# 6285. Maximal Score After Applying K Operations

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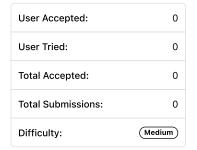
You are given a  $\mathbf{0}$ -indexed integer array nums and an integer k. You have a  $\mathbf{starting}$  score of  $\mathbf{0}$ .

#### In one operation:

- 1. choose an index i such that 0 <= i < nums.length,
- 2. increase your **score** by nums[i], and
- 3. replace nums[i] with ceil(nums[i] / 3).

Return the maximum possible **score** you can attain after applying **exactly** k operations.

The ceiling function ceil(val) is the least integer greater than or equal to val.



#### Example 1:

```
Input: nums = [10,10,10,10,10], k = 5
Output: 50
Explanation: Apply the operation to each array element exactly once. The final score is 10 + 10 + 10 + 10 + 10 = 50.
```

### Example 2:

```
Input: nums = [1,10,3,3,3], k = 3
Output: 17
Explanation: You can do the following operations:
Operation 1: Select i = 1, so nums becomes [1,4,3,3,3]. Your score increases by 10.
Operation 2: Select i = 1, so nums becomes [1,2,3,3,3]. Your score increases by 4.
Operation 3: Select i = 2, so nums becomes [1,1,1,3,3]. Your score increases by 3.
The final score is 10 + 4 + 3 = 17.
```

## Constraints:

- 1 <= nums.length,  $k <= 10^5$
- $1 \le nums[i] \le 10^9$

```
JavaScript
                                                                                                                         Ø
                                                                                                                              2
    const maxKelements = (a, k) \Rightarrow \{
1 ▼
        let pq = new MaxPriorityQueue({ compare: (x, y) \Rightarrow y - x }), res = 0;
3
        for (const x of a) pq.enqueue(x);
4 .
        while (k--) {
 5
             let cur = pq.dequeue();
6
             res += cur;
7
             pq.enqueue(Math.ceil(cur / 3));
8
9
        return res;
10
    };
```

Custom Testcase Use Example Testcases

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