Directions: Write neatly your solutions to these problems. Write your first name first and last name last on each paper along with your pseudo-name. Be sure to show your work for both problems.

Problem 1 (20 points): Partition the following array into two parts such that the sum of the two parts is minimal (ie. Min( | S1 | - | S2 | ) ). Use the Karp Karmarkar algorithm.

16, 14, 13, 8, 7, 4, 3

Problem 2 (20 points): Use the Hu-Tucker algorithm on the following array.

8, 6, 4, 2, 1, 3, 5, 7, 9

a. Give Level numbers of each element
b. Use the stack to construct the tree.