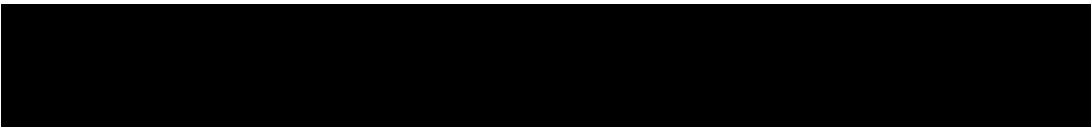




Statistical Connections

Connecting Hypothesis Testing and Estimation



Doing a test on $H_0: \mu = \mu_0$ against $H_a: \mu \neq \mu_0$ at a level of significance α is equivalent to constructing a $(1 - \alpha)100\%$ confidence interval for the parameter of interest μ . If the hypothesized value μ_0 is not contained in the confidence interval, this leads to the rejection of null hypothesis H_0 . If the hypothesized value μ_0 is contained in the confidence interval constructed, then the null hypothesis H_0 is not rejected. This relationship is also true for other parameters like the population proportion p and population variance σ^2 .

