

The Pentagon as a Substructure Lattice

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Wilkie proved in the early 70's that every model M of Peano Arithmetic has an elementary end extension N such that the lattice $Lt(N/M)$ of intermediate structures M_1 such that $M \leq M_1 \leq N$ is isomorphic to the 5-element pentagon lattice N_5 . In this talk I will discuss various ways that this theorem can/cannot be extended and generalized.