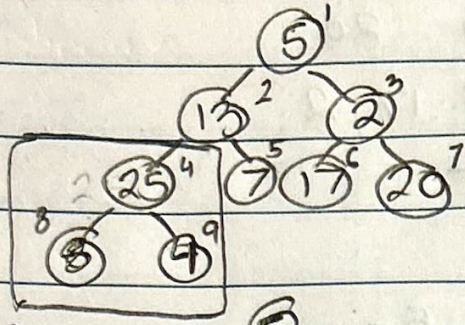
A = [5, 13, 2, 25, 7, 17, 20, 8, 4]

for length(A)/2 to 1:

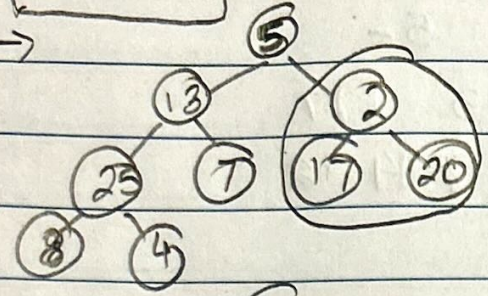
max_heapify(A, i)



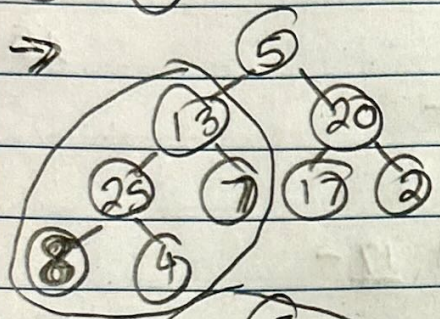
length(A)/2 = 4.5

4

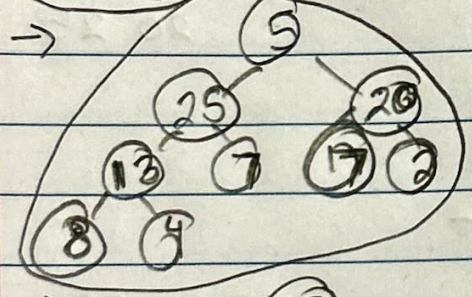
4 - 1 = 3

