

MS Module 19 Correlation basic practice exam questions

(The attached PDF file has better formatting.)

[The practice problems in the 24 modules explain the statistical procedures; the practice exam questions in this thread shows what you will be asked on the final exam.]

Question 19.1:  $t$  value for correlation

A regression model  $Y_j = \beta_0 + \beta_1 X_j + \epsilon_j$  has  $N = 12$  observations. The sample correlation between  $X$  and  $Y$  is 0.49. We test the null hypothesis  $H_0: \rho = 0$ .

What is the  $t$  value to test the null hypothesis?

Answer 19.1:  $0.49 \times (12 - 2)^{0.5} / (1 - 0.49^2)^{0.5} = 1.778$