CSC 212 -Data Structures

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Binary Tree Application-In class exercise

Exercise 1

Trace the algorithm for creating a parse tree for the expression

(((4 x 8)/6)–3)

Exercise 2

1. Show the Binary Search Tree resulting from inserting the following values in the order shown:

50, 40, 70, 20, 45, 60, 80, 55, 57

1. How many comparisons are needed to determine that 56 is

not in the list?

1. In general, assuming a balanced BST with n nodes (A balanced binary tree has roughly the same number of nodes in the left and right subtrees of the root), what is the maximum number of operations required to search for a key? Please notice that the tree in this exercise is not balanced.
2. Show the steps required to delete 70 from the tree.