

การใช้

# Nonparametric Test

28 ก.พ.2560

Untitled2 [DataSet2] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help



Visible: 2 of 2 Variables

	group	score	var	var	var	var	var	var	var	var	var	var	var	var	var	var	var
13	2.00	37.00															
14	2.00	32.00															
15	2.00	32.00															
16	2.00	19.00															
17	2.00	37.00															
18	2.00	30.00															
19	2.00	39.00															
20	2.00	35.00															
21	2.00	35.00															
22	2.00	20.00															
23	2.00	34.00															
24	2.00	16.00															
25	2.00	36.00															
26	2.00	29.00															
27	2.00	35.00															
28	2.00	37.00															
29	2.00	26.00															
30	1.00	36.50															
31	1.00	34.00															
32	1.00	31.00															
33	1.00	37.00															
34	1.00	35.00															
35	1.00	38.50															

Data View Variable View

IBM SPSS Statistics Processor is ready



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Untitled2 [DataSet2] - IBM SPSS Statistics Data Editor

File Edit View Data Transform **Analyze** Direct Marketing Graphs Utilities Add-ons Window Help

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	group	score	var	var	var	var	var	var	var	var	var	var
13	2.00	37.0										
14	2.00	32.0										
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16	2.00	19.0										
17	2.00	37.0										
18	2.00	30.0										
19	2.00	39.0										
20	2.00	35.0										
21	2.00	35.0										
22	2.00	20.0										
23	2.00	34.0										
24	2.00	16.0										
25	2.00	36.0										
26	2.00	29.0										
27	2.00	35.0										
28	2.00	37.0										
29	2.00	26.0										
30	1.00	36.5										
31	1.00	34.0										
32	1.00	31.0										
33	1.00	37.00										
34	1.00	35.00										
35	1.00	38.50										

Data View Variable View

IBM SPSS Statistics Processor is ready

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28/2/2560

	group	score
13	2.00	37.0
14	2.00	32.0
15	2.00	32.0
16	2.00	19.0
17	2.00	37.0
18	2.00	30.0
19	2.00	39.0
20	2.00	35.0
21	2.00	35.0
22	2.00	20.0
23	2.00	34.0
24	2.00	16.0
25	2.00	36.0
26	2.00	29.0
27	2.00	35.0
28	2.00	37.0
29	2.00	26.0
30	1.00	36.5
31	1.00	34.0
32	1.00	31.0
33	1.00	37.00
34	1.00	35.00
35	1.00	38.50

- Reports
- Descriptive Statistics
- Tables
- Compare Means
- General Linear Model
- Generalized Linear Models
- Mixed Models
- Correlate
- Regression
- Loglinear
- Neural Networks
- Classify
- Dimension Reduction
- Scale
- Nonparametric Tests**
- Forecasting
- Survival
- Multiple Response
- Missing Value Analysis...
- Multiple Imputation
- Complex Samples
- Quality Control
- ROC Curve...



- One Sample...
- Independent Samples...
- Related Samples...
- Legacy Dialogs

Visible: 2 of 2 Variables

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23	2.00	34.0											
24	2.00	16.0											
25	2.00	36.0											
26	2.00	29.0											
27	2.00	35.0											
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Reports  
Descriptive Statistics  
Tables  
Compare Means  
General Linear Model  
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Correlate  
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Neural Networks  
Classify  
Dimension Reduction  
Scale  
Nonparametric Tests  
Forecasting  
Survival  
Multiple Response  
Missing Value Analysis...  
Multiple Imputation  
Complex Samples  
Quality Control  
ROC Curve...

One Sample...  
Independent Samples...  
Related Samples...  
Legacy Dialogs  
Chi-square...  
Binomial...  
Runs...  
1-Sample K-S...  
2 Independent Samples...  
K Independent Samples...  
2 Related Samples...  
K Related Samples...

Data View Variable View

Legacy Dialogs

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File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help

Visible: 2 of 2 Variables

	group	score
13	2.00	37.0
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21	2.00	35.0
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26	2.00	29.0
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31	1.00	34.0
32	1.00	31.0
33	1.00	37.00
34	1.00	35.00
35	1.00	38.50

- Reports
- Descriptive Statistics
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- General Linear Model
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- Correlate
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- Classify
- Dimension Reduction
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- Nonparametric Tests**
  - One Sample...
  - Independent Samples...
  - Related Samples...
  - Legacy Dialogs
    - Chi-square...
    - Binomial...
    - Runs...
    - 1-Sample K-S...
    - 2 Independent Samples...**
    - K Independent Samples...
    - 2 Related Samples...
    - K Related Samples...
- Forecasting
- Survival
- Multiple Response
- Missing Value Analysis...
- Multiple Imputation
- Complex Samples
- Quality Control
- ROC Curve...

Data View Variable View

IBM SPSS Statistics Processor is ready

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22	2.00	20.00														
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24	2.00	16.00														
25	2.00	36.00														
26	2.00	29.00														
27	2.00	35.00														
28	2.00	37.00														
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30	1.00	36.50														
31	1.00	34.00														
32	1.00	31.00														
33	1.00	37.00														
34	1.00	35.00														
35	1.00	38.50														

Two-Independent-Samples Tests

Test Variable List

Exact...  
Options...

