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CS496

Homework 2

I pledge my honor that I have abided by the Stevens Honor System.

1) Inductive definition of a DTree
    1) n is a real number
    2) leaf(n) exists in DTree(N)
    3) m is a symbol
    4) node(m, l, r) exists in DTree(N) such that m is a symbol and l and r are either nodes or leaves.
2)
    a. node(‘x, node(‘y, leaf(7), leaf(8)), node(‘z, node(‘w, leaf(1), leaf(2)), leaf(3)))
    b. node(‘x, leaf(1), node(‘y, leaf(2), leaf(3)))
3) For each example, a node exists containing a symbol m, and a l and r which are of either the form leaf(n) or node(m, l, r). As such, they are valid DTrees.