

ANCOVA

1. Describe a research situation in which ANCOVA is an appropriate analysis.
2. What are the purposes of ANCOVA?
3. Compare and contrast ANOVA and ANCOVA.
4. What is adjusted means and how do you obtain them?
5. Given a small data set, apply ANCOVA. Make an ANCOVA table.
6. What are the assumptions of ANCOVA? What are the consequences if the assumptions are violated?
7. Explain the dangers of using ANCOVA with intact groups.
8. Why should the gain score analysis be avoided in a certain situation?

Repeated Measures

9. Describe various situations where repeated measures can be used: single group repeated measures, split plot design, multiple between-factors and/or multiple within-factors, etc.
10. Differentiate within-factor from between-factor.
11. Describe advantages and disadvantages of repeated measures.
12. Given a small data set for single group repeated measures, construct an ANOVA table.
13. What are the assumptions of repeated measures analysis?

Multiple Regression

14. Describe various situations where the simple regression analysis can be used. Identify your IV and DV.
15. Distinguish y' (predicted criterion) and y (actual criterion).
16. Compare and contrast r_{XY} and r^2_{XY} .
17. Describe various situations where the multiple regression analysis can be used. Identify your IVs and DV.
18. Compare and contrast R and R^2 .
19. Compare and contrast regression coefficients and beta weights.
20. Describe tests of significance in the multiple regression.
21. Describe "cross validation" in the context of the multiple regression.