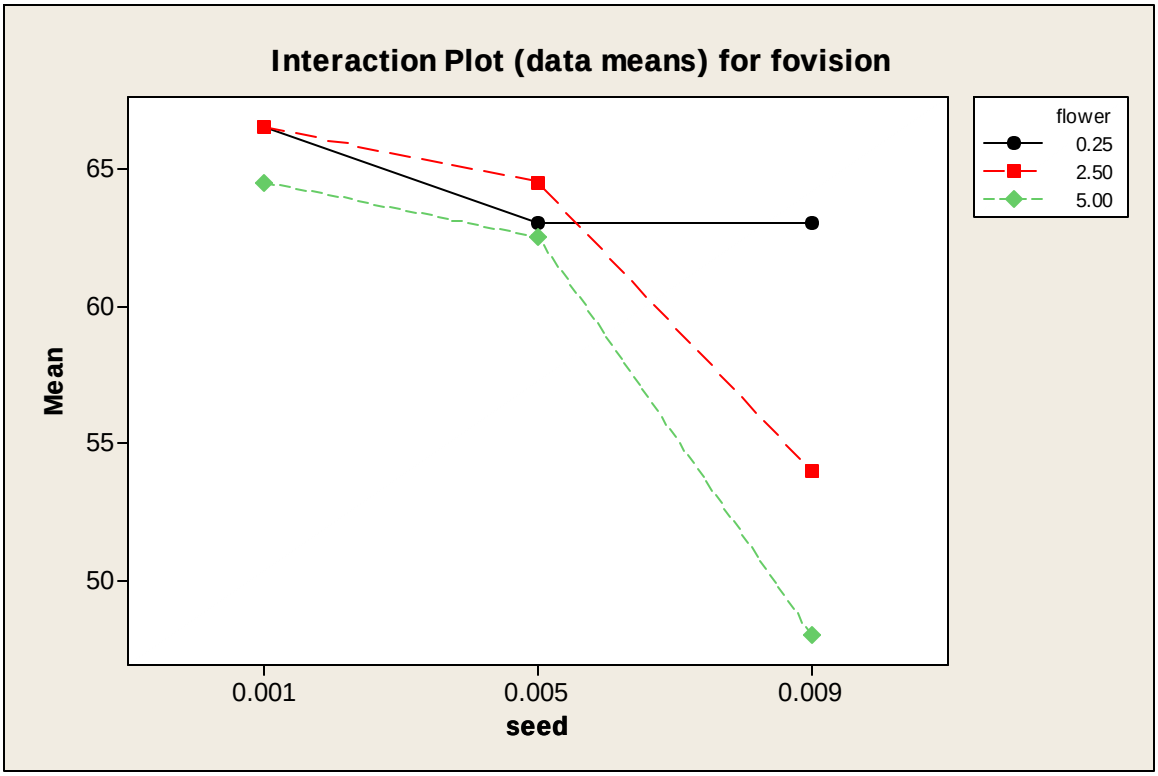


```
data one;
  do flower=0.25,2.5,5;
  do seed=0.001,0.005,0.009;
  do rep=1,2;
    input fovision @@; output;
  end; end; end; datalines;
67 66 65 61 62 64 68 65 68 61 55 53 65 64 62 63 49 47
;
proc glm;
  class flower seed;
  model fovision=flower seed flower*seed;
  contrast '   linear in flower 0.25' seed -1  0 1 flower*seed -1  0  1  0  0  0  0  0  0;
  contrast 'quadratic in flower 0.25' seed  1 -2 1 flower*seed  1 -2  1  0  0  0  0  0  0;
  contrast '   linear in flower 2.50' seed -1  0 1 flower*seed  0  0  0 -1  0  1  0  0  0;
  contrast 'quadratic in flower 2.50' seed  1 -2 1 flower*seed  0  0  0  1 -2  1  0  0  0;
  contrast '   linear in flower 5.00' seed -1  0 1 flower*seed  0  0  0  0  0  0 -1  0  1;
  contrast 'quadratic in flower 5.00' seed  1 -2 1 flower*seed  0  0  0  0  0  0  1 -2  1;
run;

data two;
  do trt=1 to 9;
  do rep=1,2;
    input fovision @@; output;
  end; end; datalines;
67 66 65 61 62 64 68 65 68 61 55 53 65 64 62 63 49 47
;
proc glm data=two;
  class trt;
  model fovision=trt;
  contrast 'linear in flower 0.25' trt 1  0 -1  0  0  0  0  0  0;
  contrast '  quad in flower 0.25' trt 1 -2  1  0  0  0  0  0  0;
  contrast 'linear in flower 2.50' trt 0  0  0  1  0 -1  0  0  0;
  contrast '  quad in flower 2.50' trt 0  0  0  1 -2  1  0  0  0;
  contrast 'linear in flower 5.00' trt 0  0  0  0  0  0  1  0 -1;
  contrast '  quad in flower 5.00' trt 0  0  0  0  0  0  1 -2  1;
```

```
  contrast '       in flower 0.25' trt 1  0 -1  0  0  0  0  0  0,
                                   trt 1 -2  1  0  0  0  0  0  0;
  contrast '       in flower 2.50' trt 0  0  0  1  0 -1  0  0  0,
                                   trt 0  0  0  1 -2  1  0  0  0;
  contrast '       in flower 5.00' trt 0  0  0  0  0  0  1  0 -1,
                                   trt 0  0  0  0  0  0  1 -2  1;
run;
```

