RATIONAL APPROXIMATION IN $L_1(\Gamma)$ METRIC ON CURVES IN THE COMPLEX PLANE

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Abstract. In this paper, the approximation for the class of functions $L_1(\Gamma)$ is investigated by means of rational functions of the form $R_n(z) = \sum_{k=-n}^{n} a_k (z-b)^k$. This class is difficult of access and little studied. The functions from $L_1(\Gamma)$ satisfying natural condition of Lipschitz on the curve $\Gamma$, namely, $\|f(z(s+h)) - f(z(s))\|_{L_1(\Gamma)} \leq const |h|^{\alpha}$ are considered. The corresponding approximation theorem is proved.


Keywords and phrases: Rational approximation, Hölder class, rectifiable Jordan curve, complex plane.

REFERENCES

