Maximum of Inversion

Given a sequence of n real numbers $a_1, a_2, \dots a_n$. Find the maximum value of $1 / a_i$ ($i = 1\dots n$).

Input

Line 1: contains the integer n ($1 \le n \le 10^6$).

Line 2 to n + 1: (i + 1)-th line contains the real number a_i.

Output

Only one line contains the maximum value of 1 / ai **with exact 3 decimal digits**.

Example

Input:
3
1
2
3

Output:
1.000