

Find the kth smallest & largest element in the array.

{7,10,4,3,20,153

i Culumo in the

k = 3

0/b-> maxi=10

mini = 7 jain = () Journal)

The approach is that if we sort the average & then find the desired elements. Like if we want to find kth minimum element? then arr [k-1] is the answer. If we want to find kth largest element, then arr [n-k] will be the kth largest element where n is the no. of elements in the array.

Dry run 1) Sort the array.

13,4,7,10,15,203

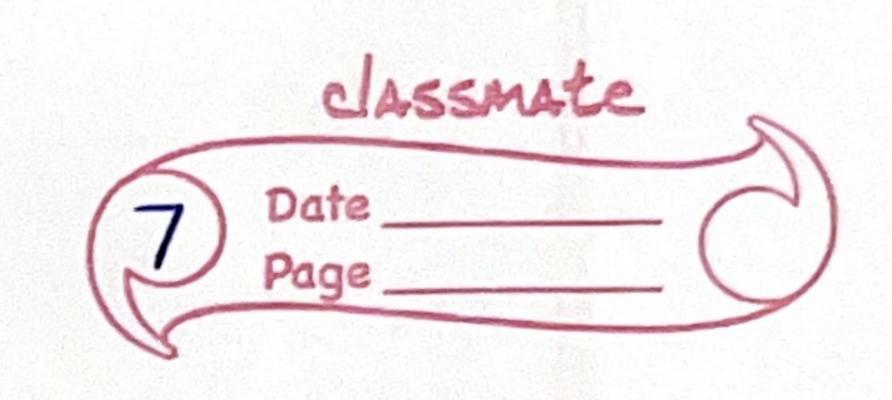
< = 3 3rd smallest element = avr [K-1]

3rd largest element = avr [n-k]

= avr [6-3]

avr [3]

Void findkth Min & Max Element (vector (int) Law) 1/Sorting away in increasing order sort (aur. begin(), aur. end());



```
// Finding Kth maximum element
  int n = au.size();
 int maxi = aur [n-k]; - Formulae in dry run
 cout << k << "th maxi = " << maxi << endl;
// Finding Kth minimum element
int mini = avvi [K-1]; > Formulae in dry run
cout << K << "th mini = " << mini;
```

Time complexity = O(nlogn) -> Sorting Space complexity = O(1) -> no extra space