Thomas Koshy and Zhenguang Gao
Polynomial Extensions of a Diminnie Delight Revisited: Part II,
Fibonacci Quart. **56** (2018), no. 1, 10–17.

Abstract

Recently, we investigated the Fibonacci polynomial recurrences $a_{n+1} = a_n(\Delta^2 a_n^2 + 3)$, where $a_n = a_n(x)$, $a_0 = f_e$, e is an even positive integer, $\Delta = \sqrt{x^2+4}$, and $n \geq 0$; and $a_{n+2} = a_{n+1}(\Delta^2 a_n^2 + 2)$, where $a_1 = f_{2k}$; k is an odd positive integer; and $n \geq 1$ [10]. We also studied their Lucas counterparts: $a_{n+1} = a_n(a_n^2 - 3)$, where $a_0 = l_e$; e is an even positive integer; and $n \geq 0$; and $a_{n+2} = a_{n+1}(a_n^2 - 2) - 2$, where $a_1 = l_{2k}$; $a_2 = l_{4k}$; k is an odd positive integer; and $n \geq 1$ [10]. This article focuses on the Jacobsthal, Vieta, and Chebyshev extensions of these charming recurrences and their implications.