

THE ROLE OF SMOOTHNESS IN APPROXIMATION BY LAGRANGE INTERPOLANTS

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Considering Lagrange interpolating polynomial $L_{n-1}(f, x)$ of a smooth function defined on uniform partition of a given mesh we shall show that the interpolant does not converge to the function which has nice mathematical properties of approximation. The (c, k) mean of $L_{n-1}(f, x)$ is also not convergent for any k .