Esercizio 1. Let M and N be elementarily homogeneous structures of the same cardinality λ. Suppose that $M \vDash \exists x\, p(x) \Leftrightarrow N \vDash \exists x\, p(x)$ for every $p(x) \subseteq L$ such that $|x| < \lambda$. Prove that the two structures are isomorphic.

Esercizio 2. Let $\varphi(x) \in L$. Prove that the following are equivalent

1. $\varphi(x)$ is equivalent to some $\psi(x) \in L_{\text{qf}}$;
2. $\varphi(a) \leftrightarrow \varphi(f a)$ for every a and every partial isomorphism $f : \mathcal{U} \to \mathcal{U}$ defined in a.

Esercizio 3. Let C be a finite set. Prove that if $C \cap M \neq \emptyset$ for every model M containing A, then $C \cap \operatorname{acl}(A) \neq \emptyset$.