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The identities of the sum of binomial coefficients for the generalized 3-periodic Fibonacci sequences. (Chinese. English summary) [Zbl 07404526]

Summary: In this paper, firstly, we construct the general formula of the generalized 3-periodic Fibonacci sequences. Then under certain conditions, we give some identities of the sum of binomial coefficients for the generalized 3-periodic Fibonacci sequences and the generalized 3-periodic Lucas sequences by matrix method.

MSC:
11B39 Fibonacci and Lucas numbers and polynomials and generalizations
11B65 Binomial coefficients; factorials; \( q \)-identities

Keywords:
generalized 3-periodic Fibonacci sequences; matrix method; sum of binomial coefficients

Full Text: DOI