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How to Add Two Natural Numbers in Base Phi, Fibonacci Quart. **59** (2021), no. 1, 19–22.

Abstract

In the base phi representation, any natural number is written uniquely as a sum of powers of the golden mean with coefficients 0 and 1, where it is required that the product of two consecutive digits is always 0. In this self-contained paper, we give a new and short proof of the recursive structure of the base phi representations of the natural numbers.