Thomas Koshy

Polynomial Extensions of the Lucas and Ginsburg Identities Revisited: Additional Dividends I,

Fibonacci Quart. 56 (2018), no. 2, 106–112.

Abstract

In [11], we extended the fascinating identity

$$g_{n+k}^3 - (-1)^k l_k g_n^3 + (-1)^k g_{n-k}^3 = \begin{cases} f_k f_{2k} g_{3n} & \text{if } g_n = f_n \\ (x^2 + 4) f_k f_{2k} g_{3n} & \text{if } g_n = l_n, \end{cases}$$

to Jacobsthal, Vieta, and Chebyshev polynomial families [10]. We now extract from this identity additional Fibonacci, Lucas, Jacobsthal, Vieta, and Chebyshev dividends.