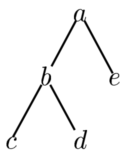
Tik-79.144 **Syksy 2000**
Logic in Computer Science: Foundations
Exercise 12

1. We can represent a binary tree as a `Prolog` structure using symbolic functios:

1. `tree(Val, Left, Right)`: a node of the tree where `Val` is the value that is stored to the tree, `Left` is the left subtree, and `Right` is the right subtree.
2. `leaf(Val)`: a leaf node with value `Val`.

a) Define a `Prolog` predicate `mirror(Tree1, Tree2)` that constructs a mirror image of a binary tree.

b) Show how your program works for the following tree:



c) Define a predicate `member_tree(Tree, V)` that is true when `V` is stored into a binary tree `Tree`. Show a query that can be used to enumerate all members of a tree.