

Solutions for Written Assignment 3 CSCI 2100A 2016 Spring

Exercise 3.3

3.3 (2);

Infix: $(4 - ((5 * 6) / (7 + 8)))$

= 2

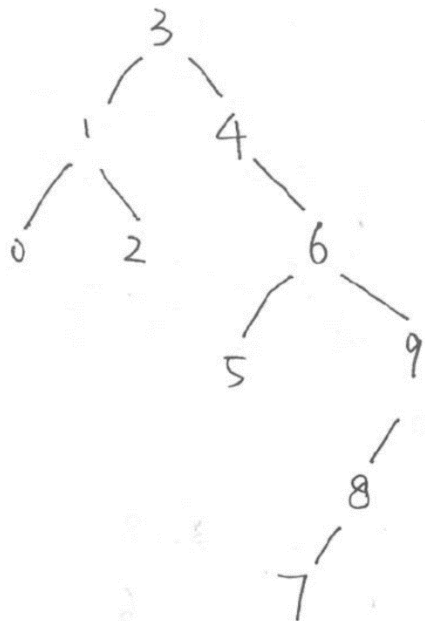
3.3 (3);

Infix: $\left(\frac{(2-1)+3}{4} + 5\right) * 6$

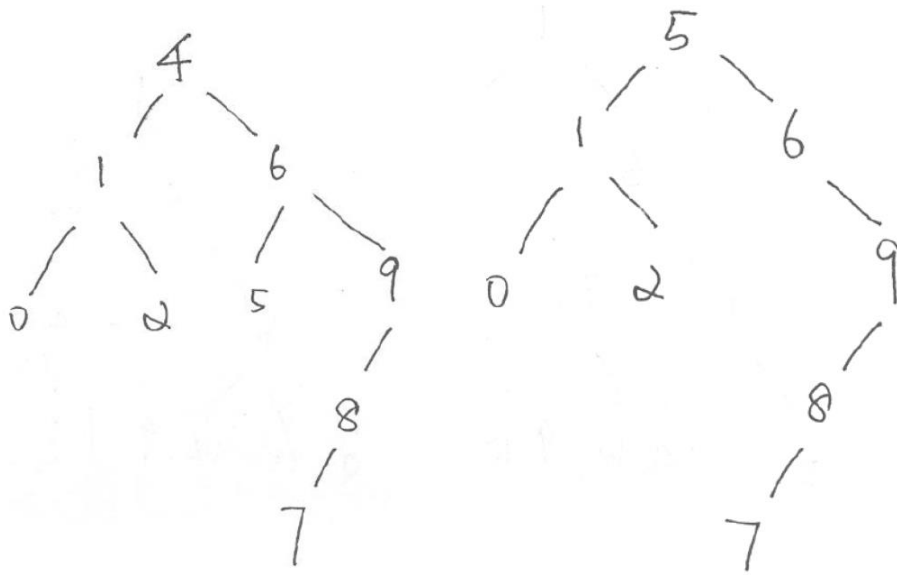
= 36

Exercise 3.10;

(1) after insertion, the tree is :

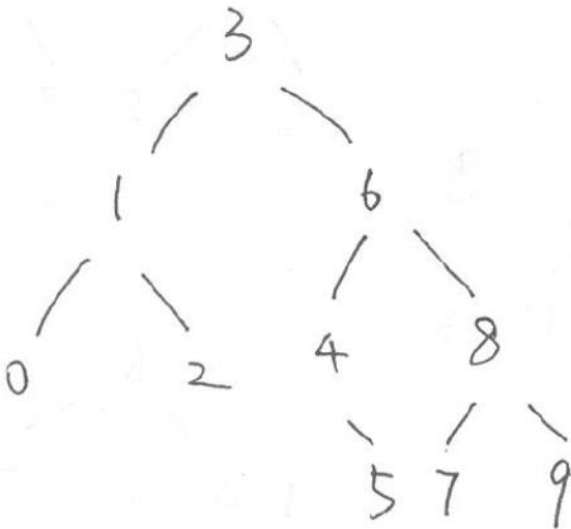


(2) after deleting the root twice, the trees are:

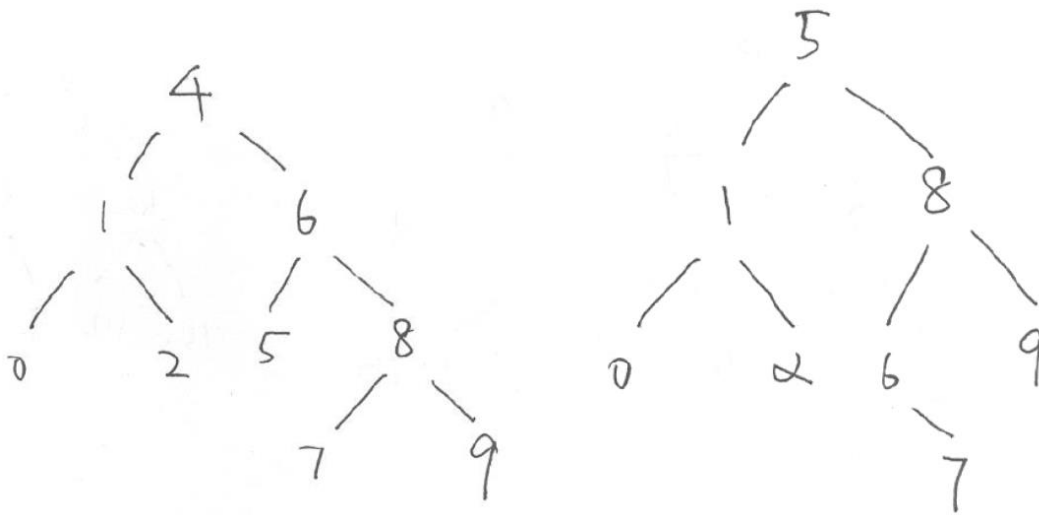


Exercise 3.11;

