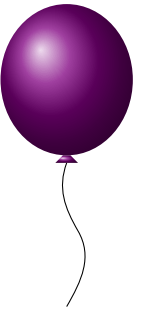


Distinct numbers

TIME LIMIT: 3.0s
MEMORY LIMIT: 256MB



How many distinct numbers does a subsegment of the array contain?

INPUT

First line of input contains the length of the array n ($1 \leq n \leq 300\,000$). Second line of input contains n integers from 0 to 10^9-1 — array elements.

Third line contains the number of queries q ($1 \leq q \leq 300\,000$). Next q lines contain descriptions of queries, one per line. Each query is described by two integers l and r ($1 \leq l \leq r \leq n$).

OUTPUT

For each query output the number of distinct numbers on the corresponding subsegment.

SAMPLES

Sample input 1	Sample output 1
5	3
1 1 2 1 3	2
3	3
1 5	
2 4	
3 5	