

Wald-Wolfowitz Two-Sample Runs Test

Wald-Wolfowitz Two-Sample Runs Test
Test-specific data preparation and execution

```
>Warning # 4492 on line 14360 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.
```

Wald-Wolfowitz two-sample runs test

>Warning # 2004 on line 14364. Command name: SUBTITLE

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

Wald-Wolfowitz two-sample runs test
Runs of school labels after pooling and ordering final grade

NPar Tests

Notes

Output Created		16-JUL-2026 16:52:01
Comments		
Input	Data	D:\DATA ANALYSIS\J Nonparametric Tests\Wald Wolfowitz Runs Test\dataset.csv
	Active Dataset	WaldWolfowitzRunsTestD ata
	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 /W-W=G3 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.

[WaldWolfowitzRunsTestData]

Wald-Wolfowitz two-sample runs test
Runs of school labels after pooling and ordering final grade

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles	
						25th	50th (Median)
G3	649	11.91	3.231	0	19	10.00	12.00
school_n	649	1.35	.477	1	2	1.00	1.00

Descriptive Statistics

	Percentiles
	75th
G3	14.00
school_n	2.00

Wald-Wolfowitz Test

Frequencies

	school_n	N
G3	GP	423
	MS	226
	Total	649

Test Statistics^{a,b}

		Number of Runs	Z	Asymp. Sig. (1- tailed)
G3	Minimum Possible	16 ^c	-24.201	.000
	Maximum Possible	378 ^c	7.132	1.000

a. Wald-Wolfowitz Test

b. Grouping Variable: school_n

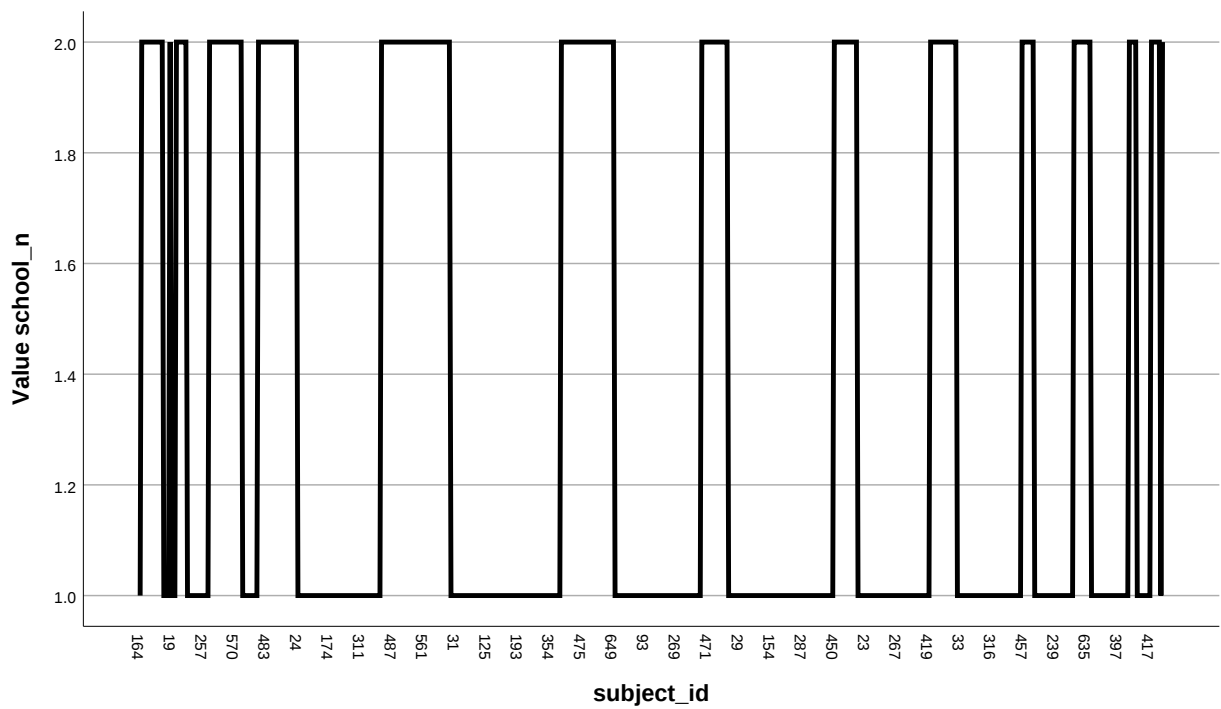
c. There are 15 inter-group ties involving 647 cases.

Graph

Wald-Wolfowitz two-sample runs test
Runs of school labels after pooling and ordering final grade

Notes

Output Created		16-JUL-2026 16:52:01
Comments		
Input	Data	D:\DATA ANALYSIS\J Nonparametric Tests\Wald Wolfowitz Runs Test\dataset.csv
	Active Dataset	WaldWolfowitzRunsTestD ata
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Syntax		GRAPH /LINE(SIMPLE) =VALUE(school_n) BY subject_id.
Resources	Processor Time	00:00:00.70
	Elapsed Time	00:00:00.90



Wald-Wolfowitz two-sample runs test
Runs of school labels after pooling and ordering final grade

```
=====
WALD-WOLFOWITZ TWO-SAMPLE RUNS TEST
Formula:  $E(R)=1+2n_1n_2/N$  and  $Var(R)=2n_1n_2(2n_1n_2-N)/[N^2(N-1)]$ 
Variables: G3, school labels
expected_runs = 295.60092449922956
p_value = 5.996580928044667e-117
runs = 30
variance = 133.4800984433666
z_statistic = -22.989065795455694
Cross-check status: pass
=====
```