```
GET
  FILE='C:\R_Files\Statistics-and-Research-Methods\11_23_19 - ANOVA - One with
in_One Between\data\Will_DATA.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
SORT CASES  BY Group.
SPLIT FILE SEPARATE BY Group.
SPLIT FILE OFF.
ONEWAY Week1 Week2 Week3 Week4 BY Group
  /MISSING ANALYSIS
  /POSTHOC=LSD ALPHA(0.05).
```

Oneway

```
[DataSet1] C:\R_Files\Statistics-and-Research-Methods\11_23_19 - ANOVA - One w
ithin_One Between\data\Will_DATA.sav
```

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
WEEK1	Between Groups	39154.800	2	19577.400	15.978	.000
	Within Groups	69840.450	57	1225.271		
	Total	108995.250	59			
WEEK2	Between Groups	41070.400	2	20535.200	29.427	.000
	Within Groups	39777.250	57	697.846		
	Total	80847.650	59			
WEEK3	Between Groups	24115.033	2	12057.517	12.860	.000
	Within Groups	53441.900	57	937.577		
	Total	77556.933	59			
WEEK4	Between Groups	39247.033	2	19623.517	14.977	.000
	Within Groups	74681.950	57	1310.210		
	Total	113928.983	59			

Post Hoc Tests

Multiple Comparisons

LSD

Dependent Variable	(I) GROUP	(J) GROUP	Mean Difference (I-J)	Std. Error	Sig.	95% ... Lower Bound
WEEK1	Chemical	Microbal	8.400	11.069	.451	-13.77
		Predator	-49.500*	11.069	.000	-71.67
	Microbal	Chemical	-8.400	11.069	.451	-30.57
		Predator	-57.900*	11.069	.000	-80.07
	Predator	Chemical	49.500*	11.069	.000	27.33
		Microbal	57.900*	11.069	.000	35.73
WEEK2	Chemical	Microbal	-39.800*	8.354	.000	-56.53
		Predator	23.600*	8.354	.007	6.87
	Microbal	Chemical	39.800*	8.354	.000	23.07
		Predator	63.400*	8.354	.000	46.67
	Predator	Chemical	-23.600*	8.354	.007	-40.33
		Microbal	-63.400*	8.354	.000	-80.13
WEEK3	Chemical	Microbal	-2.450	9.683	.801	-21.84
		Predator	41.250*	9.683	.000	21.86
	Microbal	Chemical	2.450	9.683	.801	-16.94
		Predator	43.700*	9.683	.000	24.31
	Predator	Chemical	-41.250*	9.683	.000	-60.64
		Microbal	-43.700*	9.683	.000	-63.09
WEEK4	Chemical	Microbal	58.450*	11.446	.000	35.53
		Predator	9.700	11.446	.400	-13.22
	Microbal	Chemical	-58.450*	11.446	.000	-81.37
		Predator	-48.750*	11.446	.000	-71.67
	Predator	Chemical	-9.700	11.446	.400	-32.62
		Microbal	48.750*	11.446	.000	25.83

Multiple Comparisons

LSD

Dependent Variable	(I) GROUP	(J) GROUP	95% Confidence . Upper Bound
WEEK1	Chemical	Microbal	30.57
		Predator	-27.33
	Microbal	Chemical	13.77
		Predator	-35.73
	Predator	Chemical	71.67
		Microbal	80.07
WEEK2	Chemical	Microbal	-23.07
		Predator	40.33
	Microbal	Chemical	56.53
		Predator	80.13
	Predator	Chemical	-6.87
		Microbal	-46.67
WEEK3	Chemical	Microbal	16.94
		Predator	60.64
	Microbal	Chemical	21.84
		Predator	63.09
	Predator	Chemical	-21.86
		Microbal	-24.31
WEEK4	Chemical	Microbal	81.37
		Predator	32.62
	Microbal	Chemical	-35.53
		Predator	-25.83
	Predator	Chemical	13.22
		Microbal	71.67

*. The mean difference is significant at the 0.05 level.

```
* Encoding: UTF-8.
GLM Week1 Week2 Week3 Week4 BY Group
  /WSFACTOR=Weeks 4 Polynomial
  /METHOD=SSTYPE(3)
  /PLOT=PROFILE(Weeks*Group) TYPE=LINE ERRORBAR=NO MEANREFERENCE=NO YAXIS=AUTO
  /PRINT=DESCRIPTIVE
```

```
/CRITERIA=ALPHA(.05)
/WSDESIGN=Weeks
/DESIGN=Group.
```

