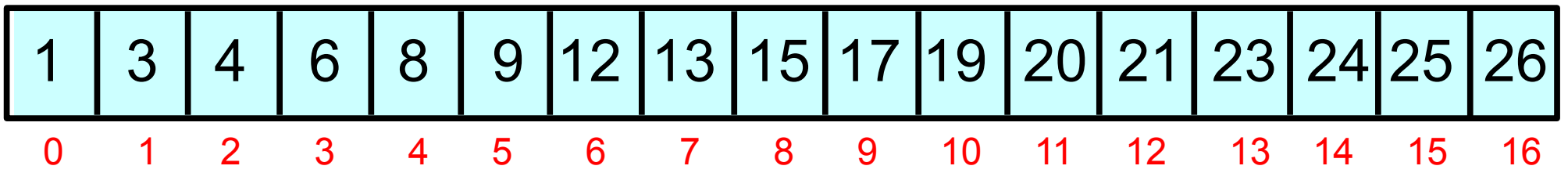
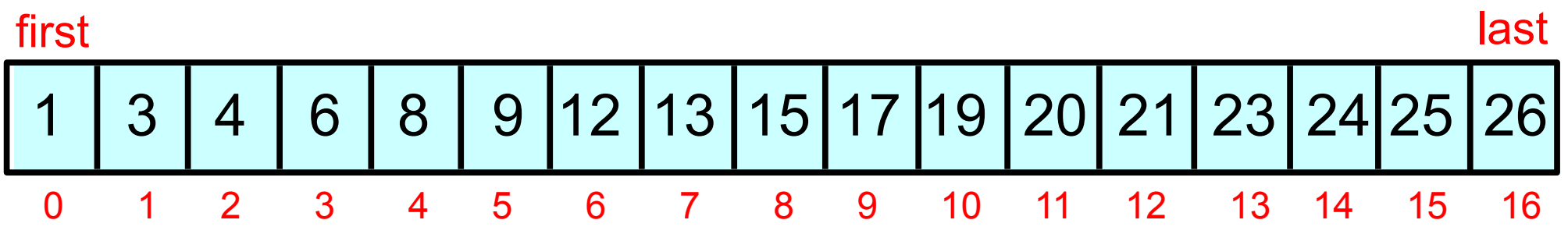
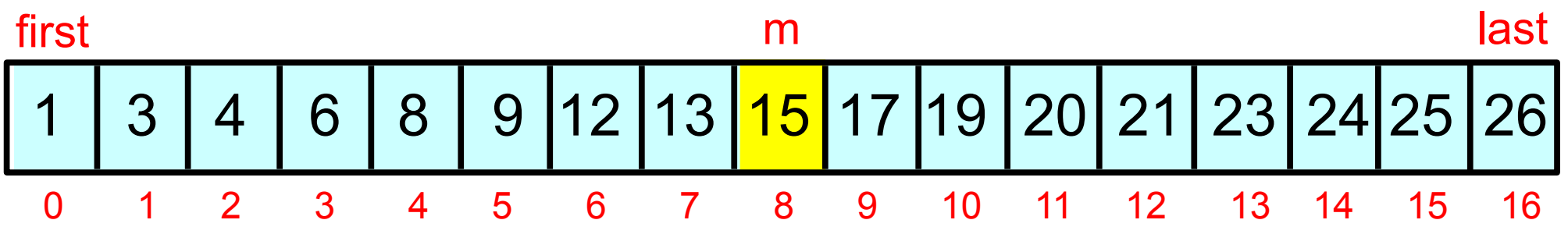
Balanced Binary Search Trees

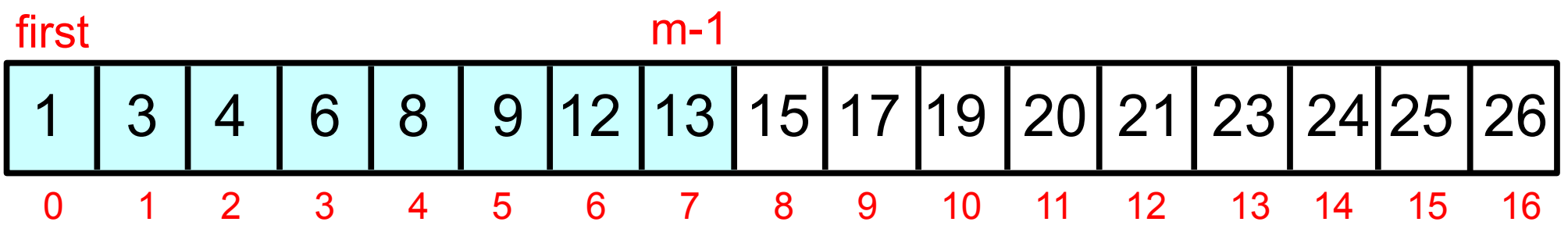

elements
1
3
4
6
8
9
12
13
15
17
19
20
21
23
24
25
26
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16



