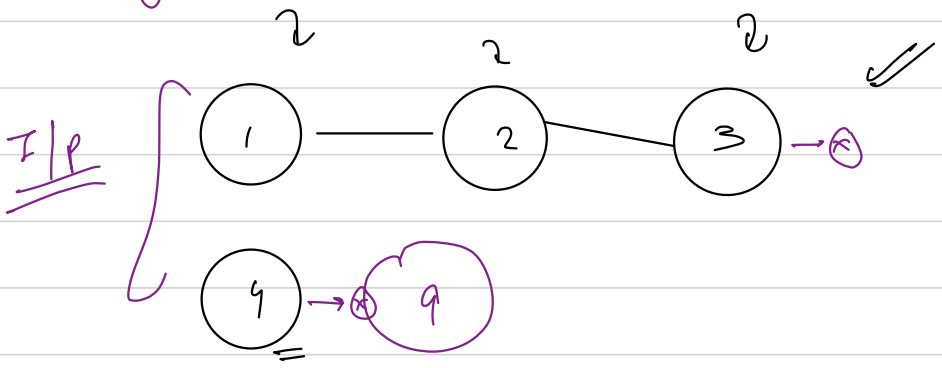
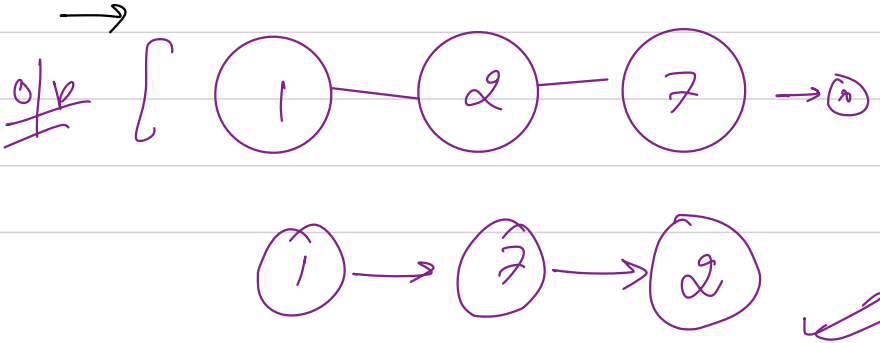
Q:1 Given 2 linked list of different sizes containing all digits. Add the 2 linked lists

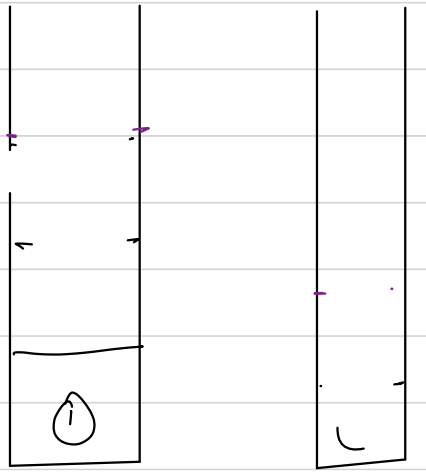




O(n)

O(1)

iteratively



carry = 0

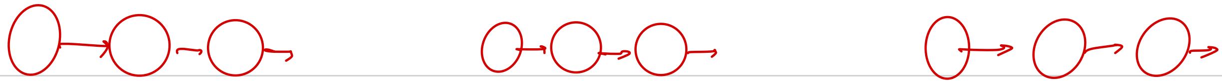
Q. You've k sorted linked lists. Merge all of them to make a final sorted linked list.

