# Bijections between Graphs and Tilings with Walkup Property

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In the current research, we consider tilings with T-tetromino and stepwise n^2-omino (figures, constructed by unit squares) and their connection to chain graphs. Also, we examine tilings with specific polyiamond (figure, constructed by unit triangles) and prove that every region, coverable by a number of polyiamonds, has defined structure. This structure lets us find connection to chain graphs and enumerate the tilings of a region via chain graphs. The main tool we use is induction and the method is the structural approach, introduced by D. W. Walkup when examining the properties of T-tetromino tilings.

**Awards Won:**