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COMMUTATIVE MATRICES OF CLASS 4A AND ITS

ABSTRACT CHARACTERISTICS

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ABSTRACT

The contents of this paper is an extension to a new class, class 4-A to our previous work on square matrices of Class – 3.These two classes differ by their general form and algebraic nature. An attempt has been made to search for and finally establish a class of (infinite set) of square matrices where in commutative property for matrix multiplication is preserved. In addition to this, Eigen values and Eigen vectors of such commutative matrices have dominant role to understand salient features of the class under discussion. It is, as shown, the most dominating property that libra values are preserved under matrix addition, multiplication, and matrix inversion operation.

KEYWORDS: Classes, Libra Value, Commutative Property, Eigen Value

NOTATION: Class 4 – A, CJ4 – A ((n x n, L(A) = P), ZL*, CJ4 – A((n x n, L(A) = 3P + K), P4**

- ZL * – A class of square matrices for which Libra Value is Zero.

- P4** -- A property associated with the sum of all the entries of any row and any column and sum of all the entries of Non- leading diagonal.

- P and K are real values.