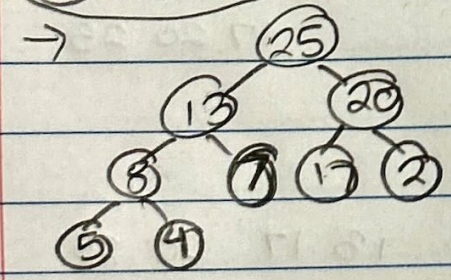


3 - 1 = 2

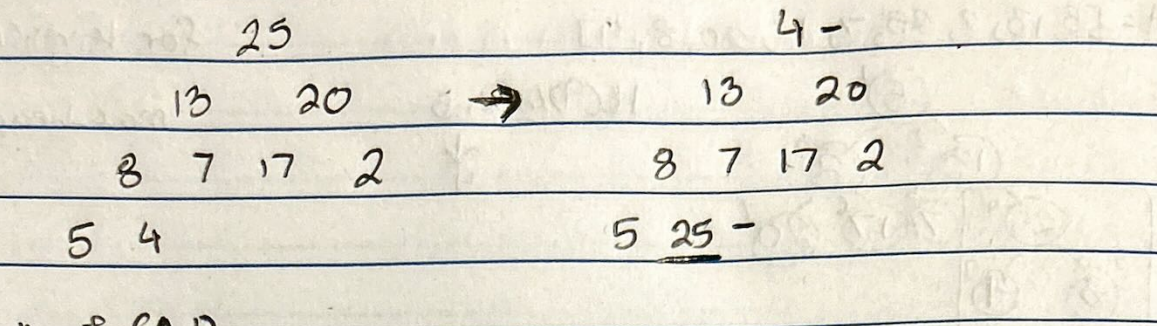


2 - 1 = 1

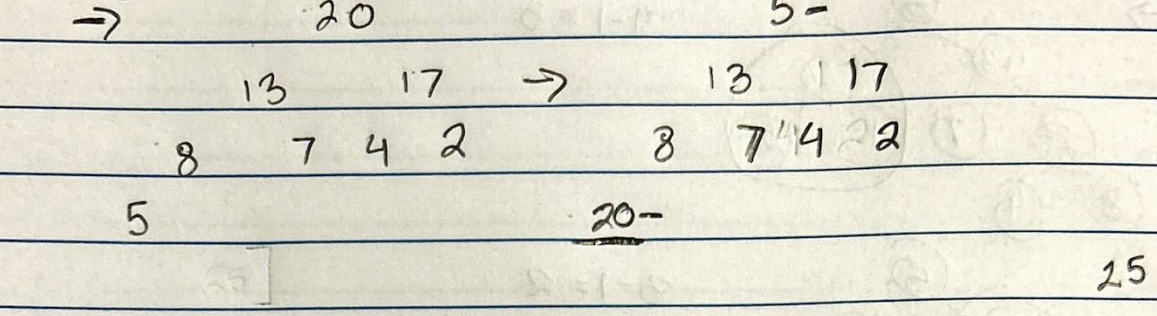




BASE

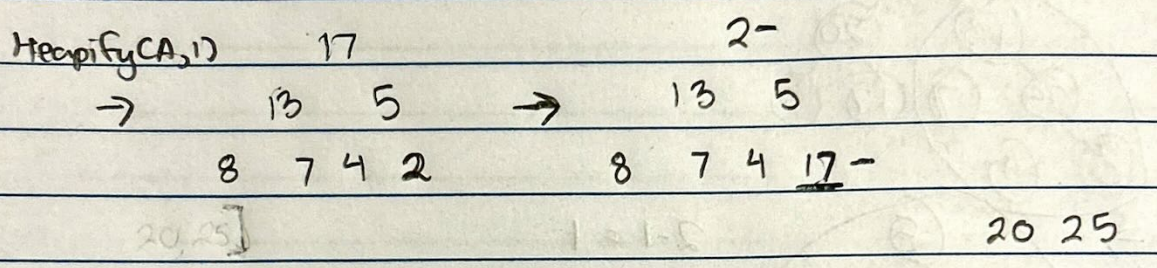


Heapify(A,1)



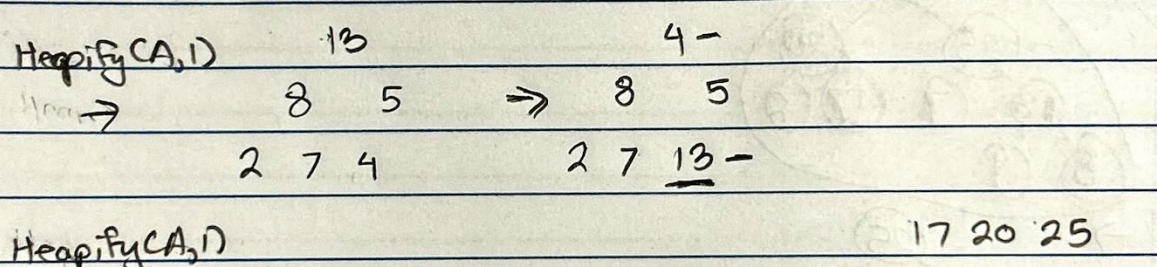
25

Heapify(A,1)



