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Abstract

The paper studies the counting function

$$R_2(n,k) = \sum_{\substack{a_1+a_2+\cdots+a_k=n \\ (a_i,a_j)=1 \\ i \neq j}} 1, \, a_i \geq 1, k \geq 2$$

with a_i, n and k positive integers and establishes a relationship between $R_2(n,k)$ and $P_2(n,k)$ where

$$P_2(n,k) = \sum_{\substack{a_1+a_2+\cdots+a_k=n \\ 1 \leq a_1 \leq a_2 \leq \cdots \leq a_k \leq n \\ (a_i,a_j)=1 \\ i \neq j}} 1, \, a_i \geq 1, k \geq 2$$

with a_i, n, k positive integers.