

Crossover design



طرح متقاطع در نرم افزار NCSS

NCSS/GESS (Trial) Data - [Untitled]

	sequence	period1	period2	C4	C5	C6	C7
1	1	74/675	73/675				
2	1	96/4	93/25				
3	1	101/95	102/125				
4	1	79/95	69/45				
5	1	79/05	69/025				
6	1	85/95	68/7				
7	1	69/725	59/425				
8	1	86/275	76/125				
9	1	112/675	114/875				
10	1	99/525	116/25				
11	1	89/425	64/175				
12	1	55/175	74/575				
13	2	74/825	37/35				
14	2	86/875	51/925				
15	2	81/675	72/175				
16	2	92/7	77/5				
17	2	50/45	71/875				
18	2	66/125	94/025				
19	2	122/45	124/975				
20	2	99/075	85/225				
21	2	86/35	95/925				
22	2	49/925	67/1				
23	2	42/7	59/425				
24	2	91/725	114/05				
25							
26							
27							
28							
29							

وارد کردن دیتا



گزینه

cross-over Analysis using T-Tests



NCSS/GESS (Trial) Data - [Untitled]

File Edit Data Analysis Graphics PASS GESS Window Help

Analysis of Variance (ANOVA) >
Clustering >
Curve Fitting >
Descriptive Statistics >
Design of Experiments >
Diagnostic Tests >
Forecasting / Time Series >
Mass Appraisal >
Meta-Analysis >
Multivariate Analysis >
Operations Research >
Proportions >
Quality Control >
Regression / Correlation >
Survival / Reliability >
T-Tests >
Other >

T-Test - One-Sample or Paired
T-Test - Two-Sample
T-Test - Two-Sample (From Means and SD's)
Hotelling's One-Sample T2
Hotelling's Two-Sample T2
Cross-Over Analysis Using T-Tests

sequence	
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	2
14	2
15	2
16	2
17	2
18	2
19	2
20	2
21	2
22	2
23	2
24	2
25	2
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	

Variable Info Sheet1

4 24

2017/18
2016/17

NCSS/GESS (Trial) Data - [Untitled]

File Edit Data Analysis Graphics PASS GESS Window Help

sequence period1 period2 C4 C5 C6 C7 C8 C9 C10 C11 C12

1 1 1
2 1 1
3 1 1
4 1 1
5 1 1
6 1 1
7 1 1
8 1 1
9 1 1
10 1 1
11 1 1
12 1 1
13 2 2
14 2 2
15 2 2
16 2 2
17 2 2
18 2 2
19 2 2
20 2 2
21 2 2
22 2 2
23 2 2
24 2 2
25 2 2
26 2 2
27 2 2
28 2 2
29 2 2
30 2 2
31 2 2
32 2 2
33 2 2
34 2 2
35 2 2
36 2 2
37 2 2
38 2 2

(1 Days Left in Trial) NCSS: Cross-Over Analysis Using T-Tests

File Run Analysis Graphics PASS GESS Window Help

Periods Plot Prob Plot Template
Profile Plot Sum Diff Plot Symbols
Variables Reports Mean Plot

Period 1 Variable: period1 Label 1: R Label 2: T
Period 2 Variable: period2 Cross-Over Alpha Level: 0.05
Sequence Group Variable: sequence Equivalence Alpha Level: 0.05
Upper Equivalence Limit: 20 Lower Equivalence Limit: -Upper Limit
☐ Filter Active

Template Id: Reset Guide Me

Variable Info Sheet1

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وارد کردن ستون sequence و
period-2 و period-1



خروجی نرم افزار

Cross-Over Analysis Summary Section

Parameter	Estimated Effect	Standard Error	T Value (DF=22)	Prob Level	Lower 95/0% Confidence Limit	Upper 95/0% Confidence Limit
Treatment	-2/29	3/73	-0/61	0/5450	-10/02	5/44
Period	-1/63	3/73	-0/44	0/6672	-9/36	6/11
Carryover	-9/75	15/67	-0/62	0/5401	-42/24	22/74





