

## Cohen's Kappa

Cohen's Kappa  
Import and test-specific preparation

## Dataset Name

### Notes

|                |                |                                                                                 |
|----------------|----------------|---------------------------------------------------------------------------------|
| Output Created |                | 16-JUL-2026 14:41:29                                                            |
| Comments       |                |                                                                                 |
| Input          | Data           | D:\DATA ANALYSIS\Chi Square and Categorical Data Tests\Cohens Kappa\dataset.csv |
|                | Filter         | <none>                                                                          |
|                | Weight         | <none>                                                                          |
|                | Split File     | <none>                                                                          |
| Syntax         |                | DATASET NAME<br>CohensKappaData.                                                |
| Resources      | Processor Time | 00:00:00.02                                                                     |
|                | Elapsed Time   | 00:00:00.01                                                                     |

### Warnings

The active dataset will replace the existing dataset named CohensKappaData.

school into school\_n

| Old Value | New Value | Value | Label |
|-----------|-----------|-------|-------|
|-----------|-----------|-------|-------|

|    |   |    |
|----|---|----|
| GP | 1 | GP |
| MS | 2 | MS |

reason into reason\_n

| Old Value | New Value | Value | Label |
|-----------|-----------|-------|-------|
|-----------|-----------|-------|-------|

|            |   |            |
|------------|---|------------|
| course     | 1 | course     |
| home       | 2 | home       |
| other      | 3 | other      |
| reputation | 4 | reputation |

guardian into guardian\_n

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| Old Value | New Value | Value  | Label |
|-----------|-----------|--------|-------|
| father    | 1         | father |       |
| mother    | 2         | mother |       |
| other     | 3         | other  |       |

## Nominal Cohen kappa

>Warning # 2004 on line 7863. Command name: SUBTITLE

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

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## Crosstabs

### Notes

|                        |                                |                                                                                                                                   |
|------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Output Created         |                                | 16-JUL-2026 14:41:30                                                                                                              |
| Comments               |                                |                                                                                                                                   |
| Input                  | Data                           | D:\DATA ANALYSIS\I Chi Square and Categorical Data Tests\Cohens Kappa\dataset.csv                                                 |
|                        | Active Dataset                 | CohensKappaData                                                                                                                   |
|                        | 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 table are based on all the cases with valid data in the specified range(s) for all variables in each table.   |
| Syntax                 |                                | CROSSTABS<br>/TABLES=grade1 BY grade2<br>/FORMAT=AVALUE TABLES<br>/STATISTICS=KAPPA<br>/CELLS=COUNT ROW COLUMN /COUNT ROUND CELL. |
| Resources              | Processor Time                 | 00:00:00.02                                                                                                                       |
|                        | Elapsed Time                   | 00:00:00.02                                                                                                                       |
|                        | Dimensions Requested           | 2                                                                                                                                 |
|                        | Cells Available                | 524245                                                                                                                            |

[CohensKappaData]

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**Case Processing Summary**

|                                               | Valid |         | Cases Missing |         | Total |         |
|-----------------------------------------------|-------|---------|---------------|---------|-------|---------|
|                                               | N     | Percent | N             | Percent | N     | Percent |
| G1 ordinal grade band * G2 ordinal grade band | 649   | 100.0%  | 0             | 0.0%    | 649   | 100.0%  |

