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The Sums of the Consecutive Fibonacci Numbers,
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Abstract

In this paper, we study integer numbers d with the following property: the sum of any d consecutive Fibonacci numbers is divisible by d. We call these d-numbers. We demonstrate a relation between d-numbers and the Pisano period, specifically, we prove that the original problem is equivalent to finding all integer numbers $d > 1$ that are divisible by their own Pisano period. We derive a general expression for all d-numbers and obtain convenient recurrent relations that significantly simplify practical calculation. Finally, we establish an equivalence between d-numbers and the OEIS sequence A072378.