

MS Module 19 Correlation basic practice exam questions

(The attached PDF file has better formatting.)

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