South East Asian J. of Mathematics and Mathematical Sciences
Vol. 19, No. 1 (2023), pp. 43-54

DOI: 10.56827/SEAJMMS.2023.1901.4 **ISSN (Online): 2582-0850**

ISSN (Print): 0972-7752

A NOTE ON THE ORDER AND TYPE OF BICOMPLEX VALUED ENTIRE FUNCTIONS

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(**Received:** *Dec. 04, 2021* **Accepted:** *Mar. 27, 2023* **Published:** *Apr. 30, 2023)*

Abstract: The main target of this paper is to find out the estimates of the order and type of a bicomplex valued entire function. Also the famous Lucas's theorem on the zeros of a polynomial is deduced in the light of bicomplex analysis. A result is proved to show that the order and type remain invariant under differentiation of an entire function in $\mathbb{C}_2$. Also we prove some results related to Hadamard composition of two entire functions in $\mathbb{C}_2$. In fact, we find out here an estimate of the type of the Hadamard composition of two bicomplex valued entire functions. Also we show that the zeros of the derivative of a polynomial $P(z)$ in $\mathbb{C}_2$ are contained within the convex hull of the zeros of $P(z)$. Some examples are provided to justify the