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On the set of reduced ϕ-partitions of a positive integer,
Fibonacci Quart. **44** (2006), no. 2, 98–102.

Abstract

Given a positive integer n, the sum $n = a_1 + \cdots + a_i$ with $1 \leq a_1 \leq a_2 \leq \cdots \leq a_i \in \mathbb{N}$ is called a ϕ-partition if it satisfies $\phi(n) = \phi(a_1) + \cdots + \phi(a_i)$, where ϕ is Euler's totient function. And, a ϕ-partition is reduced if each of its summands is simple, where a simple number is known as 1 or a product of the first primes. In this note we will present a new algorithm to exhaust the set of all reduced ϕ-partitions of n.