



D. Fast search

time limit per test: 2 seconds

memory limit per test: 512 megabytes

You are given an array a of n integers a_1, a_2, \dots, a_n .

Your task is to response to the queries like "How many numbers' values are between l and r ?".

Input

The first line of the input contains n — the length of the array ($1 \leq n \leq 10^5$).

The second line contains n integers a_1, a_2, \dots, a_n ($-10^9 \leq a_i \leq 10^9$).

The third line contains integer k — the number of queries ($1 \leq k \leq 10^5$).

The following k lines contain a pair of integers $l\ r$ — query, described above ($-10^9 \leq l \leq r \leq 10^9$).

Output

The output must consist of k integers — responses for the queries.

Example

input	Copy
5	
10 1 10 3 4	
4	
1 10	
2 9	
3 4	
2 2	
output	Copy
5 2 2 0	

[→ Submit?](#)

Language: GNU G++17 7.3.0

 Choose file: No file chosen

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