2656. Maximum Sum With Exactly K Elements

My Submissions (/contest/biweekly-contest-103/problems/maximum-sum-with-exactly-k-elements/submissions/)

Back to Contest (/contest/biweekly-contest-103/)

You are given a **0-indexed** integer array nums and an integer k. Your task is to perform the following operation **exactly** k times in order to maximize your score:

- 1. Select an element m from nums.
- 2. Remove the selected element m from the array.
- 3. Add a new element with a value of m + 1 to the array.
- 4. Increase your score by m.

Return the maximum score you can achieve after performing the operation exactly k times.

User Accepted:	10767
User Tried:	11112
Total Accepted:	11197
Total Submissions:	13975
Difficulty:	Easy

Example 1:

```
Input: nums = [1,2,3,4,5], k = 3
Output: 18
Explanation: We need to choose exactly 3 elements from nums to maximize the sum.
For the first iteration, we choose 5. Then sum is 5 and nums = [1,2,3,4,6]
For the second iteration, we choose 6. Then sum is 5 + 6 and nums = [1,2,3,4,7]
For the third iteration, we choose 7. Then sum is 5 + 6 + 7 = 18 and nums = [1,2,3,4,8]
So, we will return 18.
It can be proven, that 18 is the maximum answer that we can achieve.
```

Example 2:

```
Input: nums = [5,5,5], k = 2
Output: 11
Explanation: We need to choose exactly 2 elements from nums to maximize the sum.
For the first iteration, we choose 5. Then sum is 5 and nums = [5,5,6]
For the second iteration, we choose 6. Then sum is 5 + 6 = 11 and nums = [5,5,7]
So, we will return 11.
It can be proven, that 11 is the maximum answer that we can achieve.
```

Constraints:

- 1 <= nums.length <= 100
- 1 <= nums[i] <= 100
- 1 <= k <= 100

Discuss (https://leetcode.com/problems/maximum-sum-with-exactly-k-elements/discuss)

```
JavaScript
                                                                                                                                          \mathfrak{C}
1 \cdot | const maximizeSum = (a, k) => {
         let pq = new MinPriorityQueue(\{ compare: (x, y) => y - x \}), res = 0;
 3
         a.map(x \Rightarrow pq.enqueue(x));
 4 ,
         while (k--) {
 5
              let cur = pq.dequeue();
 6
              res += cur;
 7
             pq.enqueue(cur + 1);
 8
         }
9
         return res;
10
    };
```