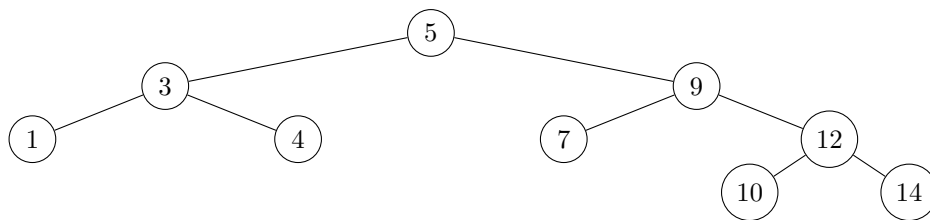1. **Double Right Rotation is Not Two Right Rotations**
   Consider following AVL tree. Perform `delete(5)`, using only

   (a) Right rotation or Left rotation

   (b) Double right rotation or Double left rotation

   (c) Starting from an empty binary search tree, in what order should we add the integers 1, 3, 4, ..., 14 to obtain the tree below?

   If you have a choice of which element to move up, pick the inorder successor, which is 7.

2. **Partial Sum**
   Consider the problem where we have a sequence of n elements: $S = a_1, a_2, ..., a_n$, and 3 operations:

   - $Add(S, b) \rightarrow a_1, a_2, ..., a_n, b$
   - $Update(S, i, \Delta) \rightarrow a_1, ..., a_{i-1}, \Delta, a_{i+1}, ..., a_n$
   - $PartialSum(S, k) \rightarrow \sum_{i=1}^{k} a_i$

   Design a data structure that can perform each of these operations in $O(\log n)$ expected time.

3. **Height of AVL Tree**
   Describe an algorithm for computing the height of AVL tree in $O(\log n)$ time, where n is the number of elements in given AVL tree. In addition, you may assume that balance factor for each node is pre-computed correctly. Moreover, assume that you are given a pointer/node of the root of AVL tree.