Cross-Over Analysis Detail Section

Seq.	Period	Treatment	Count	Least Squares Mean	Standard Deviation	Standard Error
1	1	R	12	85/33	15/57	4/49
2	2	R	12	78/83	25/18	7/27
1	2	T	12	81/42	19/69	5/68
2	1	T	12	78/17	23/28	6/72
1	Difference	(T-R)/2	12	-1/96	6/39	1/84
2	Difference	(T-R)/2	12	0/33	11/22	3/24
1	Total	R+T	12	166/75	33/12	9/56
2	Total	R+T	12	157/00	42/99	12/41
.	.	R	24	82/08		4/27
.	.	T	24	79/79		4/40
1	.	.	24	83/38		
2	.	.	24	78/50		
.	1	.	24	81/75		4/04
.	2	.	24	80/13		4/61



هم ارزی بر اساس فاصله اطمینان تفاوت

Equivalence Based on the Confidence Interval of the Difference

Test Type	Lower Equivalence Limit	Lower 90/0% Confidence Limit	Upper 90/0% Confidence Limit	Upper Equivalence Limit	Equivalent at the 5/0% Sign. Level?
Shortest C.I.	-16/42	-8/69	4/11	16/42	Yes
Westlake C.I.	-16/42	-7/41	7/41	16/42	Yes

Note: Westlake's $k_2 = -1/37$ and $k_1 = 2/60$.



هم ارزی بر اساس فاصله اطمینان نسبت

Equivalence Based on the Confidence Interval of the Ratio

Test Type	Lower Equivalence Limit	Lower 90/0% Confidence Limit	Upper 90/0% Confidence Limit	Upper Equivalence Limit	Equivalent at the 5/0% Sign. Level?
Shortest C.I.	80/00	89/41	105/01	120/00	Yes
Westlake C.I.	80/00	90/97	109/03	120/00	Yes
Fieller's C.I.	80/00	90/05	104/88	120/00	Yes



هم ارزی بر اساس دو آزمون فرضیه یک طرفه شویرمن

Equivalence Based on Schuirmann's Two One-Sided Hypothesis Tests

Test Type	Lower Test T Value	Upper Test T Value	5/0% Cutoff T Value	DF	Equivalent at the 5/0% Sign. Level?
Schuirmann's 2 1-Sided Tests	3/79	-5/02	1/72	22	Yes



هم ارزی بر اساس دو تست یک طرفه ویلکاکسون و من ویتنی

Equivalence Based on Two One-Sided Wilcoxon-Mann-Whitney Tests

Test Type	Lower Sum Ranks	Lower Prob Level	Upper Sum Ranks	Upper Prob Level	Equivalent at the 5/0% Sign. Level?
2 1-Sided MW Tests	203/00	0/0012	91/00	0/0004	Yes



هم ارزی بر اساس آزمون فرضیه اندرسون و هاک

Equivalence Based on Anderson and Hauck's Hypothesis Test

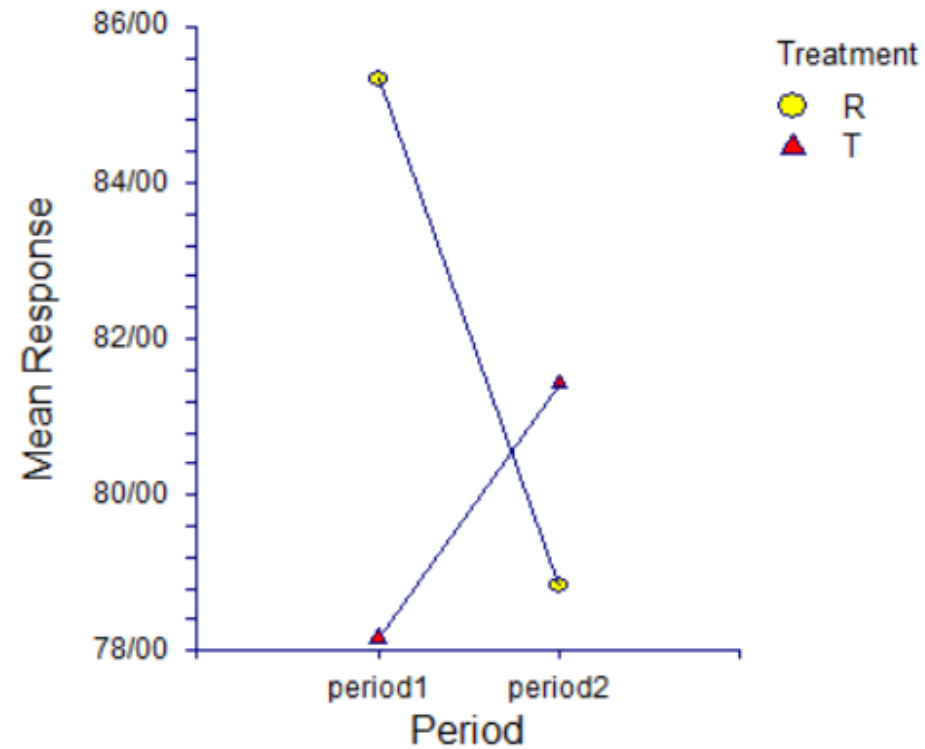
Test Type	Pr(-TL)	Pr(TU)	Prob Level	Equivalent at the 5/0% Sign. Level?
Anderson and Hauck's Test	0/0005	0/0000	0/0005	Yes



