

Selfish Sets, Posets, Tilings, and Bijections

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A subset of the integers $\{1, 2, \dots, n\}$ is selfish if it contains its own cardinality as an element. Those sets for which the minimal element is the cardinality (referred to by Grimaldi as extraordinary sets) are enumerated by the Fibonacci Numbers. In a 2013 paper, Grimaldi and Rickert introduced a partial order on these extraordinary sets. In this talk, we will establish natural bijections between the subsets and domino-square tilings to give a new interpretation to some combinatorial identities.

Keywords: Enumerative Combinatorics, Fibonacci Numbers, Tilings, Posets