CSCI 3333 Practice Quiz AVL1

Problem 1. Fill in the blanks with answers based on the AVL tree in Figure 1.

If insert(3) was called, _________ rotations would occur during the call.

If insert(3) was called, the left child of _________ would change to _________ during the first rotation.

Calling insert(____), then insert(____) causes 0 total rotations.

Calling erase(____) causes 15 to become the root of the tree.

Figure 1: The AVL tree for Problem 1.

Problem 2. Determine the truth of the following statements about AVL trees.

Every AVL tree is balanced. □ True □ False

Every AVL tree is complete. □ True □ False

Some AVL trees are complete. □ True □ False

The minimum number of rotations done in an AVL tree insert is 1. □ True □ False
Problem 3. Fill in the blanks with answers based on the AVL tree in Figure 2.

If insert(1) was called, number rotations would occur during the call.

If insert(1) was called, the left child of number would change to number during the first rotation.

If erase(12) was called, number rotations would occur during the call.

If erase(12) was called, the left child of number would change to number during the first rotation.

Figure 2: The AVL tree for Problem 3.