

Philosophy 134
Spring, 2005
Homework 2

Due: April 18, 2005, in class

1. Explain the difference between semantical entailment and derivability.
2. Show that the following is a theorem of SD : ' $A \vee \sim A$.'
3. Show that the following is a semantical entailment in SI : $\{P \equiv Q, \sim Q\} \models_{SI} \sim P$.
4. Suppose we were to add an impossibility operator ' \blacklozenge ' to MSL . Show how you would define the other modal operators in the syntax of MSL in terms of it.
5. Give an example of an interpretation in the basic semantics in which ' $\Box(A \wedge B)$ ' is true at one world but ' A ' is false at that same world.