

The Bachelor's thesis concerns the construction of bounded length sequential intervals with predetermined confidence. This paper analyses some methods, which solve this problem. In the first part we deal with a special case of random sample from normal population. For a known variance we use knowledge from nonsequential theory of interval estimation. We describe Stein's two-stage procedure for an unknown variance. Furthermore, we determine expected value of total sample range for various interval lengths. The second part generally considers a random sample from population with unknown finite variance. We present modified Stein's procedure and sequential Wald's procedure. Finally using simulation, we endeavor to find out a distribution of random variable, which corresponds to the sample range in case of unknown variance. We do this for all of the three mentioned procedures.