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FRACTAL NATURE AND CHAOTIC BEHAVIOR IN DYNAMICS OF EXPONENTIAL-MEROMORPHIC FAMILY

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Abstract

The complex dynamics of one parameter families $f_\lambda(z) = \lambda \frac{z}{z-\mu} e^z$, $\lambda > 0$, $z \in \mathbb{C} \setminus \{\mu\}$, where μ is a positive finite integer, are explored by showing images in the present paper. Fractal nature and chaotic behaviour in the dynamics of the function $f_\lambda(z)$ in complex plane are seen by generating Julia sets of $f_\lambda(z)$ using computer graphics.

Key Words : *Dynamics, Iteration, Julia sets.*

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