Câu hỏi 5

Chính xác

Chấm điểm của 2,00

Given an array of non-negative integers. Each time, we can take the smallest integer out of the array, multiply it by 2, and push it back to the array.

Request: Implement function:

```
int leastAfter(vector<int>& nums, int k);
```

Where `nums` is the given array (the length of the array is between 1 and 100000). This function returns the smallest integer in the array after performing the operation `k` times (`k` is between 1 and 100000).

Example:

Given `nums = [2, 3, 5, 7]`.

In the 1st operation, we take `2` out and push back `4`. The array is now `nums = [3, 4, 5, 7]`.

In the 2nd operation, we take `3` out and push back `6`. The array is now `nums = [4, 5, 6, 7]`.

In the 3rd operation, we take `4` out and push back `8`. The array is now `nums = [5, 6, 7, 8]`.

With `k = 3`, the result would be `5`.

Note:

In this exercise, the libraries `iostream, string, cstring, climits, utility, vector, list, stack, queue, map, unordered_map, set, unordered_set, functional, algorithm` has been included and `namespace std` are used. You can write helper functions and classes. Importing other libraries is allowed, but not encouraged, and may result in unexpected errors.

For example:

Test	Result

`vector<int> nums {2, 3, 5, 7};`
`int k = 3;`
`cout << leastAfter(nums, k);`
	5

Answer: (penalty regime: 0, 0, 0, 5, 10, ... %)

Reset answer

```
int leastAfter(vector<int>& nums, int k) {
    std::priority_queue<int, std::vector<int>, std::greater<int>> minHeap(nums.begin(), nums.end());

    for (int i = 0; i < k; ++i) {
        int smallest = minHeap.top();
        minHeap.pop();
        minHeap.push(smallest * 2);
    }

    return minHeap.top();
}
```

Precheck Kiểm tra

	Test	Expected	Got	

✔	`vector<int> nums {2, 3, 5, 7};`
	`int k = 3;`
	`cout << leastAfter(nums, k);`
		5	5	✔

Passed all tests! ✔