

CSCI 303 Algorithms

Homework 3

Due: 11:00 in class, September 25, 2001

1. (8 points) Give an efficient algorithm to determine if there exists an integer i such that $A[i] = i$ in an array of integers $A[1] < A[2] < \dots < A[n]$. Also, give a time complexity analysis of your algorithm.
2. (12 points) Insert 2, 1, 4, 5, 8, 3, 6, 7 one by one into an empty AVL tree. You must show the tree after each insertion as well as the tree after each time a certain type of rotation is applied.