

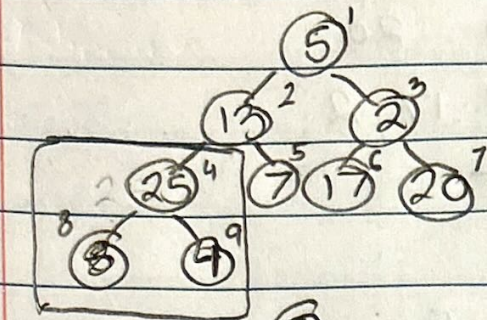
$A = [5, 13, 2, 25, 7, 17, 20, 8, 4]$

for $\text{length}(A)/2$ to 1:

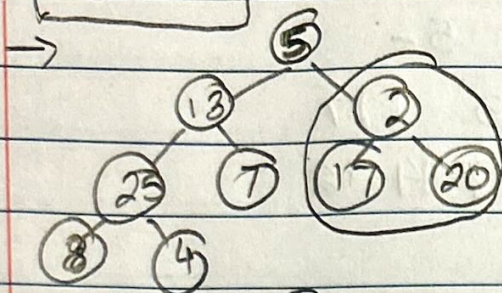
$$\text{length}(A)/2 = 4.5$$

$\text{max_heapify}(A, i)$

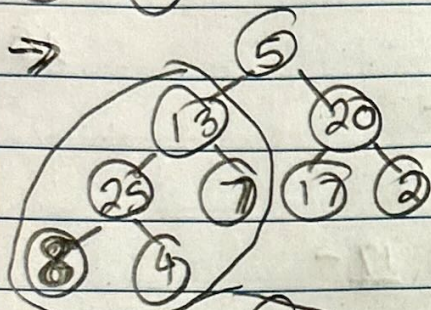
↓
4



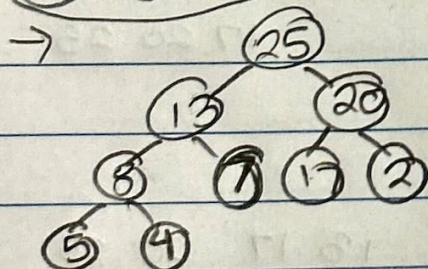
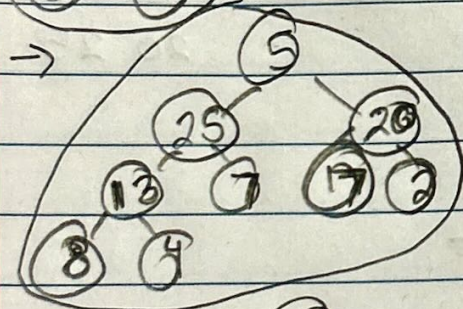
$$4 - 1 = 3$$



$$3 - 1 = 2$$



$$2 - 1 = 1$$



BASE

25

4-

13 20

→

13 20

8 7 17 2

8 7 17 2

5 4

5 25 -

Heapify(A, 1)

→

20

5-

13 17

→

13 17

8 7 4 2

8 7 4 2

5

20 -

25

Heapify(A, 1)

17

2-

→

13 5

→

13 5

8 7 4 2

8 7 4 17 -

20, 25]

20 25

Heapify(A, 1)

13

4-

→

8 5

→

8 5

2 7 4

2 7 13 -

Heapify(A, 1)

17 20 25

→

8

→

4 -

7 5

7 5

2 4

2 8 -

13 17 20 25

Heapify(A, 1)

7

→

2 -

4 5

4 5

→

2

2 -

8 13 17 20 25

Heapify(A, 1)

5

→

2 -

→

4 2

4 5 -

7 8 13 17 20 25

Heapify(A, 1)

4

→

2 -

→

2

4 -

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]