نمودار توالی با دوره

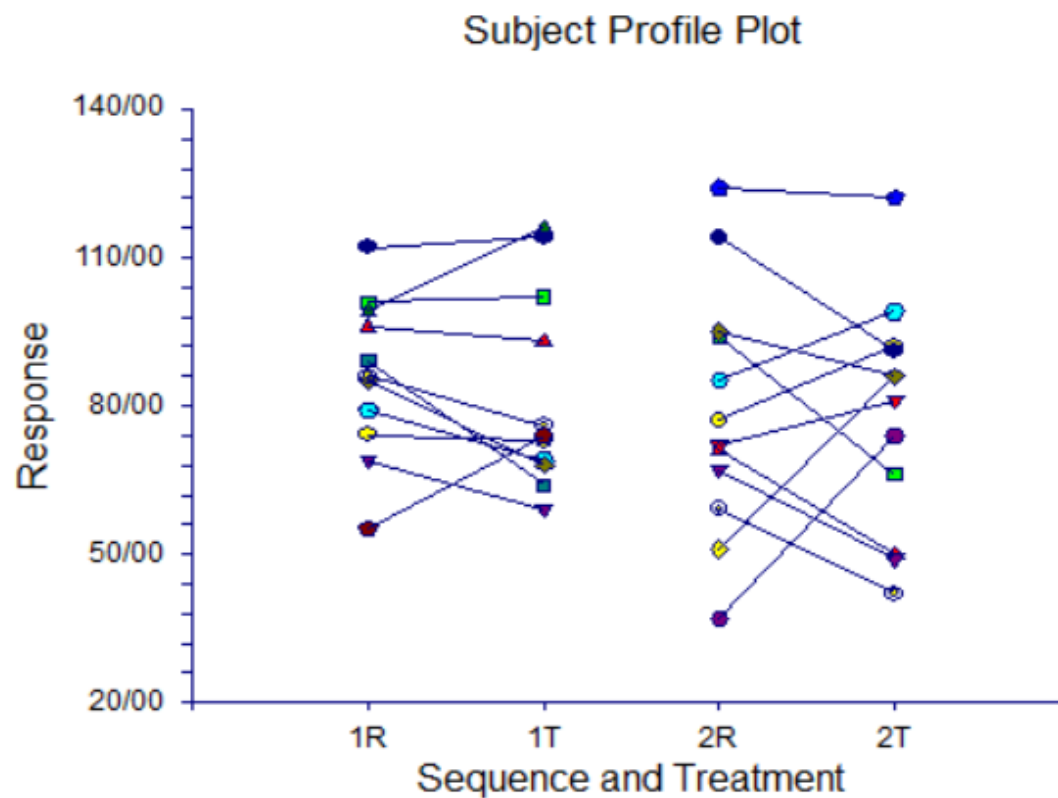
Plot of Sequence-by-Period Means

Sequence-by-Period Means



نمودار نمایه های موضوعی

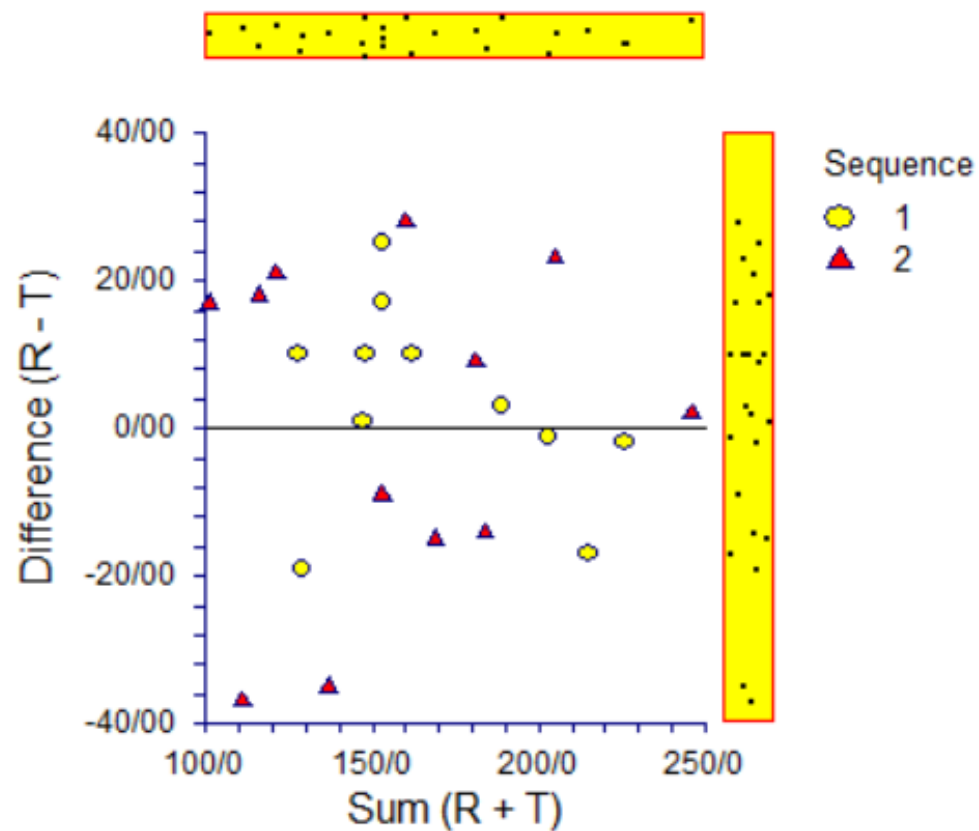
