Thomas Koshy

Polynomial Extensions of the Lucas and Ginsburg Identities, Fibonacci Quart. **52** (2014), no. 2, 141–147.

Abstract

We extend the well-known Lucas identity $F_{n+1}^3 + F_n^3 - F_{n-1}^3 = F_{3n}$ and the Ginsburg identity $F_{n+2}^3 - 3F_n^3 + F_{n-2}^3 = 3F_{3n}$ to Fibonacci and Lucas polynomials. This yields interesting dividends to Pell and Pell-Lucas polynomials and numbers.