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Monday, 18. November 2019 13:32

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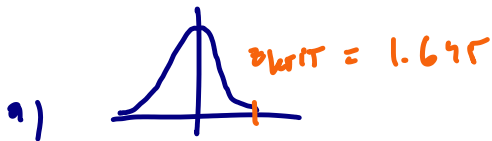
From two samples with sizes $n_1=8$ and $n_2=13$ we know the two correlation coefficients $r_1=0,8$ and $r_2=0,1$. For an error level of $\alpha=5\%$ test the null hypothesis $H_0: \rho_1=\rho_2$ against the three alternative hypotheses a) $H_1: \rho_1>\rho_2$, b) $H_1: \rho_1<\rho_2$, c) $H_1: \rho_1\neq\rho_2$, by using Fishers z-transform and the following formula (standard normal distribution):

$$z_{calc} = (z_1 - z_2) / \sqrt{\frac{1}{n_1-3} + \frac{1}{n_2-3}}$$

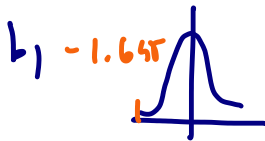
$$z_1 = 1.0986 \quad z_2 = 0.1003$$

$$z_{calc} = (z_1 - z_2) / \sqrt{\frac{1}{5} + \frac{1}{10}}$$

$$= 1.7226$$

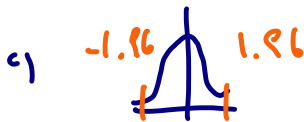


$$z_{calc} > z_{crit} \\ \Rightarrow \text{reject } H_0$$



$$z_{calc} < z_{crit}$$

don't reject H_0



$$-z_{crit} < z_{calc} < z_{crit}$$

\Rightarrow don't reject H_0