

EXAMPLE: <https://www.cedu.niu.edu/walker/statistics/Lab>

A researcher would like to evaluate the effects of four teaching methods. Twenty-eight junior high students were randomly selected. They were then randomly assigned to one of four teaching methods: A, B, C, and D. Below are their scores on the final examination. Different subjects are used for all conditions of the experiment.

| Method A | Method B | Method C | Method D |
|-----------|-----------|-----------|-----------|
| Value = 1 | Value = 2 | Value = 3 | Value = 4 |
| 14 | 17 | 14 | 8 |
| 12 | 15 | 11 | 6 |
| 10 | 12 | 10 | 5 |
| 10 | 9 | 10 | 4 |
| 9 | 9 | 8 | 2 |
| 6 | 7 | 7 | 2 |
| 5 | 7 | 7 | 2 |

Dataset: data002.csv

1 Question I

1. Identify the test to apply for detecting differences between the teaching methods
2. Explain and justify the premises of the test to apply here
3. Analyze and conclude if the researcher found differences among these teaching methods
4. Which method do you propose to apply in ahead?. Justify your answer.

2 Question II

Suppose that the Twenty-eight junior high students were randomly selected by gender as well, and analyze the influence of this new feature based on the **dataset: data003.csv**

1. Identify the test to detect whether there are differences between the teaching methods
2. Explain and justify the premises to apply one here.
3. Analyze the interaction between the factors gender and teaching method and its influence on the outcomes.
4. Is there a teaching method more likely to females rather than males? Justify your answer.