General Linear Model

Within-Subjects Factors

Measure: MEASURE_1

Weeks	Dependent Variable
1	WEEK1
2	WEEK2
3	WEEK3
4	WEEK4

Between-Subjects Factors

		Value Label	N
GROUP	1	Chemical	20
	2	Microbal	20
	3	Predator	20

Descriptive Statistics

	GROUP	Mean	Std. Deviation	N
WEEK1	Chemical	101.05	37.159	20
	Microbal	92.65	36.394	20
	Predator	150.55	31.152	20
	Total	114.75	42.981	60
WEEK2	Chemical	115.75	23.337	20
	Microbal	155.55	35.525	20
	Predator	92.15	16.937	20
	Total	121.15	37.018	60
WEEK3	Chemical	148.80	31.250	20
	Microbal	151.25	26.606	20
	Predator	107.55	33.590	20
	Total	135.87	36.256	60
WEEK4	Chemical	157.90	47.687	20
	Microbal	99.45	34.201	20
	Predator	148.20	22.064	20
	Total	135.18	43.943	60

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
Weeks	Pillai's Trace	.283	7.233[b]	3.000	55.000	.000
	Wilks' Lambda	.717	7.233[b]	3.000	55.000	.000
	Hotelling's Trace	.395	7.233[b]	3.000	55.000	.000
	Roy's Largest Root	.395	7.233[b]	3.000	55.000	.000
Weeks * GROUP	Pillai's Trace	.969	17.531	6.000	112.000	.000
	Wilks' Lambda	.243	18.822[b]	6.000	110.000	.000
	Hotelling's Trace	2.236	20.127	6.000	108.000	.000
	Roy's Largest Root	1.734	32.366[c]	3.000	56.000	.000

a. Design: Intercept + GROUP
Within Subjects Design: Weeks

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Mauchly's Test of Sphericity[a]

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b] Greenhouse-Geisser
Weeks	.921	4.580	5	.469	.946

Mauchly's Test of Sphericity[a]

Measure: MEASURE_1

Within Subjects Effect	Epsilon[b] Huynh-Feldt	Lower-bound
Weeks	1.000	.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 + GROUP
Within Subjects Design: Weeks

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: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F
Weeks	Sphericity Assumed	19775.646	3	6591.882	6.460
	Greenhouse-Geisser	19775.646	2.837	6970.899	6.460
	Huynh-Feldt	19775.646	3.000	6591.882	6.460
	Lower-bound	19775.646	1.000	19775.646	6.460
Weeks * GROUP	Sphericity Assumed	141532.492	6	23588.749	23.117
	Greenhouse-Geisser	141532.492	5.674	24945.045	23.117
	Huynh-Feldt	141532.492	6.000	23588.749	23.117
	Lower-bound	141532.492	2.000	70766.246	23.117
Error(Weeks)	Sphericity Assumed	174487.613	171	1020.395	
	Greenhouse-Geisser	174487.613	161.702	1079.066	
	Huynh-Feldt	174487.613	171.000	1020.395	
	Lower-bound	174487.613	57.000	3061.186	

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.
Weeks	Sphericity Assumed	.000
	Greenhouse-Geisser	.000
	Huynh-Feldt	.000
	Lower-bound	.014
Weeks * GROUP	Sphericity Assumed	.000
	Greenhouse-Geisser	.000
	Huynh-Feldt	.000
	Lower-bound	.000
Error(Weeks)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Weeks	Type III Sum of Squares	df	Mean Square	F	Sig.
Weeks	Linear	17335.601	1	17335.601	19.642	.000
	Quadratic	752.604	1	752.604	.581	.449
	Cubic	1687.441	1	1687.441	1.908	.173
Weeks * GROUP	Linear	24446.292	2	12223.146	13.849	.000
	Quadratic	114239.158	2	57119.579	44.133	.000
	Cubic	2847.042	2	1423.521	1.610	.209
Error(Weeks)	Linear	50307.957	57	882.596		
	Quadratic	73773.487	57	1294.272		
	Cubic	50406.168	57	884.319		

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	3854974.537	1	3854974.537	3473.832	.000
GROUP	2054.775	2	1027.388	.926	.402
Error	63253.937	57	1109.718		

Profile Plots