## Russell Euler and Jawad Sadek

An Extension of the Periodicity of an Extended Fibonacci Family, Fibonacci Quart. **53** (2015), no. 4, 335–339.

## Abstract

The Fibonacci congruence  $F_{\phi(m)+n} \equiv F_n \pmod{\frac{m}{d}}$  has been extended to Pell numbers, Lucas numbers, and Pell-Lucas numbers, where  $\phi$  is the Euler phi-function,  $m = a^2 - a - 1$ , d = (2a - 1, m),  $a \ge 2$  is an integer, and (x, y) denotes the greatest common divisor of the integers x and y. We prove that the generalization holds for a larger class of integers than the one containing the integers of the form  $m = a^2 - a - 1$ .