

1125-VA-1155 **Rachel Victoria Barber*** (rvb41@msstate.edu), P.O. Box MA, 410 Allen Hall, 175 President's Circle, Mississippi State, MS 39762. *Low-Dimensional Reality-Based Algebras*.

In this paper we introduce the definition of a reality-based algebra as well as a subclass of reality-based algebras, table algebras. We look at a specific reality-based algebra(RBA) of dimension 5 of the form $\mathbb{C} \oplus M_2(\mathbb{C})$ and provide formulas for the structure constants of this algebra. We look at the structure constants and determine certain conditions when this RBA is a table algebra. (Received September 15, 2016)