

```

GLM Size1 Size2 Size3 Size4
  /WSFACTOR=SizeOffset 4 Polynomial
  /MEASURE=Response
  /METHOD=SSTYPE(3)
  /PLOT=PROFILE(SizeOffset)
  /EMMEANS=TABLES(SizeOffset) COMPARE ADJ(BONFERRONI)
  /PRINT=DESCRIPTIVE ETASQ
  /CRITERIA=ALPHA(.05)
  /WSDESIGN=SizeOffset.

```

General Linear Model

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 29-OCT-2018 17:48:41 |
| Comments | | |
| Input | Active Dataset | DataSet0 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 7 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the model. |
| Syntax | | GLM Size1 Size2 Size3 Size4 /WSFACTOR=SizeOffset 4 Polynomial /MEASURE=Response /METHOD=SSTYPE(3) /PLOT=PROFILE (SizeOffset) /EMMEANS=TABLES (SizeOffset) COMPARE ADJ(BONFERRONI) /PRINT=DESCRIPTIVE ETASQ /CRITERIA=ALPHA(.05) /WSDESIGN=SizeOffset. |

Notes

| | | |
|-----------|----------------|-------------|
| Resources | Processor Time | 00:00:01.92 |
| | Elapsed Time | 00:00:00.86 |

[DataSet0]

Within-Subjects Factors

Measure: Response

| SizeOffset | Dependent Variable |
|------------|--------------------|
| 1 | Size1 |
| 2 | Size2 |
| 3 | Size3 |
| 4 | Size4 |

Descriptive Statistics

| | Mean | Std. Deviation | N |
|-------|--------|----------------|---|
| Size1 | 1.6905 | .35588 | 7 |
| Size2 | 2.0714 | .40089 | 7 |
| Size3 | 2.7500 | .47140 | 7 |
| Size4 | 3.4643 | .44581 | 7 |

Multivariate Tests^a

| Effect | | Value | F | Hypothesis df | Error df | Sig. |
|------------|--------------------|--------|---------------------|---------------|----------|------|
| SizeOffset | Pillai's Trace | .935 | 19.055 ^b | 3.000 | 4.000 | .008 |
| | Wilks' Lambda | .065 | 19.055 ^b | 3.000 | 4.000 | .008 |
| | Hotelling's Trace | 14.292 | 19.055 ^b | 3.000 | 4.000 | .008 |
| | Roy's Largest Root | 14.292 | 19.055 ^b | 3.000 | 4.000 | .008 |

Multivariate Tests^a

| Effect | | Partial Eta Squared |
|------------|--------------------|---------------------|
| SizeOffset | Pillai's Trace | .935 |
| | Wilks' Lambda | .935 |
| | Hotelling's Trace | .935 |
| | Roy's Largest Root | .935 |

- a. Design: Intercept
Within Subjects Design: SizeOffset
- b. Exact statistic

Mauchly's Test of Sphericity^a

Measure: Response

| Within Subjects Effect | Mauchly's W | Approx. Chi-Square | df | Sig. | Epsilon ^b Greenhouse-Geisser |
|------------------------|-------------|--------------------|----|------|--|
| SizeOffset | .313 | 5.484 | 5 | .369 | .627 |

Mauchly's Test of Sphericity^a

Measure: Response

| Within Subjects Effect | Epsilon ^b | |
|------------------------|----------------------|-------------|
| | Huynh-Feldt | Lower-bound |
| SizeOffset | .903 | .333 |

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

- a. Design: Intercept
Within Subjects Design: SizeOffset
- b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: Response

| Source | | Type III Sum of Squares | df | Mean Square | F |
|-------------------|--------------------|-------------------------|--------|-------------|--------|
| SizeOffset | Sphericity Assumed | 12.818 | 3 | 4.273 | 35.255 |
| | Greenhouse-Geisser | 12.818 | 1.880 | 6.819 | 35.255 |
| | Huynh-Feldt | 12.818 | 2.709 | 4.733 | 35.255 |
| | Lower-bound | 12.818 | 1.000 | 12.818 | 35.255 |
| Error(SizeOffset) | Sphericity Assumed | 2.182 | 18 | .121 | |
| | Greenhouse-Geisser | 2.182 | 11.280 | .193 | |
| | Huynh-Feldt | 2.182 | 16.251 | .134 | |
| | Lower-bound | 2.182 | 6.000 | .364 | |

