

Circus 2

time limit per test: 1 second (2 seconds for Python)
memory limit per test: 500 megabytes
input: standard input
output: standard output
points: 100 · problem code: circus2

Long before he became a goat, Andy was pursuing a career in academia. After writing that 17 is a composite number on an exam, Andy decided that if he was going to be a clown anyway, he may as well join the circus. Andy is once again in charge of setting up the tightropes.

There are n posts in a line, where the i th post has height a_i . Andy must choose exactly two posts. The height of the tightrope is the minimum of the two chosen post heights, and the distance between posts i and j is $|i - j|$.

If Andy chooses posts i and j , the audience's excitement factor is $|i - j| \cdot \min(a_i, a_j)$. Find the maximum possible excitement factor.

Input

The first line contains an integer n , the number of posts.

The second line contains n integers $a_1, a_2, \dots, a_n$, where a_i is the height of the i th post.

Output

Print a single integer: the maximum excitement factor Andy can achieve.

Constraints

- $2 \leq n \leq 2 \cdot 10^5$
- $1 \leq a_i \leq 10^9$

Example 1

Input

```
5
1 2 3 4 5
```

Output

```
6
```

Explanation

Choosing the 3rd and 5th posts gives excitement factor $|5 - 3| \cdot \min(3, 5) = 2 \cdot 3 = 6$.