Nemenyi Post-Hoc Test

```
>Warning # 4492 on line 13434 in column 42.  Text: internet_bin
>The (ADD) VALUE LABELS command included a symbol other than a value where a
>value (either numeric or string) was expected.  For compatibility with
>previous systems, a parenthesized value would have been acceptable.  All valu
e
>labels up to the next slash will be ignored.
```

```
>Warning # 2004 on line 13438.  Command name: SUBTITLE
>The subtitle given exceeds 60 characters in length.  The first 60 characters
>will be used.
```

Nemenyi post-Friedman comparisons
All G1-G2-G3 mean-rank contrasts with studentized-range adju

NPar Tests

Notes

Output Created		16-JUL-2026 16:49:11
Comments		
Input	Data	D:\DATA ANALYSIS\J Nonparametric Tests\Nemenyi Test\dataset.csv
	Active Dataset	NemenyiTestData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each test are based on all cases with valid data for the variable (s) used in that test.
Syntax		NPAR TESTS /FRIEDMAN=G1 G2 G3 /WILCOXON=G1 G2 G1 WITH G2 G3 G3 (PAIRED) /STATISTICS=DESCRIPT...
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.03
	Number of Cases Allowed[a]	393216

a. Based on availability of workspace memory.

[NemenyiTestData]

Nemenyi post-Friedman comparisons
All G1-G2-G3 mean-rank contrasts with studentized-range adju

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles 25th	Percentiles 50th (Median)
G1	649	11.40	2.745	0	19	10.00	11.00
G2	649	11.57	2.914	0	19	10.00	11.00
G3	649	11.91	3.231	0	19	10.00	12.00

Descriptive Statistics

	Percentiles 75th
G1	13.00
G2	13.00
G3	14.00

Friedman Test

Ranks

	Mean Rank
G1	1.76
G2	1.90
G3	2.34

Test Statistics[a]

N	649
Chi-Square	167.328
df	2
Asymp. Sig.	.000

a. Friedman Test

Wilcoxon Signed Ranks Test

Nemenyi post-Friedman comparisons
All G1-G2-G3 mean-rank contrasts with studentized-range adju

Ranks

		N	Mean Rank	Sum of Ranks
G2 - G1	Negative Ranks	187[a]	231.70	43328.00
	Positive Ranks	273[b]	229.68	62702.00
	Ties	189[c]		
	Total	649		
G3 - G2	Negative Ranks	72[d]	190.29	13701.00
	Positive Ranks	290[e]	179.32	52002.00
	Ties	287[f]		
	Total	649		
G3 - G1	Negative Ranks	120[g]	213.30	25595.50
	Positive Ranks	344[h]	239.20	82284.50
	Ties	185[i]		
	Total	649		

a. G2 < G1

b. G2 > G1

c. G2 = G1

d. G3 < G2

e. G3 > G2

f. G3 = G2

g. G3 < G1

h. G3 > G1

i. G3 = G1

Test Statistics[a]

	G2 - G1	G3 - G2	G3 - G1
Z	-3.577[b]	-10.297[b]	-10.099[b]
Asymp. Sig. (2-tailed)	.000	.000	.000

a. Wilcoxon Signed Ranks Test

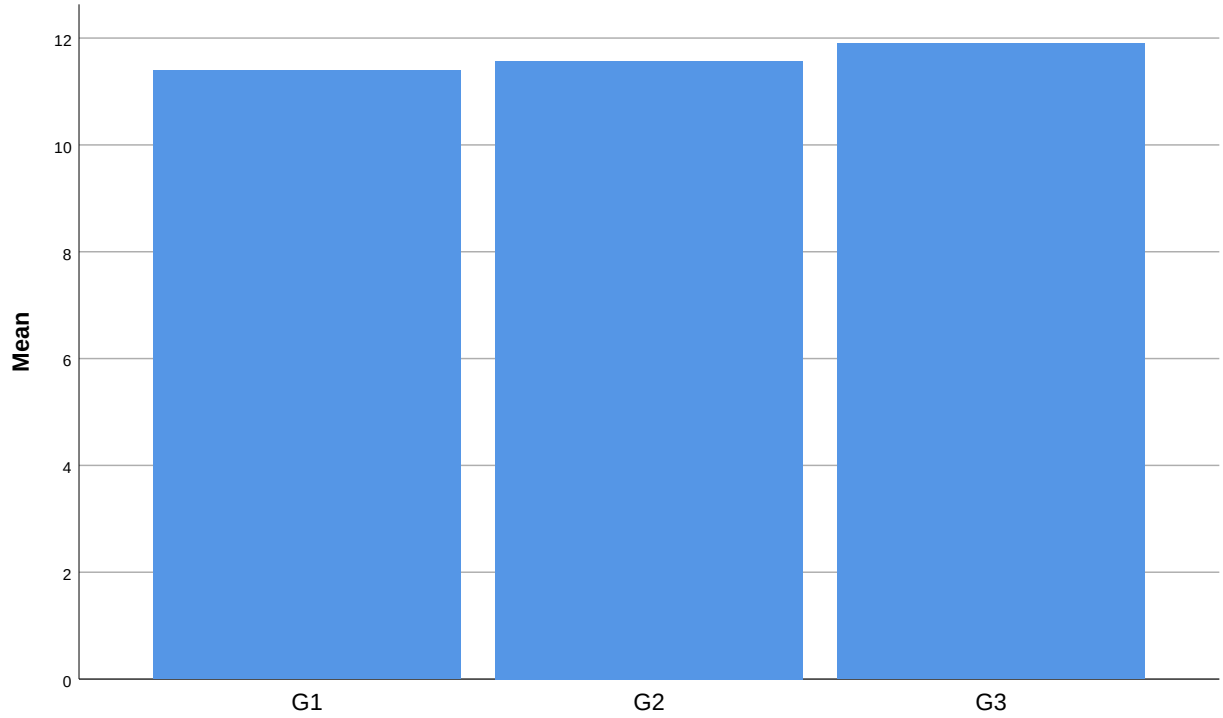
b. Based on negative ranks.

Graph

Notes

Output Created		16-JUL-2026 16:49:12
Comments		
Input	Data	D:\DATA ANALYSIS\J Nonparametric Tests\Nemenyi Test\dataset.csv
	Active Dataset	NemenyiTestData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Syntax		GRAPH /BAR(SIMPLE) =MEAN(G1) MEAN(G2) MEAN(G3).
Resources	Processor Time	00:00:00.62
	Elapsed Time	00:00:01.10

Nemenyi post-Friedman comparisons
All G1-G2-G3 mean-rank contrasts with studentized-range adju




```
==========================================================================
NEMENYI POST-HOC TEST
Formula: q_ij = |Rbar_i-Rbar_j| / sqrt[k(k+1)/(6n)]
Variables: within-student ranks of G1, G2, G3
critical_difference = 0.1301052369895711
minimum_p_value = 0.0
q_critical_alpha_05 = 2.3437005863784077
standard_error = 0.055512738165336896
Cross-check status: pass
==========================================================================
```