Ovidiu D. Bagdasar and Peter J. Larcombe
On the Masked Periodicity of Horadam Sequences: A Generator-Based Approach,

Abstract

The Horadam sequence is a general second order linear recurrence sequence, dependent on a family of four (possibly complex) parameters—two recurrence coefficients and two initial conditions. In this article we examine a phenomenon identified previously and referred to as 'masked' periodicity, which links the period of a self-repeating Horadam sequence to its initial conditions. This is presented in the context of cyclicity theory, and then extended to periodic sequences arising from recursion equations of degree three or more.