Plot of Subject Profiles



نمودار مجموع و تفاوت

Plot of Sums and Differences

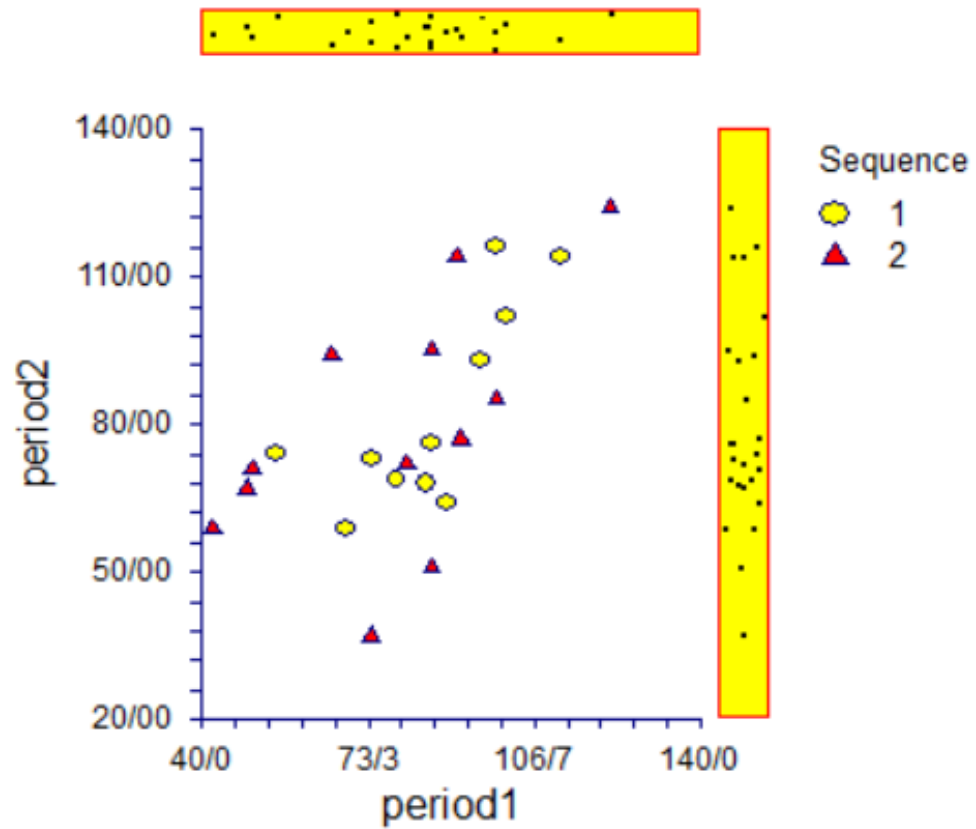
Sum Difference Plot



نمودار دوره

