Philosophy 134
Spring, 2005
Homework 8

Due: June 6, 2005, in class

1. Suppose that instead of there being a unitary domain in the *QII-x* semantical
   systems, there were distinct domains for each world, all of which contain the
   same members. Would the resulting semantical systems be equivalent to the
   QII-x systems? Explain your answer.

2. Give a semantical proof that the converse of the Barcan consequence,
   $\{\Box(\forall x)Fx\} \vDash_{QII-x} (\forall x)\Box Fx$, holds in *QII-x*.

3. Show that the following is a semantical entailment in *QII-K*:
   $\{(\exists x)\Box Fx\} \vDash_{Q1I-K} \Box(\exists x)Fx$.

4. Show that the following derivability relation holds in *Q1D-K*:
   $\{(\exists x)\Box Fx\} \vDash_{Q1D-K} \Box(\exists x)Fx$.

5. Show that the following is a semantical entailment in *QII-x*:
   $\{a = b\} \vDash_{QII-x} \Box Fa \supset \Box Fb$.