1 → 4 → 5

1 → 3 → 4

2 → 6

Ans 1 → 1 → 2 → 3 → 4 → 4 → 5 → 6



K ll

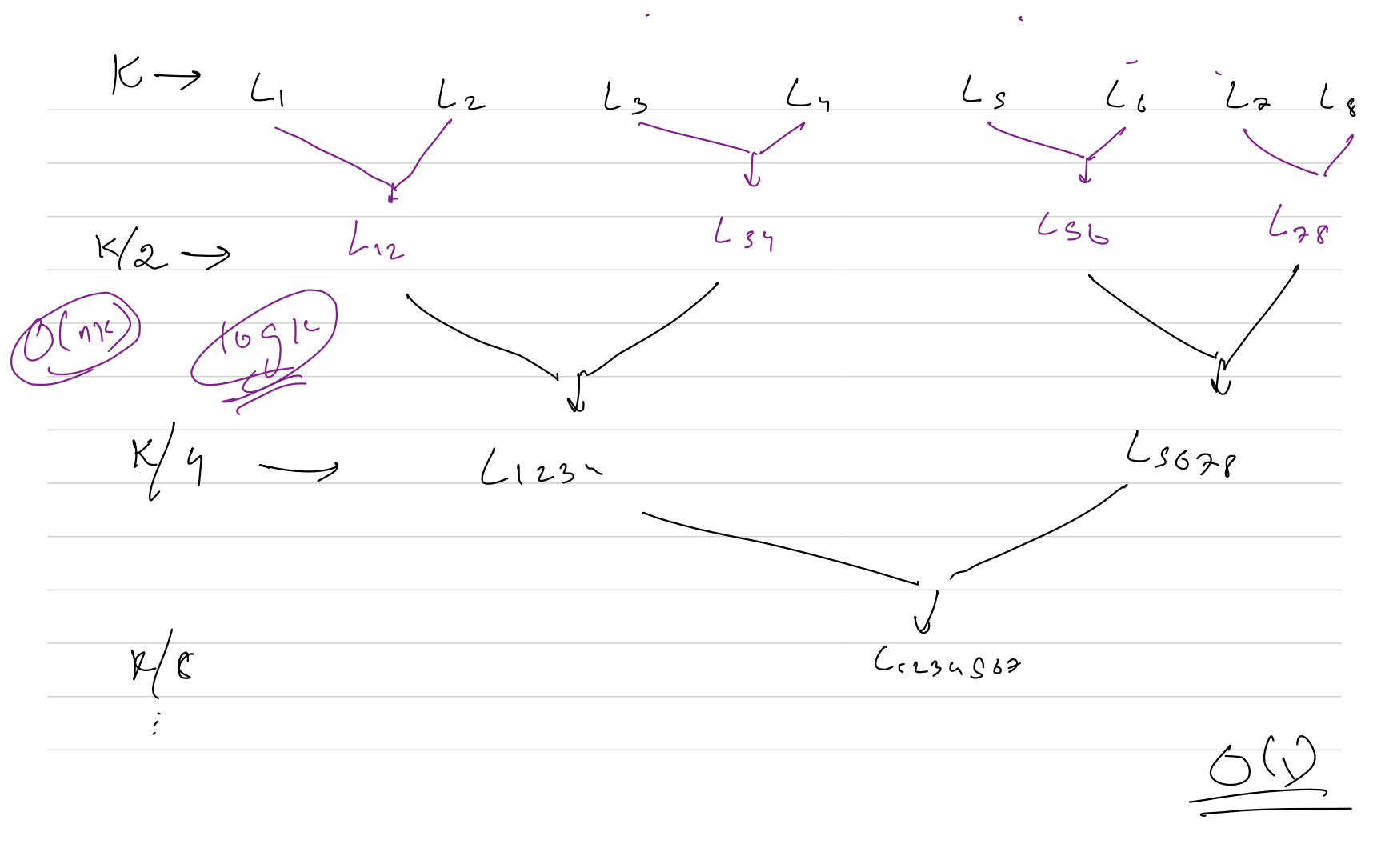
n (K-1)

n K-2

⋮

n 1

$O(n^k)$


K →
L1
L2
L3
L4
L5
L6
L7
L8
K/2 →
L12
L34
L56
L78
O(nk)
log k
K/4 →
L1234
L5678
K/8
L12345678
O(1)

