

Esercizio 1. The language contains only the binary relations $<$ and e . The theory T_0 says that $<$ is a strict linear order and that e is an equivalence relation. Let \mathcal{M} consists of models of T_0 and partial isomorphisms. Do rich models exist? Can we axiomatize their theory? If so, does it have elimination of quantifiers? Is it λ -categorical for some λ ?

Esercizio 2. Let T_0 and \mathcal{M} be as in Example ?? except that we restrict the language to the relations r_0, \dots, r_n for a fixed n . Do ω -rich models of T_0 exist? If so, let T_1 be the set of sentences that hold in all rich model. Does T_1 has elimination of quantifiers? Is T_1 ω -categorical? Answer the question above if we add to the language a constant 0 ? (Risponedre sinteticamente.)