

1. Nehlsen-Cannarella *et al* conducted a study (*Medecine and Science in Sports and Exercise* 23: 64) to examine the relation of immunoglobulin level to moderate exercise training. Subjects were 36 nonsmoking women, assigned randomly to either of two groups (exercise, non-exercise). Measurements of serum levels of IgA were made at three points in time: baseline (B), at the end of 6 weeks (M), and at the end of 15 weeks (E).

(A) Define variables in a tabular format, as follows.

<u>name</u>	<u>symbol</u>	<u>scale</u>
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scale = nominal, ordinal, or cardinal

cardinal = interval or ratio scale.

(B) Using the symbols, write a general linear model relating the response variable to explanatory variable(s) and interaction terms (if appropriate).

(C) Complete the first two columns of the ANOVA table source df

(D) State the name of the analysis, from the following list.

t-test, one-way ANOVA, two-way ANOVA, three-way ANOVA

paired comparisons, randomized blocks, repeated measures

hierarchical (nested) ANOVA

regression, multiple regression,

1-way ANCOVA (= 1 nominal and 1 cardinal scale explanatory variable)

2-way ANCOVA (= 2 nominal and 1 cardinal scale explanatory variable)

none of the above.