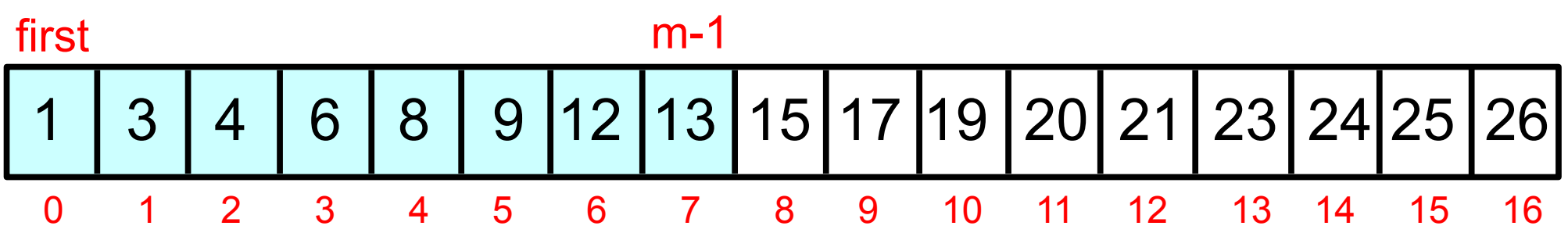
buildBalancedTree(elements, first, last)

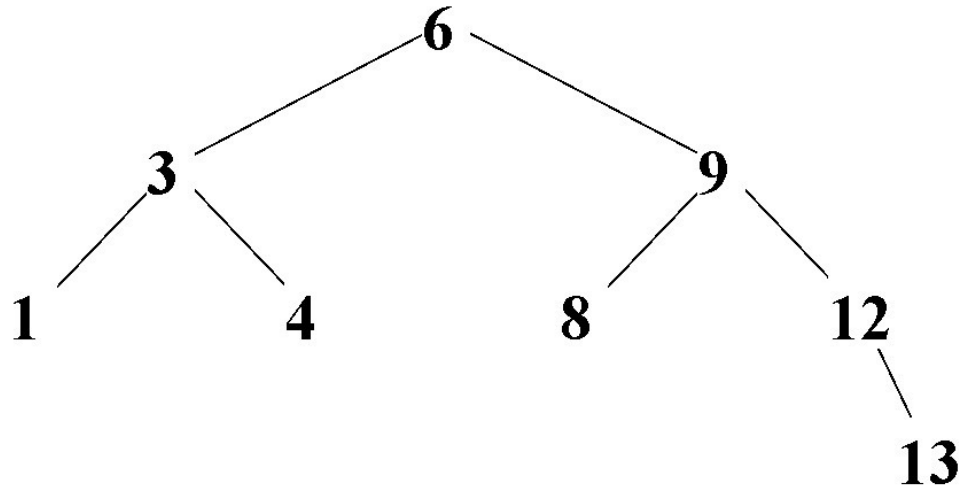


buildBalancedTree(elements, first, last)