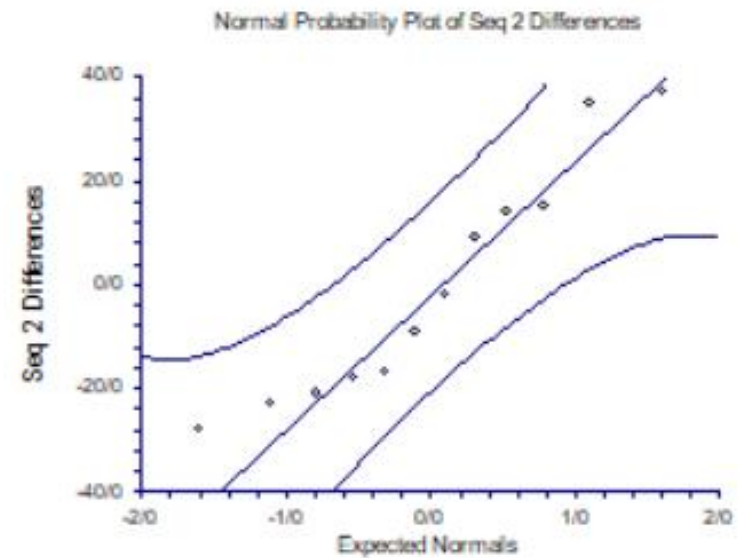
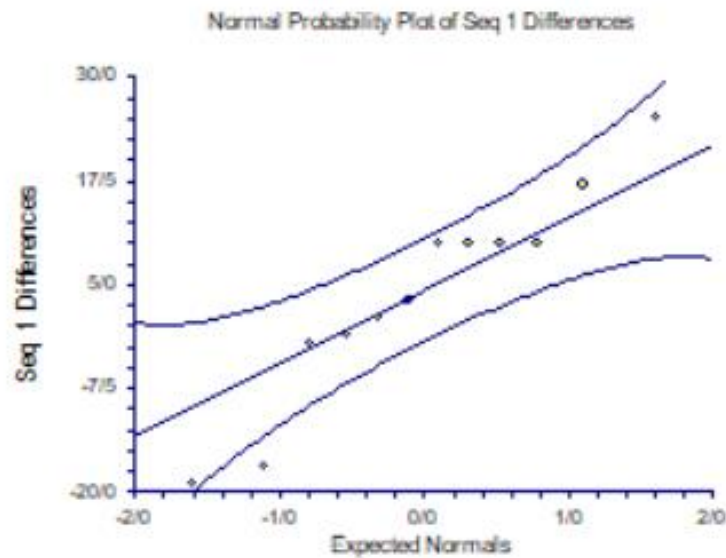
Period Plot

Period Plot



نمودارهای احتمال

Probability Plots



پایان

با تشکر از توجه شما...

