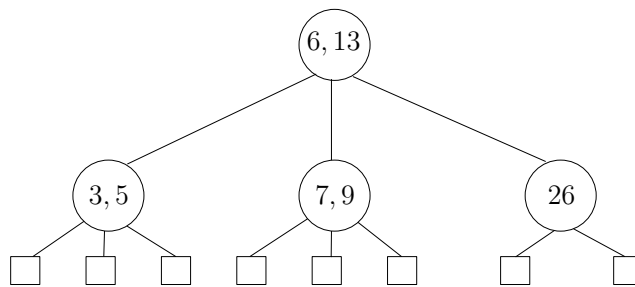


## CSC 225: Lab 8

1. Look at the 2 – 3 tree in Figure 1. What is the corresponding red-black tree?

Figure 1: A 2 – 3 tree of height 2.



2. Find a sequence of insertions that would construct this 2 – 3 tree.
3. Consider the insertion sequence 3, 5, 7, 6, 13, 9, 26. Draw the final tree? Is it the 2 – 3 tree in Figure 1?
4. Look at the red-black tree in Figure 2. Is it a valid red-black tree? How can you check? If it is not a valid red-black tree reconstruct the tree with the same keys in such a way that it is a valid red-black tree.

Figure 2: A red-black tree of black height 2.