(1) after insertion, the AVL tree is :

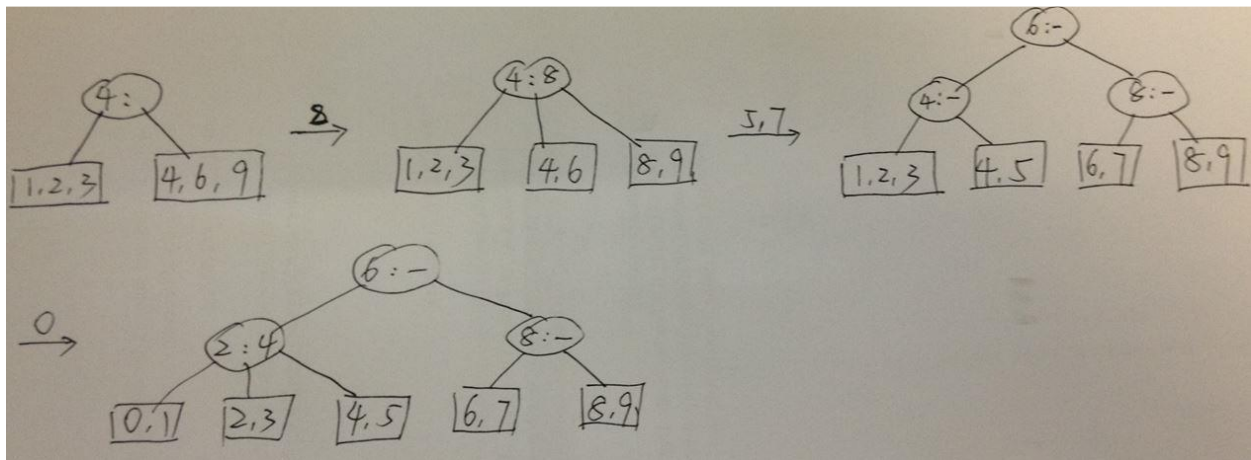


(2) after deleting the root twice, the trees are:

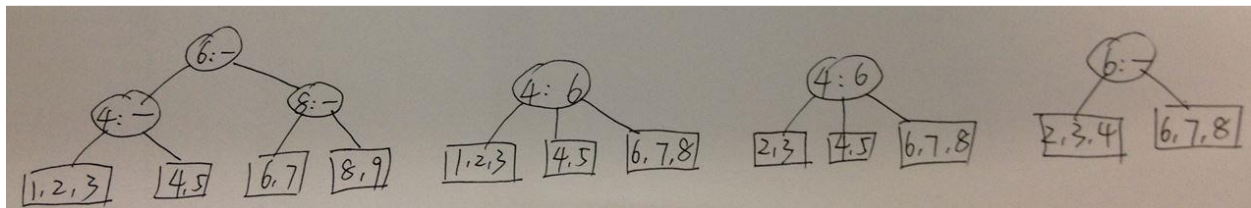


Exercise 3.18;

(1) after insertion, the 2-3 tree is:

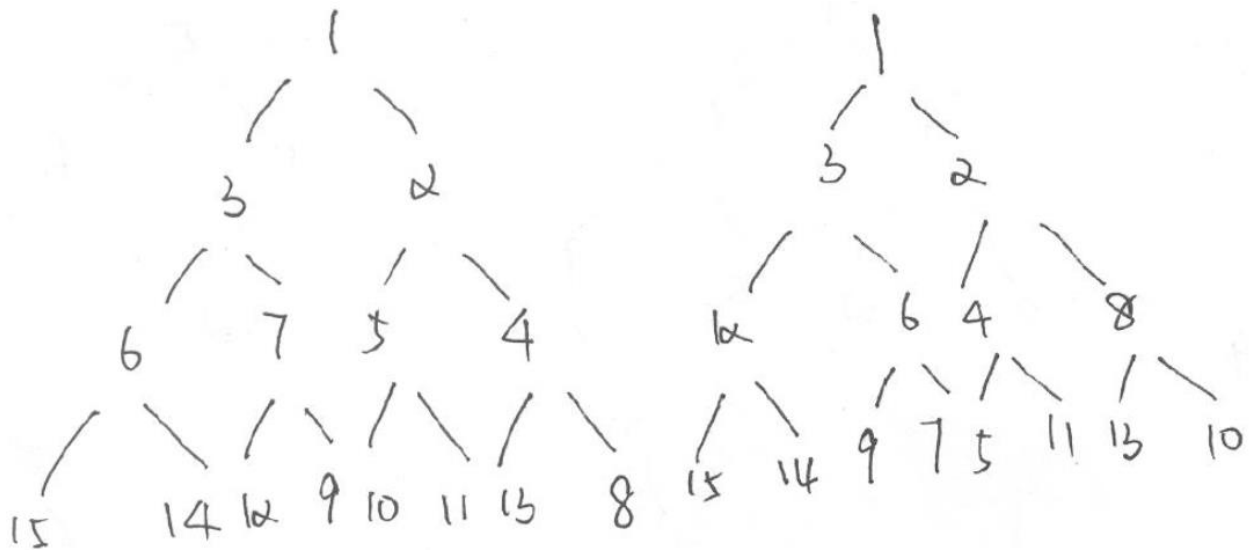


(2) after deleting 0, 9, 1 and 5, the tree are as follows:



Exercise 5.1;

The built trees are as follows, corresponding to (1) and (2):



Exercise 5.2;

After deleting the minimal value for the above heaps three times, the heaps are listed in the following. The left is for 5.1 (1); while the right is for 5.1(2).