Tests of Within-Subjects Effects

Measure: Response

| Source | | Sig. | Partial Eta Squared |
|-------------------|--------------------|------|---------------------|
| SizeOffset | Sphericity Assumed | .000 | .855 |
| | Greenhouse-Geisser | .000 | .855 |
| | Huynh-Feldt | .000 | .855 |
| | Lower-bound | .001 | .855 |
| Error(SizeOffset) | Sphericity Assumed | | |
| | Greenhouse-Geisser | | |
| | Huynh-Feldt | | |
| | Lower-bound | | |

Tests of Within-Subjects Contrasts

Measure: Response

| Source | SizeOffset | Type III Sum of Squares | df | Mean Square | F | Sig. |
|-------------------|------------|-------------------------|----|-------------|--------|------|
| SizeOffset | Linear | 12.600 | 1 | 12.600 | 53.628 | .000 |
| | Quadratic | .194 | 1 | .194 | 2.000 | .207 |
| | Cubic | .024 | 1 | .024 | .764 | .416 |
| Error(SizeOffset) | Linear | 1.410 | 6 | .235 | | |
| | Quadratic | .583 | 6 | .097 | | |
| | Cubic | .188 | 6 | .031 | | |

Tests of Within-Subjects Contrasts

Measure: Response

| Source | SizeOffset | Partial Eta Squared |
|-------------------|------------|---------------------|
| SizeOffset | Linear | .899 |
| | Quadratic | .250 |
| | Cubic | .113 |
| Error(SizeOffset) | Linear | |
| | Quadratic | |
| | Cubic | |

Tests of Between-Subjects Effects

Measure: Response

Transformed Variable: Average

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
|-----------|-------------------------|----|-------------|---------|------|---------------------|
| Intercept | 174.168 | 1 | 174.168 | 505.212 | .000 | .988 |
| Error | 2.068 | 6 | .345 | | | |

Estimated Marginal Means

SizeOffset

Estimates

Measure: Response

| SizeOffset | Mean | Std. Error | 95% Confidence Interval | |
|------------|-------|------------|-------------------------|-------------|
| | | | Lower Bound | Upper Bound |
| 1 | 1.690 | .135 | 1.361 | 2.020 |
| 2 | 2.071 | .152 | 1.701 | 2.442 |
| 3 | 2.750 | .178 | 2.314 | 3.186 |
| 4 | 3.464 | .168 | 3.052 | 3.877 |

Pairwise Comparisons

Measure: Response

| (I) SizeOffset | (J) SizeOffset | Mean Difference (I-J) | Std. Error | Sig. ^b | 95% Confidence Interval for Difference ^b | |
|----------------|----------------|--------------------------|------------|-------------------|--|-------------|
| | | | | | Lower Bound | Upper Bound |
| 1 | 2 | -.381 | .174 | .429 | -1.054 | .292 |
| | 3 | -1.060 [*] | .221 | .018 | -1.913 | -.206 |
| | 4 | -1.774 [*] | .258 | .003 | -2.769 | -.779 |
| 2 | 1 | .381 | .174 | .429 | -.292 | 1.054 |
| | 3 | -.679 [*] | .099 | .003 | -1.060 | -.297 |
| | 4 | -1.393 [*] | .166 | .001 | -2.036 | -.750 |
| 3 | 1 | 1.060 [*] | .221 | .018 | .206 | 1.913 |
| | 2 | .679 [*] | .099 | .003 | .297 | 1.060 |
| | 4 | -.714 [*] | .157 | .024 | -1.322 | -.107 |
| 4 | 1 | 1.774 [*] | .258 | .003 | .779 | 2.769 |
| | 2 | 1.393 [*] | .166 | .001 | .750 | 2.036 |
| | 3 | .714 [*] | .157 | .024 | .107 | 1.322 |

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

| | Value | F | Hypothesis df | Error df | Sig. | Partial Eta Squared |
|--------------------|--------|---------------------|---------------|----------|------|---------------------|
| Pillai's trace | .935 | 19.055 ^a | 3.000 | 4.000 | .008 | .935 |
| Wilks' lambda | .065 | 19.055 ^a | 3.000 | 4.000 | .008 | .935 |
| Hotelling's trace | 14.292 | 19.055 ^a | 3.000 | 4.000 | .008 | .935 |
| Roy's largest root | 14.292 | 19.055 ^a | 3.000 | 4.000 | .008 | .935 |

Each F tests the multivariate effect of SizeOffset. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

Profile Plots

