Esercizio 1. Let $\varphi(z) \in L(A)$ be a consistent formula. Prove that, if $a \in \operatorname{acl}(A, b)$ for every $b \models \varphi(z)$, then $a \in \operatorname{acl}(A)$. Prove the same claim with a type $p(z) \subseteq L(A)$ for $\varphi(z)$.

Esercizio 2. Let $a \in \mathcal{U} \smallsetminus \operatorname{acl}\varnothing$. Prove that $\mathcal{U}$ is isomorphic to some elementary substructure $\mathcal{V} \preceq \mathcal{U}$ such that $a \notin \mathcal{V}$.

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