```
data tomato;
  do run=1 to 6;
  do rep=1 to 2;
    input y temp @@; drop rep;
  output; end; end; datalines;
24.65 25 18.62 40 24.11 30 17.08 40 22.31 25 21.25 30
17.95 35 18.93 40 28.90 25 18.27 35 25.53 30 20.91 35
;
proc glm;
  class run temp;
  model y=run temp;
  lsmeans temp/tdiff pdiff;
run;
```

The GLM Procedure

Dependent Variable: y

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	139.5838000	17.4479750	7.85	0.0588
Error	3	6.6678250	2.2226083		
Corrected Total	11	146.2516250			

R-Square	Coeff Var	Root MSE	y Mean
0.954409	6.920466	1.490841	21.54250

Source	DF	Type I SS	Mean Square	F Value	Pr > F
run	5	35.1480750	7.0296150	3.16	0.1861
temp	3	104.4357250	34.8119083	15.66	0.0245

Source	DF	Type III SS	Mean Square	F Value	Pr > F
run	5	32.4003083	6.4800617	2.92	0.2038
temp	3	104.4357250	34.8119083	15.66	0.0245

Least Squares Means

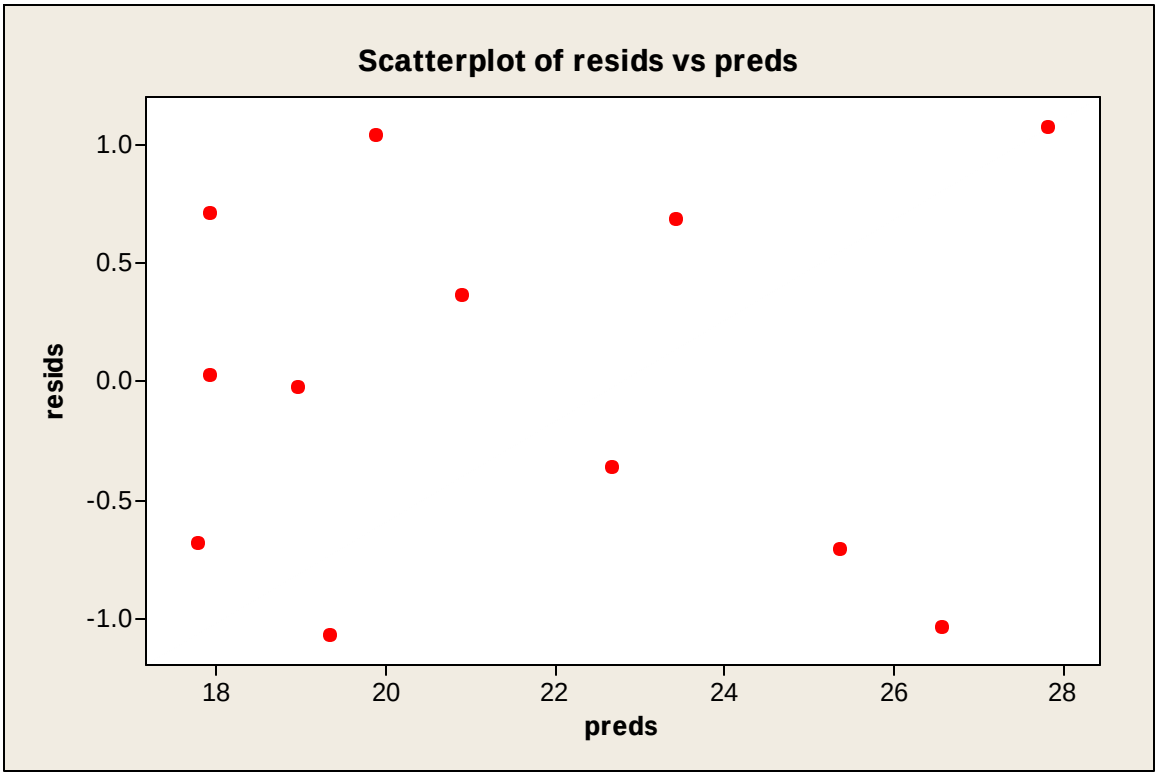
temp	y LSMEAN	LSMEAN Number
25	25.9725000	1
30	24.1900000	2
35	17.4850000	3
40	18.5225000	4

Least Squares Means for Effect temp
t for H0: LSMean(i)=LSMean(j) / Pr > |t|

Dependent Variable: y

i/j	1	2	3	4
1		1.195633	5.693094	4.997178
		0.3177	0.0107	0.0154
2	-1.19563		4.49746	3.801544
	0.3177		0.0205	0.0320
3	-5.69309	-4.49746		-0.69592
	0.0107	0.0205		0.5365
4	-4.99718	-3.80154	0.695916	
	0.0154	0.0320	0.5365	

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.


Scatterplot of resids vs preds
resids
1.0
0.5
0.0
-0.5
-1.0
18
20
22
24
26
28
preds