Q1

Height of Heap

Height : h

Running time of Maximum Heapify = O(h)

Time take Heapify = O(n)

(read and deleting Heap time : O(logn)

So Maximum Heapify of time is = O(n) because depend upon the Number swap and swap equal Number Height so Maximum swap in the Heafiy is their height that why running time is O(h).

Q #02

Priority Queue basically either max-Heap or min Heap or priority with small as value priority with lower value. In order to confirm the priority or not we delete the all priority Queue and at the end we get Sorted Array. If we get Sorted Array then its priority Queue, So deleting time

deleting time = O(n logn) = O(nlogn)

nlogn will take time to confirm pority Queue or not