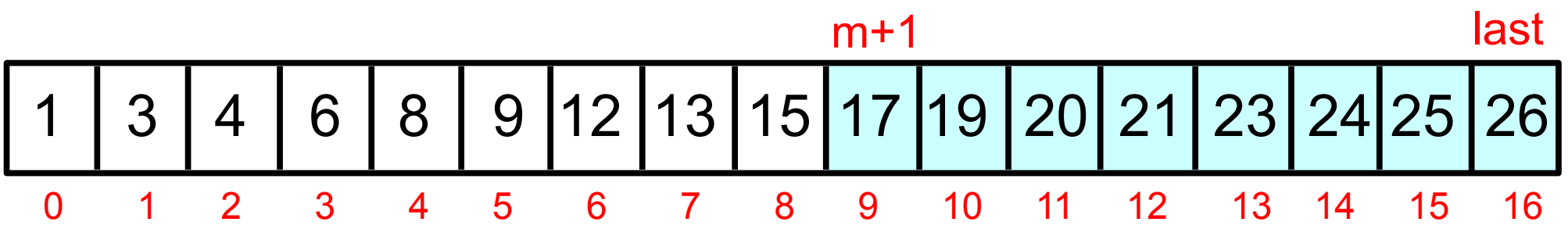


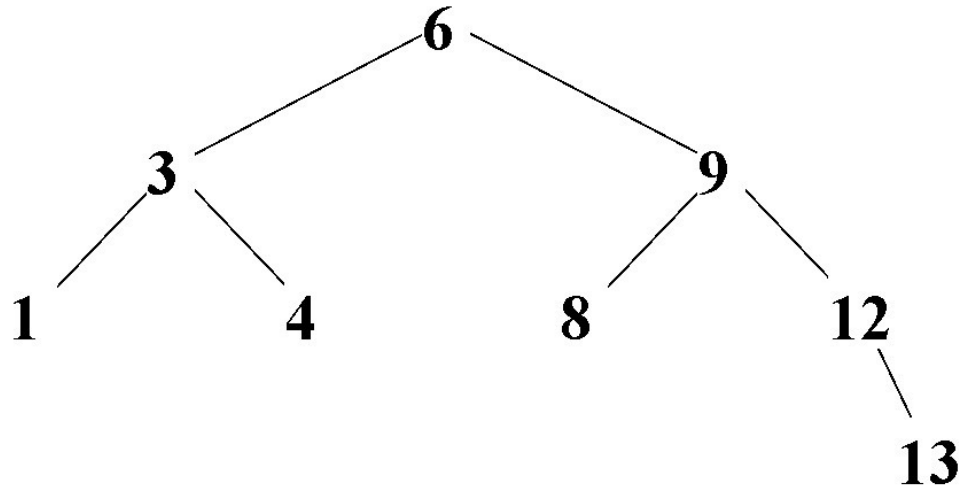
left = buildBalancedTree(elements, first, m-1)



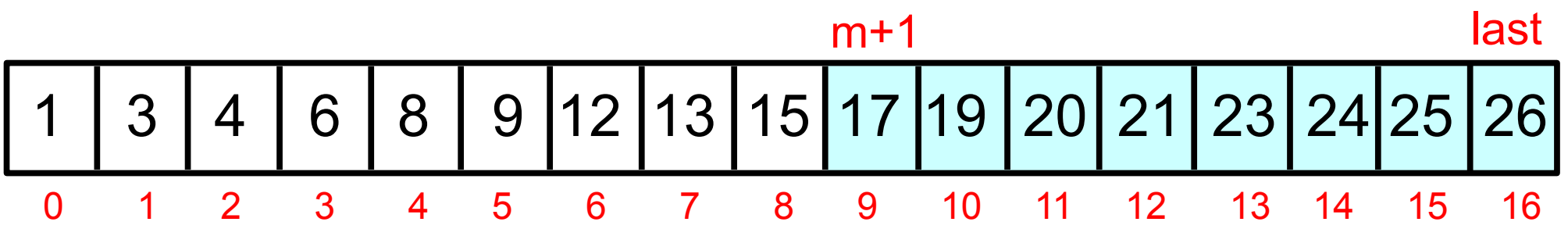


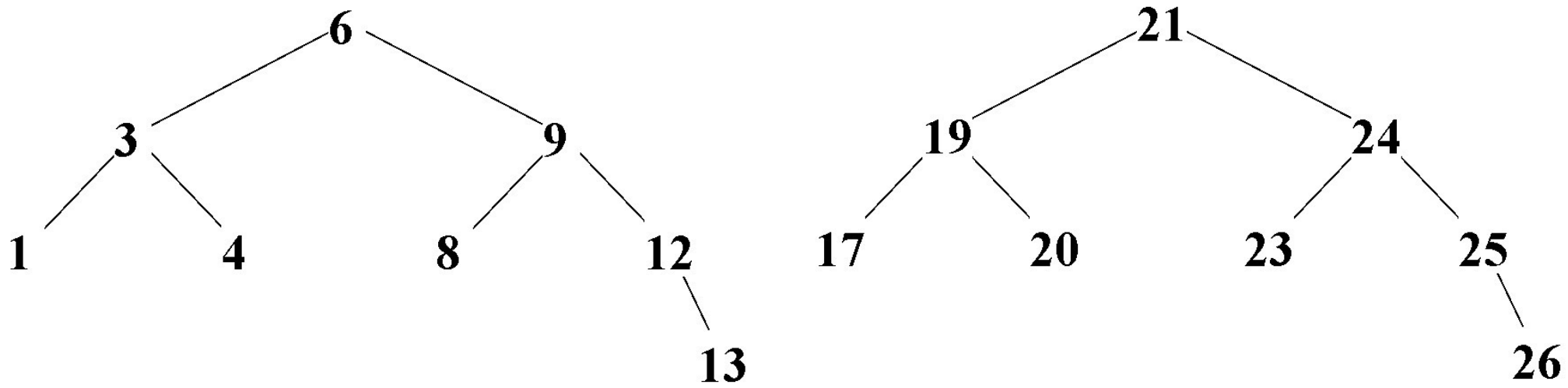
left = buildBalancedTree(elements, first, m-1)





right = buildBalancedTree(elements, m+1, last)



