A22

Monday, 25. November 2019 15:05

A22

ad assignment A21: How great would an observed correlation coefficient r_{xy} have to be in order to be significant on an error level of α=5% for a sample size n=14, i.e. to lead to the rejection of the null hypothesis H_0: ρ=0,8 in favor of the alternative hypothesis H_1: ρ>0,8?
Answer the question

a) for t_{calc} b) for z_{calc} (after Fishers z-transform)

$t_{calc} := r_{xy} \cdot \sqrt{\frac{n-2}{1-r_{xy}^2}}$ $z_{Calc} := z \cdot \sqrt{n-3}$

$t_{crit} = 1.7823$ $z_{crit} = 1.6449$

r0	0.8		z0	1.09861
r	tcalc		z	zcalc
0.99	7.77618		2.64665	5.13427
0.98	5.22233		2.29756	3.97646
0.97	4.03733		2.0923	3.29568
0.96	3.29914		1.94591	2.81017
0.95	2.7735		1.83178	2.43164
0.94	2.36914		1.73805	2.12077
0.93	2.042		1.65839	1.85657
0.92	1.76777		1.58903	1.62652