

ABSTRACT

THE DETERMINATION OF SAMPLE SIZE FOR EXPONENTIAL DISTRIBUTION LIFE TIME SYSTEM USING SEQUENTIAL RATIO TEST

By

Faradhika Nitasya

The life time is an observed time interval of an object when the first time into the observation until the object is disfunction or die. Sequential Ratio Test (SRT) is a test that performed at each stage, which examined one by one until will be obtained a conclusion to reject, accept, or continue the observation. Using this test can be obtained ideal sample size and can save the time and costs because the samples were tested in stages. In this research the life time distribution is used by Exponential distribution. The determination of sample size using SRT has $H_0: \mu \geq \mu_0$ with $\mu_0 = 200$ hours and $H_1: \mu \leq \mu_1$ with $\mu_1 = 100$ hours, and the value of (producer risk) and (consumer risk) that have been determined. The simulation results show that the ideal sample size is 29 with and are predetermined.

Keywords: Life time, Exponential Distribution, Sequential Ratio Test, Hypothesis, Sample Size.