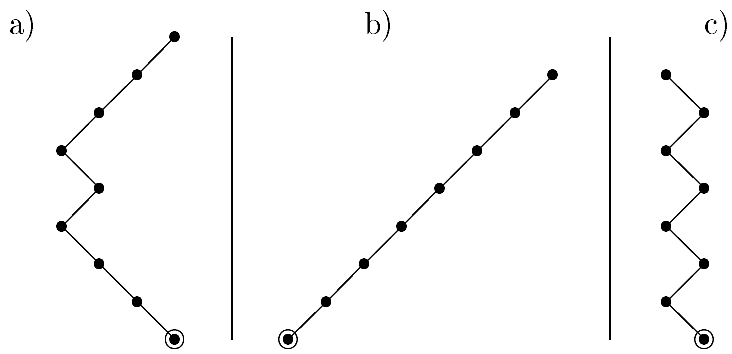
Technische Universität München
Department of Computer Science
Chair for Efficient Algorithms
Prof. Dr. Sami Khuri

SS 2000
Problem Set 1
February 29, 2000

Efficient Algorithms and Data Structures II

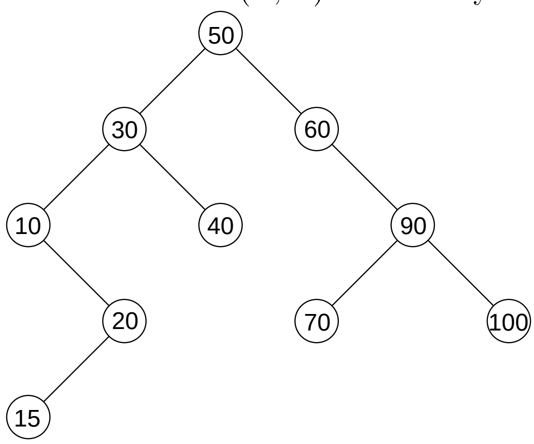
Problem 1 (10 points)

In each case, show the tree after the circled node is splayed to the root node.



Problem 2 (8 points)

Show the tree after the execution of access(T,25) followed by delete(T,60).



Problem 3 (10 points)

Prove that the chromatic number of an interval graph equals its clique number.

Problem 4 (12 points)

Show that the chromatic index of odd complete graphs, K_n, where $n = 2m+1$ with $m \geq 1$, is equal to n. In other words, show that $\chi\prime(K_n) = n$.