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ON RELATION BETWEEN THE NORM AND THE QUASINORM OF THE SUM OF POLYNOMIALS DEPENDENT ON DIFFERENT VARIABLES

Abstract

In the paper, the matter of approximation of a function of two variables by the sums of polynomials of one variable is investigated. At first the relation is established in the form of the estimates between the norms and the quasinorms of the sum of polynomials of one variable. Then the existence in theorem approximation of continuous functions of two variables on a rectangle by the sums of polynomials of one variable is given. Furthermore, a sufficient condition is established for extremal property of the sum of polynomials in approximation of a function of two variables. The lower estimations of such a best approximation are also obtained in the paper.