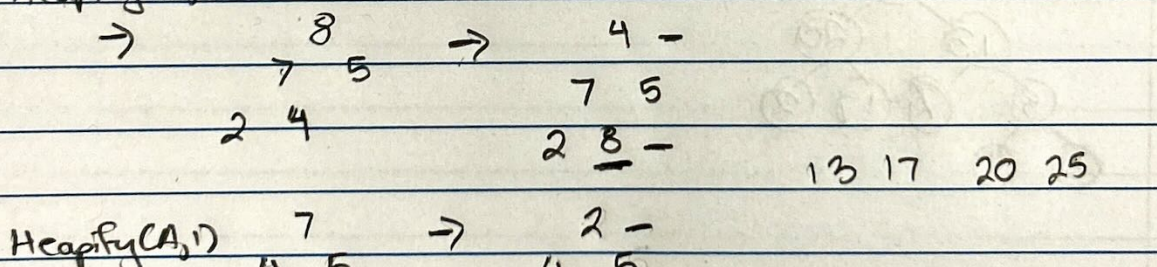
20 25

Heapify(A,1)



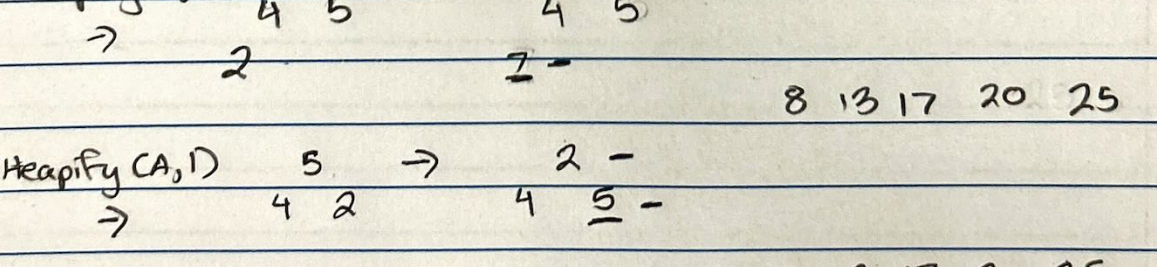
17 20 25

Heapify(A,1)



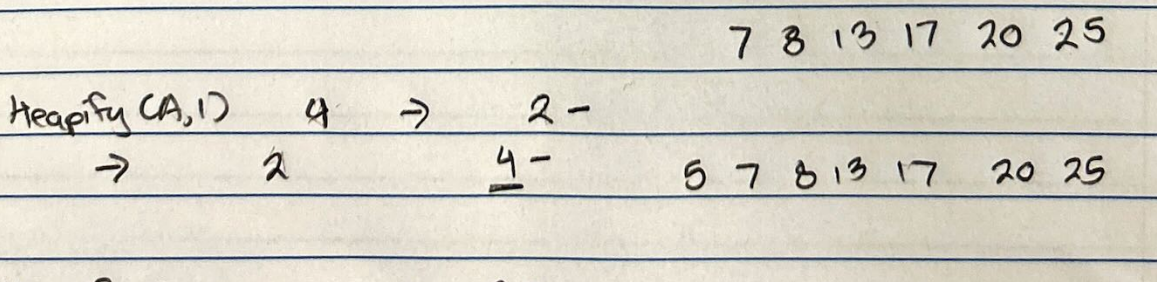
13 17 20 25

Heapify(A,1)



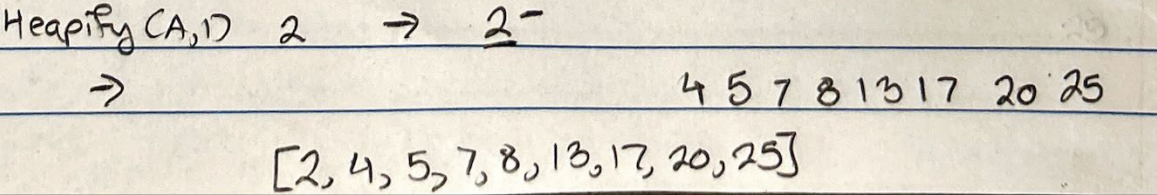
8 13 17 20 25

Heapify(A,1)



7 8 13 17 20 25

Heapify(A,1)



5 7 8 13 17 20 25

Heapify(A,1) 2 → 2-

→ 4 5 7 8 13 17 20 25

[2, 4, 5, 7, 8, 13, 17, 20, 25]