Problem Set 7
Introduction to Modal Logic
Institute for Logic, Language and Computation
Universiteit van Amsterdam

Due November 18, 2005

1. 3.6.1 (a)

2. Suppose that Γ is a Λ-MCS. Prove the following two facts:

   (a) $\Lambda \subseteq \Gamma$; and

   (b) For any two formulas ϕ and ψ, $\phi \vee \psi \in \Gamma$ iff either $\phi \in \Gamma$ or $\psi \in \Gamma$.

3. Complete the proof of Lindenbaum's Lemma. That is, if Δ is the set of formulas constructed in the proof, prove that Δ is a Λ-MCS.