

Name: _____

Problem Set 13

1. A team of researchers is interested in sexual aggression in men between the ages of 20 and 40. They randomly selected 60 men to participate in the study with the constraint that each group consisted of men of the same age. That is, the ages of men in the control group and both treatment groups must be the same.

Aggression scores for control and treatment groups for men of different ages.

Age	Placebo	Hormone X	Hormone Y
28	47.84	35.84	72.96
35	41.67	40.57	69.76
20	50.63	32.03	78.46
28	51.44	36.54	72.64
29	44.27	39.07	71.90
32	55.95	40.30	69.90
39	55.95	48.12	61.98
29	49.81	37.06	72.54
32	51.64	39.52	71.10
24	50.87	32.80	77.08
38	48.00	44.29	64.95
36	53.45	42.86	66.78
38	54.08	43.63	65.39
38	53.56	46.27	64.72
30	56.45	39.32	71.29
39	53.34	50.92	59.15
35	55.95	41.47	69.70
25	43.99	33.32	73.07
38	49.90	45.33	64.95
36	49.22	43.57	65.97

- a. Conduct an ANOVA
- i. What is the biological question(s) this test is designed to answer?

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ii. Report your conclusions in an ANOVA summary table.

iii. What is the biological significance of your conclusion?

b. Conduct an ANCOVA

i. What is the biological question(s) this test is designed to answer?

ii. Report your conclusions in an ANOVA summary table.

iii. What is the biological significance of your conclusion?

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vi. What is the biological significance of your conclusion?

b. Conduct an ANCOVA

vii. What is the biological question(s) this test is designed to answer?

viii. Report your conclusions in an ANOVA summary table.

ix. What is the biological significance of your conclusion?

SPSS Tutorial

- Click Analyze
 - Click General Linear Model
 - Click Univariate (opens a dialog box)
 - Highlight dependent variable and click right arrow next to dependent variable
 - Highlight treatment variable and click right arrow next to fixed factor
 - Highlight covariate and click right arrow next to covariate
 - Click Model (opens a dialog box)
 - Click the Custom radio button
 - Click the fixed factor, make sure the drop down menu beneath Build Terms reads “Main effects”, then click the right arrow
 - Click the covariate, make sure the drop down menu beneath Build Terms reads “Main effects”, then click the right arrow
 - Click the fixed factor, hold down the Ctrl key, and click the covariate, make sure the drop down menu beneath Build terms read “Interaction”, then click the right arrow
 - Click Continue
 - Click OK