

Esercizio 1. Let $L = \{<\}$ and let N be a ω_1 -saturated extension of \mathbb{Q} . Prove that there is an embedding $f : \mathbb{R} \rightarrow N$. Is it elementary? Can it be an isomorphism?

Esercizio 2. Let M and N be elementarily homogeneous structures of the same cardinality λ . Suppose that $M \models \exists x p(x) \Leftrightarrow N \models \exists x p(x)$ for every $p(x) \subseteq L$ such that $|x| < \lambda$. Prove that the two structures are isomorphic. (Hint: see Theorem 7.8)

Esercizio 3. Let $A \subseteq N \models T_{\text{acf}}$ what is the cardinality of $S_x(A)$, where $|x| = 1$? Recall that $S_x(A)$ is the set of complete types $p(x) \subseteq L(A)$, finitely consistent in N .

Answer the same question for $A \subseteq N \models T_{\text{rg}}$.