Malliteoria

Harjoitus 8

1. Show that Stone space $S_n(A;\mathcal{A})$ is a compact Hausdorff space.

2. We say that a complete L-theory T is κ-stable if for all $\mathcal{A} \models T$ and $A \subseteq \mathcal{A}$ of power $\leq \kappa$, $|S_1(A;\mathcal{A})| \leq \kappa$. Show that if $\kappa \geq |L_{\omega\omega}|$ is regular (i.e. every $X \subseteq \kappa$ of power $< \kappa$ has an upper bound), then T has a saturated model of power κ.

3. Prove Lemma 8.12 (ii).

5. Let T be a countable complete theory such that $S_n(\emptyset)$ is countable for all n. Show that T has an atomic model. Conclude that T_{acf_0} has an atomic model.