

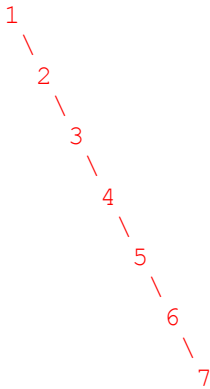
## 1) (5 pts) DSN/ALG (Binary Trees)

Draw a single **binary search tree** that meets all the following conditions:

- The tree contains 7 nodes.
- The tree's pre-order traversal is the same as its in-order traversal.
- The tree does not contain any duplicate values.

If it is not possible to draw such a tree, say so and explain why not.

Here's one such tree. Basically, it has to devolve into a linked list like this:



**Pre-order:** 1 2 3 4 5 6 7

**In-order:** 1 2 3 4 5 6 7

**Grading:** 0 if answered not possible,  
If a tree is given 1 pt for a valid binary search tree  
4 pts if it goes all right (correct)  
Take off 1 pt for each left node (cap at 4 pts off)