



Problem C. Toby and Query

Input: Standard
Output: Standard
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In his free time Toby is always searching for interesting things. This time Toby created the following problem: given a sequence of n integer numbers, Toby would like to know how many different numbers are in the range $[l, r]$ ($r \geq l$)

Input

The input has several test cases. The first line of each test case contains an integer n ($1 \leq n \leq 10^5$), the size of the sequence of numbers. The next line contains n values a_i ($0 \leq a_i \leq 9$), the numbers in the sequence. The next line contains an integer q ($1 \leq q \leq 10^4$), the amount of queries. Then there are q lines, each line contains a query: two integers l and r ($1 \leq l, r \leq n$).

Output

For each test case print q integers, representing the amount of different numbers in the range $[l, r]$ for each query in the input.

Example

Input	Output
7	1
0 2 3 3 7 5 2	2
3	4
1 1	1
2 4	1
2 7	
5	
7 7 7 7 7	
2	
4 5	
1 5	

Use fast I/O methods