

In this thesis we look at Glivenko-Cantelli theorem and its generalization. Firstly we prove the classical version of this theorem with empirical distribution function and as its corollary we show uniform convergence of sample quantiles to the actual ones. Next we give definition of bracketing number and prove generalized version of Glivenko-Cantelli theorem for function classes with finite bracketing number. Then we show how from the generalized version of the theorem follows the classical one not only for real random variables, but also for random vectors. Lastly we give examples of some Glivenko-Cantelli classes of functions. Throughout the work we also have applications of proven theorems in mind.