

Wilcoxon Rank-Sum Test

Wilcoxon Rank-Sum Test
Test-specific data preparation and execution

```
>Warning # 4492 on line 14436 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.
```

Wilcoxon rank-sum test

>Warning # 2004 on line 14440. Command name: SUBTITLE

>The subtitle given exceeds 60 characters in length. The first 60 characters
>will be used.

Wilcoxon rank-sum test
G1 pooled ranks for GP versus MS schools, shown as W and equ

NPar Tests

Notes

Output Created		16-JUL-2026 16:52:11
Comments		
Input	Data	D:\DATA ANALYSIS\J Nonparametric Tests\Wilcoxon Rank Sum Test\dataset.csv
	Active Dataset	WilcoxonRankSumTestDa ta
	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 /M-W=G1 BY school_n(1,2) /STATISTICS=DESCRIPT IVES QUARTILES.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.02
	Number of Cases Allowed ^a	449389

a. Based on availability of workspace memory.

[WilcoxonRankSumTestData]

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Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles	
						25th	50th (Median)
G1	649	11.40	2.745	0	19	10.00	11.00
school_n	649	1.35	.477	1	2	1.00	1.00

Descriptive Statistics

	Percentiles
	75th
G1	13.00
school_n	2.00

Mann-Whitney Test

Ranks

		school_n	N	Mean Rank	Sum of Ranks
G1	GP		423	366.14	154877.00
	MS		226	248.00	56048.00
	Total		649		

Test Statistics^a

G1	
Mann-Whitney U	30397.000
Wilcoxon W	56048.000
Z	-7.694
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: school_n

RANK

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Comments		
Input	Data	D:\DATA ANALYSIS\J Nonparametric Tests\Wilcoxon Rank Sum Test\dataset.csv
	Active Dataset	WilcoxonRankSumTestData
	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	All non-missing data are used.
Syntax		RANK VARIABLES=G1 (A) /RANK INTO wrs_rank /TIES=MEAN.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.04
Variables Created or Modified	wrs_rank	Rank of G1

Created Variables^a

Source Variable	Function	New Variable	Label
G1 ^b	Rank	wrs_rank	Rank of G1

a. Mean rank of tied values is used for ties.

b. Ranks are in ascending order.

Means

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Comments		
Input	Data	D:\DATA ANALYSIS\J Nonparametric Tests\Wilcoxon Rank Sum Test\dataset.csv
	Active Dataset	WilcoxonRankSumTestDa ta
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	For each dependent variable in a table, user- defined missing values for the dependent and all grouping variables are treated as missing.
	Cases Used	Cases used for each table have no missing values in any independent variable, and not all dependent variables have missing values.
Syntax		MEANS TABLES=wrs_rank BY school_n /CELLS=COUNT MEAN SUM.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

Case Processing Summary

	Included		Cases Excluded		Total	
	N	Percent	N	Percent	N	Percent
Rank of G1 * school_n	649	100.0%	0	0.0%	649	100.0%

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Report

Rank of G1

school_n	N	Mean	Sum
GP	423	366.13948	154877.000
MS	226	248.00000	56048.000
Total	649	325.00000	210925.000

Graph

Notes

Output Created		16-JUL-2026 16:52:11
Comments		
Input	Data	D:\DATA ANALYSIS\J Nonparametric Tests\Wilcoxon Rank Sum Test\dataset.csv
	Active Dataset	WilcoxonRankSumTestDa ta
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Syntax		GRAPH /BAR(GROUPED) =SUM(wrs_rank) BY school_n.
Resources	Processor Time	00:00:00.58
	Elapsed Time	00:00:00.63

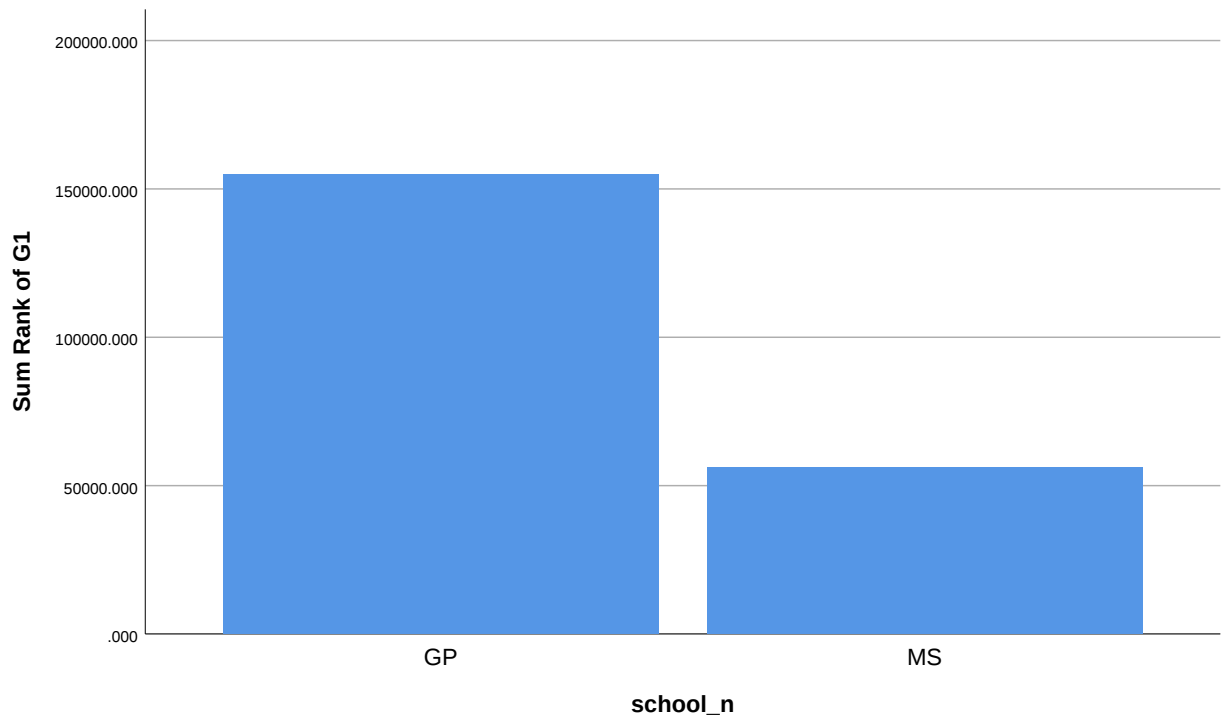
>Warning # 17848

>The requested bar chart type cannot be drawn with the provided data. Instead

,

>Graphics will attempt to draw a simple bar chart.

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WILCOXON RANK-SUM TEST
Formula: W_GP=sum of pooled midranks; U=W_GP-n_GP(n_GP+1)/2
Variables: G1, school
gp_rank_sum = 154877.0
p_value = 1.4239582478483665e-14
probability_superiority_gp_over_ms = 0.682033096926714
u_equivalent = 65201.0
Cross-check status: pass
=====
```