→ LL – n

↓

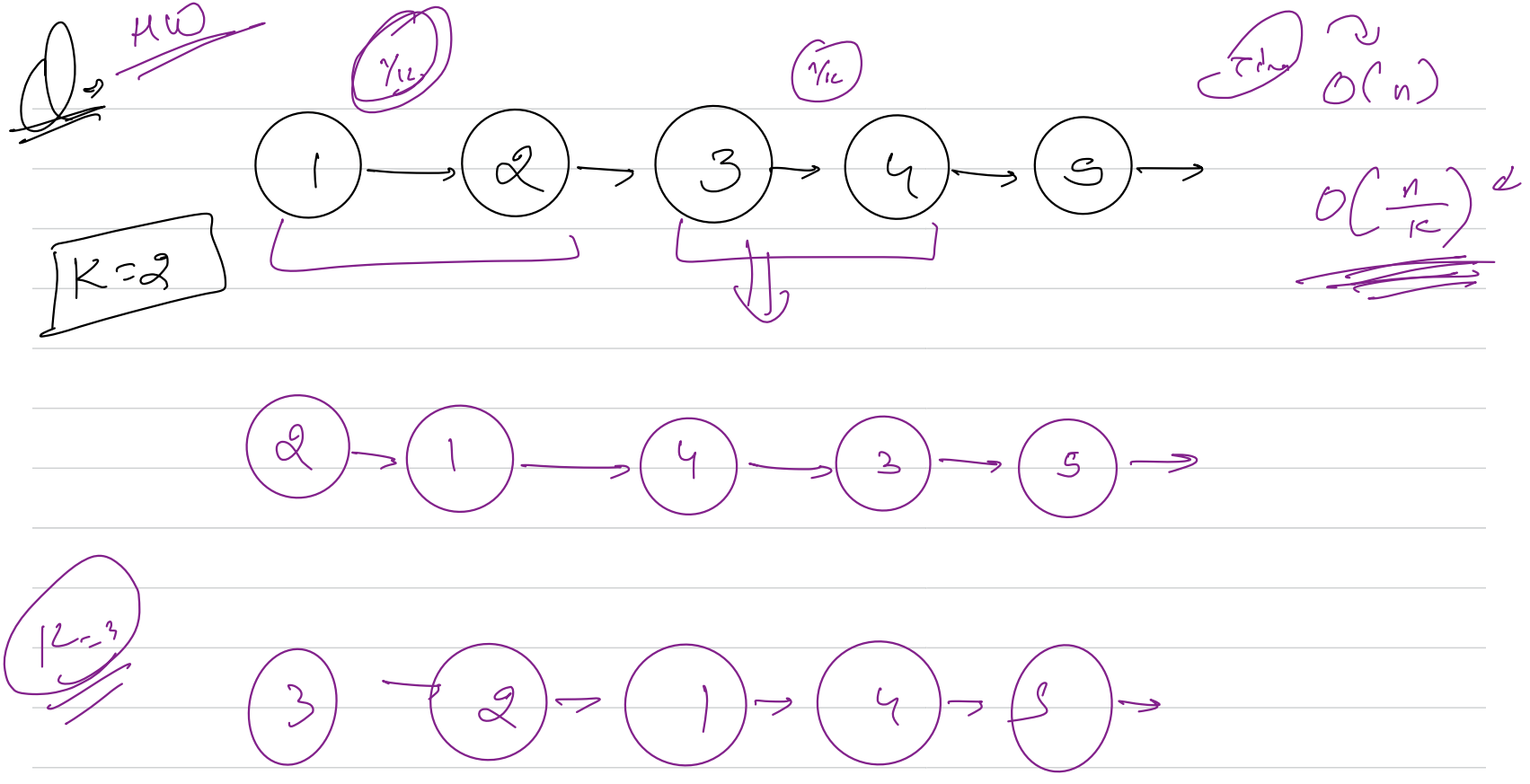
O(n·k·log k)

