

ABSTRACT. This is the third part of the five-part saga on the umbral transfer-matrix method, based on Gian-Carlo Rota's seminal notion of the umbra. In this article we describe the Maple package Z00 that for any specific k , automatically constructs an umbral scheme for enumerating “ k -board” lattice animals (polyominoes) on the two-dimensional square lattice. Such umbral schemes enable counting these important classes of animals in polynomial time as opposed to the exponential time that is required for counting all animals.