**G1 ordinal grade band \* G2 ordinal grade band Crosstabulation**

|                       |               |                                | G2 ordinal grade band |              |
|-----------------------|---------------|--------------------------------|-----------------------|--------------|
|                       |               |                                | Low below 10          | Medium 10-13 |
| G1 ordinal grade band | Low below 10  | Count                          | 107                   | 50           |
|                       |               | % within G1 ordinal grade band | 68.2%                 | 31.8%        |
|                       |               | % within G2 ordinal grade band | 73.8%                 | 14.2%        |
|                       | Medium 10-13  | Count                          | 38                    | 274          |
|                       |               | % within G1 ordinal grade band | 11.2%                 | 80.6%        |
|                       |               | % within G2 ordinal grade band | 26.2%                 | 77.8%        |
|                       | High 14-16    | Count                          | 0                     | 28           |
|                       |               | % within G1 ordinal grade band | 0.0%                  | 21.9%        |
|                       |               | % within G2 ordinal grade band | 0.0%                  | 8.0%         |
|                       | Very high 17+ | Count                          | 0                     | 0            |
|                       |               | % within G1 ordinal grade band | 0.0%                  | 0.0%         |
|                       |               | % within G2 ordinal grade band | 0.0%                  | 0.0%         |
| Total                 |               | Count                          | 145                   | 352          |
|                       |               | % within G1 ordinal grade band | 22.3%                 | 54.2%        |
|                       |               | % within G2 ordinal grade band | 100.0%                | 100.0%       |

Nominal Cohen kappa  
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**G1 ordinal grade band \* G2 ordinal grade band Crosstabulation**

|                       |               |                                | G2 ordinal grade band |               |
|-----------------------|---------------|--------------------------------|-----------------------|---------------|
|                       |               |                                | High 14-16            | Very high 17+ |
| G1 ordinal grade band | Low below 10  | Count                          | 0                     | 0             |
|                       |               | % within G1 ordinal grade band | 0.0%                  | 0.0%          |
|                       |               | % within G2 ordinal grade band | 0.0%                  | 0.0%          |
|                       | Medium 10-13  | Count                          | 27                    | 1             |
|                       |               | % within G1 ordinal grade band | 7.9%                  | 0.3%          |
|                       |               | % within G2 ordinal grade band | 23.1%                 | 2.9%          |
|                       | High 14-16    | Count                          | 88                    | 12            |
|                       |               | % within G1 ordinal grade band | 68.8%                 | 9.4%          |
|                       |               | % within G2 ordinal grade band | 75.2%                 | 34.3%         |
|                       | Very high 17+ | Count                          | 2                     | 22            |
|                       |               | % within G1 ordinal grade band | 8.3%                  | 91.7%         |
|                       |               | % within G2 ordinal grade band | 1.7%                  | 62.9%         |
| Total                 |               | Count                          | 117                   | 35            |
|                       |               | % within G1 ordinal grade band | 18.0%                 | 5.4%          |
|                       |               | % within G2 ordinal grade band | 100.0%                | 100.0%        |

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**G1 ordinal grade band \* G2 ordinal grade band Crosstabulation**

|                       |               |                                | Total  |
|-----------------------|---------------|--------------------------------|--------|
| G1 ordinal grade band | Low below 10  | Count                          | 157    |
|                       |               | % within G1 ordinal grade band | 100.0% |
|                       |               | % within G2 ordinal grade band | 24.2%  |
|                       | Medium 10-13  | Count                          | 340    |
|                       |               | % within G1 ordinal grade band | 100.0% |
|                       |               | % within G2 ordinal grade band | 52.4%  |
|                       | High 14-16    | Count                          | 128    |
|                       |               | % within G1 ordinal grade band | 100.0% |
|                       |               | % within G2 ordinal grade band | 19.7%  |
|                       | Very high 17+ | Count                          | 24     |
|                       |               | % within G1 ordinal grade band | 100.0% |
|                       |               | % within G2 ordinal grade band | 3.7%   |
| Total                 |               | Count                          | 649    |
|                       |               | % within G1 ordinal grade band | 100.0% |
|                       |               | % within G2 ordinal grade band | 100.0% |

**Symmetric Measures**

|                      |       | Value | Asymptotic<br>Standard Error <sup>a</sup> | Approximate T <sup>b</sup> | Approximate<br>Significance |
|----------------------|-------|-------|-------------------------------------------|----------------------------|-----------------------------|
| Measure of Agreement | Kappa | .610  | .027                                      | 23.178                     | .000                        |
| N of Valid Cases     |       | 649   |                                           |                            |                             |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

