h = 9

h = 6

h = 10

0 4 6 9 11 17

map:

0 1 2 3 4 5

padding: 0 1 2 3 4 5 6 7

Initially:

[0, 3]   [0, 7]   [4,]

0	0	0	0	0	0	0	0
0	1	2	3	4	5	6	7

0	0	6	10	10	0	0	0
0	1	2	3	4	5	6	7

update [1,7] → 10 ⇒ have to update almost
                                       all nodes
                                       ⇒ $O(n^2)$
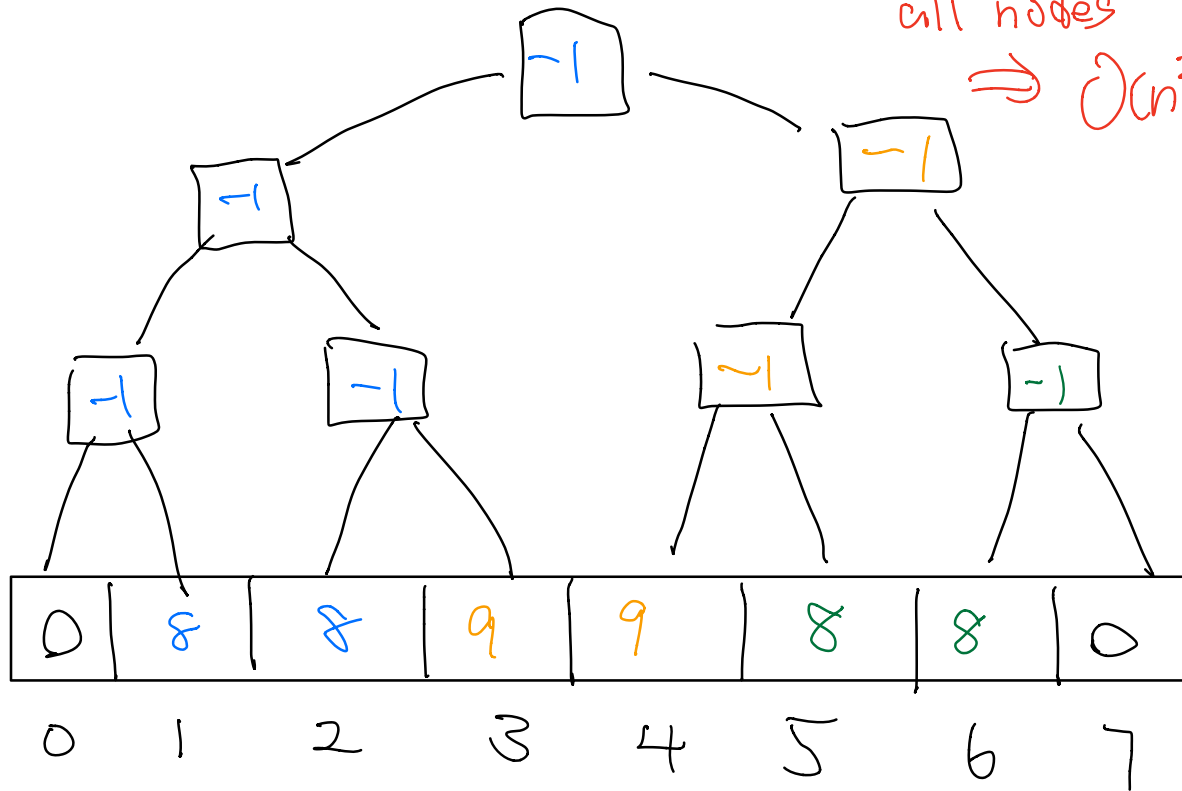
Previous queries:

update: [1,2] → 8

update: [1,4] → 9

update: [1,6] → 8

2 3 5 7 9 12 15 19 20 24

↓ ↓ ↓ ↓ ↓ ↓ ↓   ↓ ↓ ↓

0 1 2 3 4 5 6   7 8 9

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15