ArrayList<Integer> al = new ArrayList<>();

① al.add(100): `10|30|20|70` → `10|20|30|70|100` `10|20|*|40|50|60|70` // → O(1)

② al.set(3,150) `10|20|30|70|100` → `10|20|30|150|100` → get(3) = 150;
→ arr.length

③ al.size() : → 5

④ al.get(3) : → 150
al.get(0) → 10
al.get(4) → 100
al.get(5) → error

⑤ al.remove(0) → `10|20|30|70|a` → `20|30|70|a` // O(n)
al.remove(al.size()-1) → `10|20|30|70|a` → `10|20|30|a` // O(1)

⑥ Collections.sort(al) : `10|20|150|40` → `10|20|40|150`

ArrayList<Integer> al = new ArrayList<>()

`10|20|30|70|100|a|v|0|0`

arr.set(i,ele);
arr.add(1,5) `10|5|20|3`
arr.add(3,50) `10|20|3` → `10|5|20|3` → `10|5|20|3|50` // O(1)

j=0 `-2|8|10|3|4|1|18` h=7
i=1 `-2|v|10|3|4|1|18` h=7-1=6

n = 10^8 , T: - < O(n)   `10 → 10^9`   100 < 15
n = 10^5   T: - < O(n log n)
n = 10^4   T: - < (n²)
n = 10^3   T: - < (n³)
n < 10³   T: - < (n⁴)
n = (10^18) T: < (log h)
n = 10^10^6   : < log(log(n))

`10`
`10|20|30|70|20|20` , 20 → `10|20|40`

arr.get(idx)   = arr[idx]
arr.size()   = arr.length
arr.set(idx,ele) = arr[idx] = ele;