Three-way ANOVA

The **THREE-WAY ANOVA** determines how a response is affected by three factors.

Assumptions

The results can be considered reliable as long as the following assumptions are met: response variable must be normally distributed, samples are independent, variances of populations are equal, and responses for a given group are independent and identically distributed normal random variables.

How To

- ✓ Run**: STATISTICS->ANALYSIS OF VARIANCE (ANOVA)->THREE-WAY ANOVA...**
- ✓ Select a **RESPONSE** variable and three **FACTOR** variables (nominal variables)**.**
- ✓ Factor can be one of two types: fixed or random.
  - Fixed factors: For a particular factor, we assume that the levels of the factor that we have represented in our experiment compose all possible levels of the factor in the population. That is, we have presented all possible levels (e.g., types of teaching method) in our experiment.
  - Random Factors: We assume that the levels of a factor in our experiment have been randomly assigned from all possible levels of the factor that exist in the real world.
- ✓ **Casewise** deletion is used for missing values removal.

Results

Analysis of variance table and results of post-hoc analysis are shown. More information is available in the "One-way ANOVA" chapter.