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https://www.spoj.com/problems/RMQSQ/

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RMQSQ - Range Minimum Query

no tags

You are given a list of **N** numbers and **Q** queries. Each query is specified by two numbers *i* and *j*; the answer to each query is the minimum number between the range [*i*, *j*] (inclusive).

Note: the query ranges are specified using 0-based indexing.

Input

The first line contains **N**, the number of integers in our list (**N** ≤ 100,000). The next line holds **N** numbers that are guaranteed to fit inside an integer. Following the list is a number **Q** (**Q** ≤ 10,000). The next **Q** lines each contain two numbers *i* and *j* which specify a query you must answer (**0** ≤ *i*, *j* ≤ **N**-1).

Output

For each query, output the answer to that query on its own line in the order the queries were made.

Example

Input:

```
3
1 4 1
2
1 1
1 2
```

Output:

```
4
1
```

Submit solution!

Added by: Joshua Kirstein

Date: 2014-10-18

Time limit: 3s

Source limit: 50000B

Memory limit: 1536MB

Cluster: Cube (Intel G860)

Languages: All

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