B C	16.833	3	d
C			
C	9.750	3	e