Florian Luca and Anitha SrinivasanMarkov Equation With Fibonacci Components,Fibonacci Quart. 56 (2018), no. 2, 126–129.

Abstract

We find all triples of Fibonacci numbers $(x, y, z) = (F_i, F_j, F_n)$ satisfying the Markov equation $x^2 + y^2 + z^2 = 3xyz$.