

CS 50010 Assignment 3

Due Thursday the 29th in class **NOTE:** Due date changed from syllabus

Red-Black/2-3 Trees

- 1) Draw both the 2-3 tree and the left leaning red black tree that would be created by inserting the following integers in order. Show the state of the tree after each insertion (optionally intermediate stages. Partial credit may be awarded if these are shown)

3, 1, 6, 10, 14, 8, 2, 20, 12

Heaps

1. Build a min heap given the following commands in order. Show the heap as both a tree representation and array representation. In the array representation ensure that you are managing the array size in an efficient manner. Begin with an array size of 4.

Insert(3), Insert(1), insert(6), insert(10), removeMin(), insert(14), insert(8), removeMin()