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This paper gives a combinatorial proof of the formula

$$n^m = \sum_{k_1! \cdot \cdots \cdot k_{n-1}!} \frac{m!}{k_1! k_2! \cdots k_{n-1}!},$$

where $m$ and $n$ are positive integers, $m \leq n$, and $k_1, k_2, \ldots, k_{n-1}$ are nonnegative integers satisfying $0 \leq k_1 + \cdots + k_i \leq \min(i, m)$ for all $i$.

Reviewer: J. Cigler (Wien)

MSC:
05A19 Combinatorial identities, bijective combinatorics
05A15 Exact enumeration problems, generating functions

Full Text: DOI

References:


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