Homework 8–9:  
Predicate Logic: Syntax and Semantics  

CS521, Professor Guttman  
Due: 16 Mar 2010

Read the text through at least p. 66.

1. Exercise 5.7.6, pp. 58–59. Choose five of the entailment assertions and show models that are counterexamples to them.

2. Exercise 5.9.1, p. 61. Do numbers 1, 3, 4. There’s a typo: The comment in item 3 should say that a partial order that also satisfies σ_6 is a total order.

3. Exercise 5.10.3, p. 64. Write up item 5, after thinking through the previous items. Also write down a formula for 7.

4. Exercise 5.10.4, p. 64.