

Chef and Dhyey have become friends recently. Chef wants to test Dhyey's intelligence by giving him a puzzle to solve.

The puzzle contains an integer sequence A_1, A_2, \dots, A_N . The answer to the puzzle is the maximum of $A_i \% A_j$, taken over all valid i, j .

Help Dhyey solve this puzzle.

Input

- The first line of each test case contains a single integer N .
- The second line contains N space-separated integers A_1, A_2, \dots, A_N .

Output

For each test case, print a single line containing one integer — the answer to the puzzle.

Constraints

- $2 \leq N \leq 10^5$
- $1 \leq A_i \leq 10^9$ for each valid i

Subtasks

Subtask #1 (30 points): $2 \leq N \leq 1,000$

Subtask #2 (70 points): $2 \leq N \leq 10^5$

Example Input 1

5

1 2 3 4 5

Example Output 1

4

Example Input 2

6

5 5 5 2 3 8

Example Output 2

5