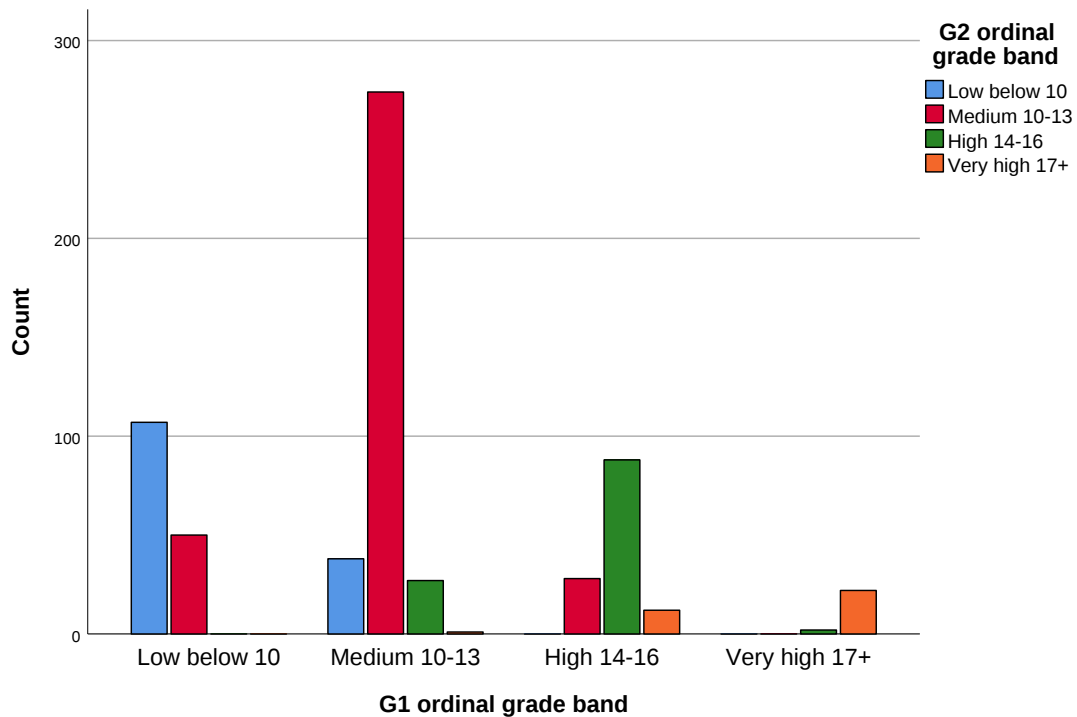
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## Graph

### Notes

|                |                                |                                                                                  |
|----------------|--------------------------------|----------------------------------------------------------------------------------|
| Output Created |                                | 16-JUL-2026 14:41:30                                                             |
| Comments       |                                |                                                                                  |
| Input          | Data                           | D:\DATA ANALYSIS\ Chi Square and Categorical Data Tests\Cohens Kappa\dataset.csv |
|                | Active Dataset                 | CohensKappaData                                                                  |
|                | Filter                         | <none>                                                                           |
|                | Weight                         | <none>                                                                           |
|                | Split File                     | <none>                                                                           |
|                | N of Rows in Working Data File | 649                                                                              |
| Syntax         |                                | GRAPH /BAR(GROUPED) =COUNT BY grade1 BY grade2.                                  |
| Resources      | Processor Time                 | 00:00:00.37                                                                      |
|                | Elapsed Time                   | 00:00:00.45                                                                      |

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```
=====
=====
COHEN'S KAPPA
=====
=====
Formula: kappa = (P_o-P_e)/(1-P_e)
Variables: G1 grade band, G2 grade band
cohens_kappa = 0.610017494485434
observed_agreement = 0.7565485362095532
p_value = 7.65551073960406e-119
z_value = 23.177634403770856
Cross-check status: pass
=====
=====
```