

In addition to the below given problems, kindly study Chapter 10 in the lecture notes. Referenced problems can also be found there. In the lecture only marked problems will be discussed; for solutions to the other problems please contact Georg Moser.

1. Problem 10.6.
2. Problem 10.7.
3. Consider Lemma 10.12 and show that $\forall x (A(x) \rightarrow A(yx)) \rightarrow \forall x (A(x) \rightarrow A(y(yx)))$ is derivable. (*)
4. Show that inner Skolemisation preserves satisfiability. Compare to the proof for structural (outer) Skolemisation. (*)
5. Consider Theorem 10.18 and show that A is satisfiable, if $\text{str_step}(A)$ is satisfiable. (*)