a) Means, sums of squares and cross products, standard deviations, and the correlation between X and Y.

b) Regression equation of Y on X.

c) Regression and residual sum of squares.

d) F ratio for the test of significance of the regression of Y on X, using the sums of squares (i.e., SSreg and SSres) and$ r\_{xy}^{2}$.

e) Variance of estimate and the standard error of estimate.

f) Standard error of the regression coefficient.

g) T ratio for the test of the regression coefficient. What should the square of the t equal? (In other words, what statistical calculated above should it equal?)

Using the regression equations, calculate the following:

h) Each person’s predicted scores, Y’, on the basis of the X’s (Report the first 3 subjects).

i) The sum of the predicted scores and their mean.

j) The residuals between the observed and predicted scores (y-y’) for each person and their sum, $Σ\left(y-y^{'}\right),$ and the sum of the squared residuals, $Σ(y-y')^{2}$.

k) Plot the data, the regression line, and the standardized residuals against the predicted scores.