Homework assignment

CMSC 15300

Due: April 21, 2004

1. Problem 21 from Section 3.2 of Hein.

2. Given the following SML definition of binary trees:

   ```
   datatype tree
     = Leaf
     | Nd of (tree * tree)
   ```

   define a function `depth`, with the type `tree -> int`, that returns the *depth* of its argument. We define the depth of a `Leaf` to be 0.

3. Given the following SML datatype definition

   ```
   datatype wff
     = T
     | F
     | And of (wff * wff)
     | Or of (wff * wff)
     | Not of wff
   ```

   define a function `eval`, with the type `wff -> bool`, that returns the truth valuation of its argument.