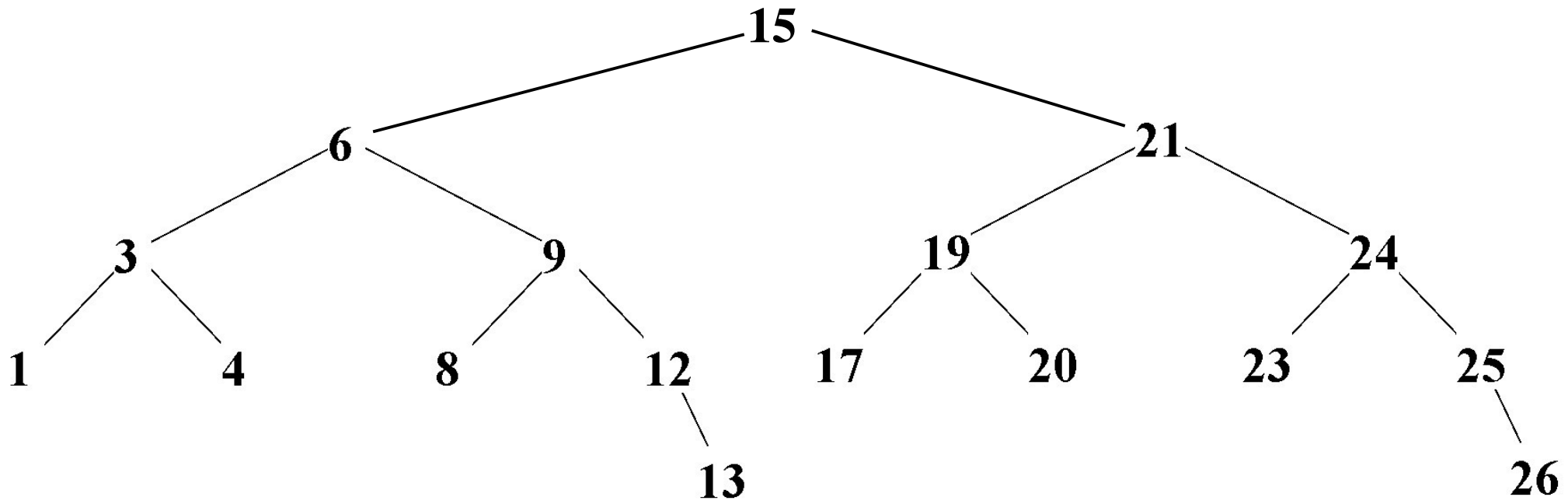


right = buildBalancedTree(elements, m+1, last)

elements

m

1	3	4	6	8	9	12	13	15	17	19	20	21	23	24	25	26
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

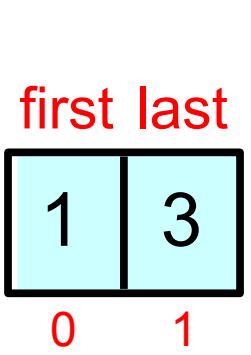


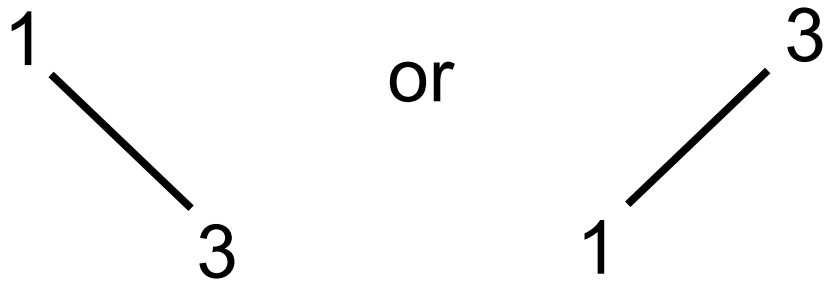
new BinarySearchTree(elements[m], left, right)

Base Cases

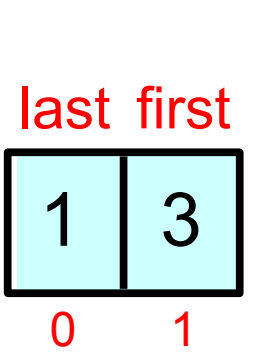
3

last == first





last == first+1



null

last < first