

Seminar 22

1. A r^2 value close to 0 indicates a strong correlation between X and Y. (True/False)
2. If a line is fitted to a set of points by the method of least squares, the individual positive and negative errors from the line sum to zero. (True/False)
3. Suppose the slope of an estimating equation is positive. Then the value of r must be the positive square root of r^2 . (True/False)
4. The coefficient of correlation explains the percentage of the total variation of the dependent variable. (True/False)
5. The value of r^2 for a particular situation is 0.49. What is the coefficient of correlation in this situation?
a) 0.49 b) 0.07 c) 0.7 d) cannot be determined from information given
6. For the estimating equation to be a perfect estimator of the dependent variable, which of these would have to be true?
a) The standard error of the estimate is zero.
b) All the data points are on the regression line.
c) The coefficient of determination is -1.
d) (a) and (b) but not (c).
e) All of these.
7. A random sample of eight introductory accounting texts yielded the figures shown in the table for annual sales (in thousands) and price (in dollars).

Sales	12.2	18.6	29.2	15.7	25.4	35.2	14.7	11.1
Price	29.2	30.5	29.7	31.3	30.8	29.9	27.8	27.0

- a) Find the sample correlation coefficient between sales and price. Interpret the result.
- b) Find the sample coefficient of determination. Interpret the result.

8.

Hours of part-time job working	8	5	5	13	10	5	13	15	2	8
Examination Result	60	65	85	45	50	70	65	45	80	60

- a) Calculate the Spearman's rank coefficient, r_s for the data set.
- b) Interpret the relationship between the two variables.