The GLM Procedure

Class Level Information

Class	Levels	Values
flower	3	0.25 2.5 5
seed	3	0.001 0.005 0.009

Number of Observations Read 18
Number of Observations Used 18

Dependent Variable: fovision

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	623.7777778	77.9722222	15.77	0.0002
Error	9	44.5000000	4.9444444		
Corrected Total	17	668.2777778			

R-Square	Coeff Var	Root MSE	fovision Mean
0.933411	3.622171	2.223611	61.38889

Source	DF	Type I SS	Mean Square	F Value	Pr > F
flower	2	102.7777778	51.3888889	10.39	0.0046
seed	2	386.1111111	193.0555556	39.04	<.0001
flower*seed	4	134.8888889	33.7222222	6.82	0.0083

Source	DF	Type III SS	Mean Square	F Value	Pr > F
flower	2	102.7777778	51.3888889	10.39	0.0046
seed	2	386.1111111	193.0555556	39.04	<.0001
flower*seed	4	134.8888889	33.7222222	6.82	0.0083

Contrast	DF	Contrast SS	Mean Square	F Value	Pr > F
linear in flower 0.25	1	12.2500000	12.2500000	2.48	0.1499
quadratic in flower 0.25	1	4.0833333	4.0833333	0.83	0.3872
linear in flower 2.50	1	156.2500000	156.2500000	31.60	0.0003
quadratic in flower 2.50	1	24.0833333	24.0833333	4.87	0.0547
linear in flower 5.00	1	272.2500000	272.2500000	55.06	<.0001
quadratic in flower 5.00	1	52.0833333	52.0833333	10.53	0.0101

The GLM Procedure

Class Level Information

Class	Levels	Values
trt	9	1 2 3 4 5 6 7 8 9

Number of Observations Read 18
Number of Observations Used 18

Dependent Variable: fovision

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	623.7777778	77.9722222	15.77	0.0002
Error	9	44.5000000	4.9444444		
Corrected Total	17	668.2777778			

R-Square	Coeff Var	Root MSE	fovision Mean
0.933411	3.622171	2.223611	61.38889

Source	DF	Type I SS	Mean Square	F Value	Pr > F
trt	8	623.7777778	77.9722222	15.77	0.0002

Source	DF	Type III SS	Mean Square	F Value	Pr > F
trt	8	623.7777778	77.9722222	15.77	0.0002

Contrast	DF	Contrast SS	Mean Square	F Value	Pr > F
linear in flower 0.25	1	12.2500000	12.2500000	2.48	0.1499
quad in flower 0.25	1	4.0833333	4.0833333	0.83	0.3872
linear in flower 2.50	1	156.2500000	156.2500000	31.60	0.0003
quad in flower 2.50	1	24.0833333	24.0833333	4.87	0.0547
linear in flower 5.00	1	272.2500000	272.2500000	55.06	<.0001
quad in flower 5.00	1	52.0833333	52.0833333	10.53	0.0101
in flower 0.25	2	16.3333333	8.1666667	1.65	0.2449
in flower 2.50	2	180.3333333	90.1666667	18.24	0.0007
in flower 5.00	2	324.3333333	162.1666667	32.80	<.0001