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A Condition for Anti-Diagonals Product Invariance Across Powers of 2×2 Matrix Sets Characterizing a Particular Class of Polynomial Families,

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Abstract

Motivated by some recent work on a particular class of polynomial families associated with certain types of integer sequences, we formulate a sufficient condition under which the anti-diagonals products across sets of characterizing 2×2 matrices remain invariant as matrix power increases. Two proofs are given along with some examples.