Abstract

Theory of approximation of functions had been studied throughout trigonometric polynomials , algebraic polynomials and nonlinear polynomials by number of research works they also had been studied through Jackson and Bernstein theorems . The first person who invented the best approximation problem is Chebyshev , which appears in his research , was presented to the Academy of science in January 1853.

We are going in this research to study the best and multi best approximation of functions in the space Lp(μ) where this spaces consists of all bounded measurable function f (where every two functions are considered equal if they are equal μ - almost every where (a.e)), and satisfying .

$(\int |f|^p d\mu)^{1/p} < \infty$