Help Fredo

Attempted by: **2580** / Accuracy: **78%** / Maximum Score: **30** / 37 Votes

Tag(s): Algorithms, Binary Search, Easy-Medium

Fredo is assigned a task today. He is given an array *A* containing *N* integers. His task is to update all elements of array to some minimum value *x*, that is, $A[i] = x$; $1 \leq i \leq N$ such that product of all elements of this new array is strictly greater than the product of all elements of the initial array. Note that *x* should be as minimum as possible such that it meets the given condition. Help him find the value of *x*.

Input Format:
The first line consists of an integer *N*, denoting the number of elements in the array.
The next line consists of *N* space separated integers, denoting the array elements.

Output Format:
The only line of output consists of value of *x*.

Input Constraints:
$1 \leq N \leq 10^5$
$1 \leq A[i] \leq 10^{10}$; $A[i]$ denoting an array element.

SAMPLE INPUT

```
5
4 2 1 10 6
```

SAMPLE OUTPUT

```
4
```

Explanation