Test Variable List: [group], [score]

Grouping Variable: [ ]

Define Groups...

Test Type

Mann-Whitney U  Kolmogorov-Smirnov Z  
 Moses extreme reactions  Wald-Wolfowitz runs

OK Paste Reset Cancel Help

Data View Variable View

Untitled2 [DataSet2] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help

Visible: 2 of 2 Variables

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23	2.00	34.00															
24	2.00	16.00															
25	2.00	36.00															
26	2.00	29.00															
27	2.00	35.00															
28	2.00	37.00															
29	2.00	26.00															
30	1.00	36.50															
31	1.00	34.00															
32	1.00	31.00															
33	1.00	37.00															
34	1.00	35.00															
35	1.00	38.50															

Two-Independent-Samples Tests

Test Variable List: score

Grouping Variable: group(??)

Test Type

- Mann-Whitney U
- Kolmogorov-Smirnov Z
- Moses extreme reactions
- Wald-Wolfowitz runs

OK Paste Reset Cancel Help

Data View Variable View

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Visible: 2 of 2 Variables

	group	score	var	var	var	var	var	var	var	var	var	var	var	var	var	var	var
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24	2.00	16.00															
25	2.00	36.00															
26	2.00	29.00															
27	2.00	35.00															
28	2.00	37.00															
29	2.00	26.00															
30	1.00	36.50															
31	1.00	34.00															
32	1.00	31.00															
33	1.00	37.00															
34	1.00	35.00															
35	1.00	38.50															

Data View Variable View

Two-Independent-Samples Tests

Test Variable List

score [score]

Exact... Options...

Two Independent Samples:...

Group 1:

Group 2:

Continue Cancel Help

Test Type

Mann-Whitney U  Kolmogorov-Smirnov Z

Moses extreme reactions  Wald-Wolfowitz runs

OK Paste Reset Cancel Help



Visible: 2 of 2 Variables

	group	score	var	var	var	var	var	var	var	var	var	var	var	var	var	var
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29	2.00	26.00														
30	1.00	36.50														
31	1.00	34.00														
32	1.00	31.00														
33	1.00	37.00														
34	1.00	35.00														
35	1.00	38.50														

Two-Independent-Samples Tests

Test Variable List

score [score]

Exact...  
Options...

Two Independent Samples...

Group 1: 1  
Group 2: 2

Continue Cancel Help

Test Type

Mann-Whitney U  Kolmogorov-Smirnov Z  
 Moses extreme reactions  Wald-Wolfowitz runs

OK Paste Reset Cancel Help

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22	2.00	20.00														
23	2.00	34.00														
24	2.00	16.00														
25	2.00	36.00														
26	2.00	29.00														
27	2.00	35.00														
28	2.00	37.00														
29	2.00	26.00														
30	1.00	36.50														
31	1.00	34.00														
32	1.00	31.00														
33	1.00	37.00														
34	1.00	35.00														
35	1.00	38.50														

Two-Independent-Samples Tests

Test Variable List: คะแนน [score]

Grouping Variable: group(1 2)

Test Type

- Mann-Whitney U
- Kolmogorov-Smirnov Z
- Moses extreme reactions
- Wald-Wolfowitz runs

OK Paste Reset Cancel Help

Data View Variable View

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	group	score	var	var	var	var	var	var	var	var	var	var	var	var	var	var
13	2.00	37.00														
14	2.00	32.00														
15	2.00	32.00														
16	2.00	19.00														
17	2.00	37.00														
18	2.00	30.00														
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25	2.00	36.00														
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29	2.00	26.00														
30	1.00	36.50														
31	1.00	34.00														
32	1.00	31.00														
33	1.00	37.00														
34	1.00	35.00														
35	1.00	38.50														

Two-Independent-Samples Tests

Exact Tests

Asymptotic only

Monte Carlo

Confidence level: 99 %

Number of samples: 10000

Exact

Time limit per test: 5 minutes

Exact method will be used instead of Monte Carlo when computational limits allow.

For nonasymptotic methods, cell counts are always rounded or truncated in computing the test statistics.

Continue Cancel Help



- Output
  - Log
  - NPar Tests
    - Title
    - Notes
    - Active Dataset
    - Descriptive Statist
    - Mann-Whitney Tes
      - Title
      - Ranks
      - Test Statistics

### → NPar Tests

[DataSet2]

#### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
คะแนน	58	32.9310	6.04112	12.00	39.00
ชั้นปีการศึกษา	58	1.5000	.50437	1.00	2.00

#### Mann-Whitney Test

Double-click to activate

ชั้นปีการศึกษา	N	Mean Rank	Sum of Ranks
คะแนน ระแวง	29	33.74	978.50
สระแก้ว	29	25.26	732.50
Total	58		

#### Test Statistics<sup>a</sup>

	คะแนน
Mann-Whitney U	297.500
Wilcoxon W	732.500
Z	-1.919
Asymp. Sig. (2-tailed)	.055

a. Grouping Variable:  
ชั้นปีการศึกษา