

D. Fast search

time limit per test: 2 seconds
memory limit per test: 512 megabytes
input: standard input
output: standard output

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++20 13.2 (64 bit, win

Choose file: Choose File No file chosen

Submit

