

For each of the following data situations (1 and 2):

- (A) Define variables in a tabular format, as follows: name symbol scale [3]/variable
 scale = nominal, ordinal, or cardinal (where cardinal = interval or ratio scale)
- (B) Using your symbols, write a general linear model relating the response variable to explanatory variable(s) and interaction terms (if appropriate). [1]/term
- (C) Write the degrees of freedom below the response variable, each explanatory variable, and the error term in the model [1]/term
- (D) Complete the first two columns of the ANOVA table [2]/term
- (E) State the name of the analysis, from the following list. [1]
 t-test, one-way ANOVA
 regression (one explanatory variable), multiple regression (two or more explanatory)
 2-way ANOVA = 2 nominal scale (categorical) explanatory variables
 none of the above.

1. Height is frequently named as a good predictor variable of weight among people of the same age and gender. Roberts (*American Journal of Clinical Nutrition* 54:499) measured the heights (cm) and weights (kg) of 14 males between the ages of 19 and 26 years of age. Does weight depend on height ?

A. name symbol scale

D. source df

B. _____ = _____ + ϵ

C.

E.

2. Does blood pressure in hypertensive people depend on stress, as well as age and weight? For a random sample of 20 patients with hypertension, Daniel (*Biostatistics*, 1995,p 427) reported mean arterial blood pressure (mm Hg) in relation to 3 variables: age (years), weight (kg), and a measure of stress ranging from 8 to 99. (Assume no interactive effects of explanatory variables on the response variable).

A. name symbol scale

D. source df

B. _____ = _____ + ϵ

C.

E.