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**Abstract**

A general combinatorial approach is presented for proving identities of the form  $mf_n = \sum_{i \in I_m} f_{n+i}$ , where  $m$  is a nonnegative integer constant,  $n \geq |\min(I_m)|$  is an integer,  $I_m$  is a set of nonconsecutive integers, and  $f_n$  is the Fibonacci number  $F_{n+1}$ . The approach involves counting phased square-domino tilings, as in the book *Proofs that Really Count* by Benjamin and Quinn. Furthermore, for each proof of an identity of the form  $mf_n = \sum_{i \in I_m} f_{n+i}$ , there is a corresponding isomorphic proof of the identity  $m = \sum_{i \in I_m} \phi^i$ , where  $\phi$  is  $(1 + \sqrt{5})/2$ .