Using Primes, Real, and Complex Numbers To Prove That Two Matrices Are Similar

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Two matrices, in which their numbers are separated by a number defined by “n” or “ni”, being ‘i’ the imaginary unit, will be similar. This research will work with various types of squared matrices and with prime numbers that follow the Green-Tao theorem, complex numbers and others and the determinant will be searched. The following matrices will be used and this applies to every squared matrix used: matrix A, the value of each number will be separated by “n” which is a constant number; in matrix B, every value of the matrix will undergo a sum of the “n” value which is constant but for the second row, the first number of the row, will be separated by the sum of the previous number and “2n”; the rest of the rows will follow the rules of matrix A. The second option will only be used with prime numbers and the real numbers. It is important to clarify that the starting number of every matrix will be defined as “a” and “a” will be a constant number throughout the matrix, but it will change in every matrix. Complex numbers will be used as “n” in some cases. In other words, “n” will be “ni”. Equal determinants must be required to prove the investigation. It Is anticipated that the same determinants will be found. The possible applications for this research will be in quantum predictions and linear algebra development.

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