Abstract

Recently, Kitaev, Mansour and Vella introduced numbered polyomino patterns that generalize the concept of pattern avoidance from permutations and words to numbered polyominoes. We study simultaneous avoidance of two or more right angled numbered polyomino patterns, which are 0-1 labellings of the essentially unique convex two-dimensional polyomino shape with 3 tiles. It turns out that this study gives relations to several combinatorial structures.