

عنوان مقاله:

The complex-type cyclic-Fibonacci sequence and its applications

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نویسندگان:

Ömür Deveci - Department of Mathematics, Kafkas University, Kars, Turkey

Özgür Erdağ - Department of Mathematics, Kafkas University, Kars, Turkey

Uğur Güngöz - Department of Mathematics, Kafkas University, Kars, Turkey

خلاصه مقاله:

In the present paper, we aim to generalize the notion of complex-type Fibonacci sequences to complex-type cyclic Fibonacci sequences. Firstly, we define the complex-type cyclic-Fibonacci sequence and then we give miscellaneous properties of this sequence by using the matrix method. Also, we study the complex-type cyclic-Fibonacci sequence modulo m . In addition, we describe the complex-type cyclic-Fibonacci sequence in a 2-generator group and investigate that in finite groups in details. Then, as our last result, we obtain the lengths of the periods of the complex-type cyclic-Fibonacci sequences in dihedral groups $D_{\{2\}}$, $D_{\{3\}}$, $D_{\{4\}}$, $D_{\{5\}}$, $D_{\{6\}}$ and $D_{\{8\}}$ with respect to their generating sets.

کلمات کلیدی:

The complex-type cyclic-Fibonacci sequence, Matrix, Group, Period

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