Esercizio 1. Let $a = \langle a_i : i \in I \rangle$ be an (infinite) A-indiscernible sequence and let $I \subseteq J$ with $|J| \leq \kappa$. Then there is an A-indiscernible sequence $c = \langle c_i : i \in J \rangle$ such that $c_{\restriction I} = a$.

Esercizio 2. Let $a \equiv_A b$ and let $q(x) = \mathrm{tp}(a/A) = \mathrm{tp}(b/A)$. Prove that if $q(x)$ extends to a global A-invariant type $p(x) \in S(\mathfrak{U})$ then there is a sequence $c = \langle c_i : i < \omega \rangle$ such that a, c and b, c are both sequences of A-indiscernibles.

Esercizio 3. Prove that the following are equivalent for every $\mathcal{D}$ that is externally definable by a stable formula

1. $\mathcal{D}$ is invariant over every model M containing A;
2. $\mathcal{D} \in \mathrm{acl}^{\mathrm{eq}} A$.