

Chapter 11 – Analysis of Variance (ANOVA) Study Guide

OBJECTIVES:

The student will be able to:

1. Explain the assumptions and conditions for ANOVA.
2. Compute and interpret a one-way (single factor) ANOVA.
3. Select appropriate post-hoc tests for a statistically significant one-way ANOVA.
4. Compute and interpret post-hoc tests to determine which pairs of means from the one-way ANOVA are significantly different.
5. Compute and interpret the Kruskal-Wallis test (a non-parametric test similar to a one-way ANOVA).
6. Compute and interpret a two-way (factorial) ANOVA.
7. Write about statistical tests performed in this chapter.

TERMINOLOGY:

- one-way ANOVA
- ANOVA F (omnibus F or overall F)
- post-hoc multiple comparisons
 - LSD (least significant differences) test
 - Scheffe test
 - Tukey HSD (honestly significant differences) test
 - Games-Howell test
- Kruskal-Wallis H test
- two-way (factorial) ANOVA

ASSIGNMENTS: See additional activities and extra SPSS problems for assignment examples.