Philosophy 303
Symbolic Logic
Winter, 2009

Homework Assignment 2

Due Friday Jan. 23, 2009 by 3 PM

The problems draw from different parts of the book, but some sections are especially important. For problems 1 - 3, pay special attention to pages 45 - 55;
For problems 4 - 7 pay special attention to pages 59 - 72

1. Chapter 2, Exercise 35, b)
2. Chapter 2, Exercise 36 b), d)
3. Chapter 2, Exercise 39
4. Chapter 2, Exercise 49, Parts c), and e)
5. Give a definition of the function $f(x) = a^x (= \underbrace{a \cdot a \cdot a \cdot \ldots \cdot a}_{xtimes})$ by induction from the function $g(z) = a \cdot z$ (plus the constant function $k(z) = 1$).
6. Chapter 2, Exercise 52
7. Chapter 2 Exercise 58
   Prove that the set defined by your inductive definition is the Kleene * of X.