Priority Queue

↑

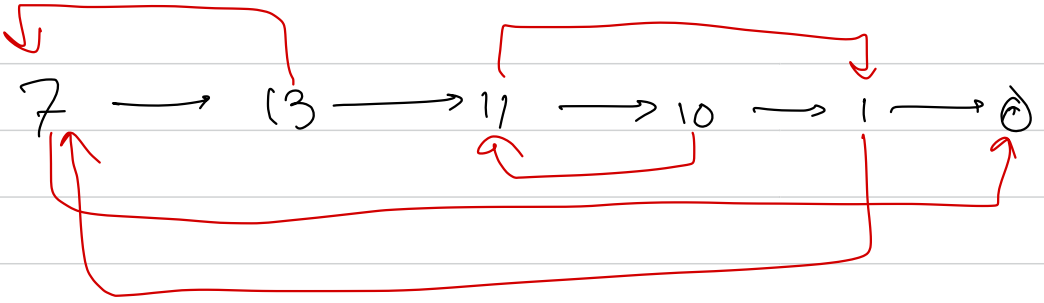
Know ans

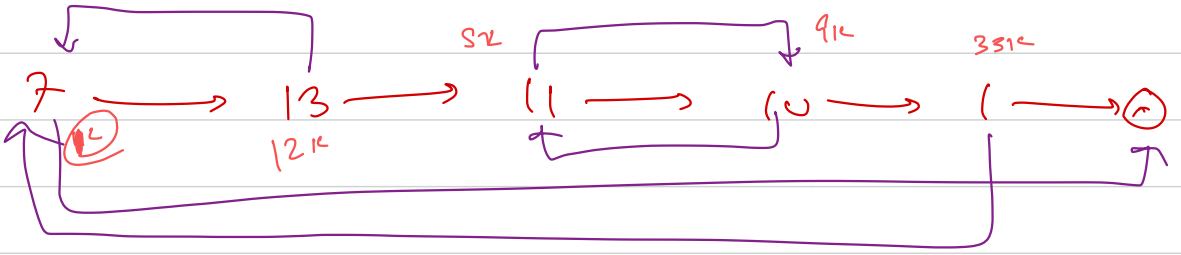
k – LL

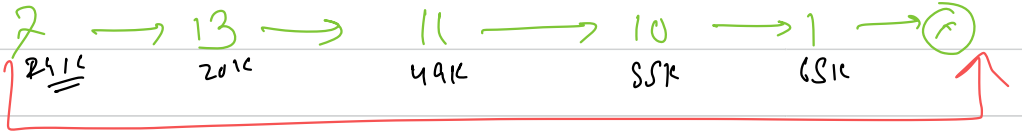

HW
1
2
3
4
5
K=2
O(n)
O(n/k)
2
1
4
3
5
K=3
3
2
1
4
5

reverse_group(head, k)

Q. Given a ll with each node having a next and a random pointer. (it points to any node randomly) - Prepare a copy of the linked list.







original

clone

1K → 24K

12K → 20K

5K → 49K

9K → 55K

3xK → 65K

address mapper

TC O(n)

SC O(n)

Pick

7: Node

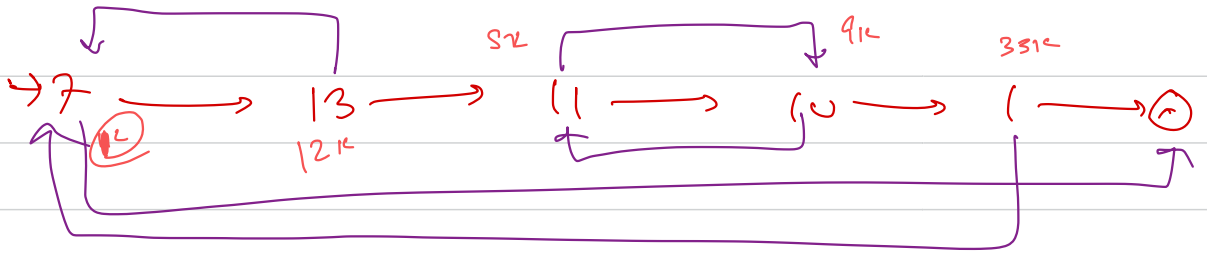
13: 7

11: 10

10: 4

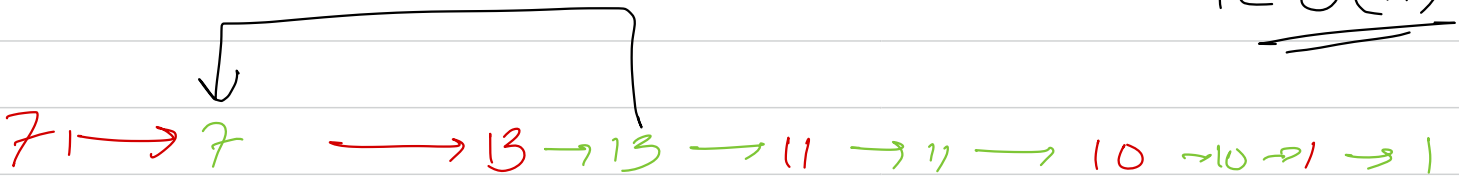
1: 0

value



SC: O(1)

TC: O(n)



13.next.random = 13.random.next

11.next.random = 11.random.next