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*Combinatorial Proofs of Determinant Formulas for the Fibonacci and Lucas Polynomials,*

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**Abstract**

We provide combinatorial proofs of several formulas for the Fibonacci and Lucas polynomials as determinants of some recently introduced Hessenberg matrices. Our arguments make use of the basic definition of the determinant as a signed sum over the symmetric group and generalize prior results, which were shown algebraically using cofactor expansion and recurrences.