

4. List the nodes of the tree of Question 2 that are probed when it is searched for each of the following keys. Include probes of external nodes as well as internal nodes.

8, 11, 32, 9, 99, 14

5. Depict the tree resulting from the deletion of each of the following keys from the tree of Question 2.

14, 7, 8, 1

6. Determine the *maximum contiguous subsequence* of the sequence

$$-3, 1, 3, 5, -10, 3, 38 - 1, 3, 10$$

and justify your answer.

7. Provide a linear-time algorithm for the maximum contiguous subsequence problem. Explain why it is correct and why its running time is linear.