



Problem B: Product of Array Elements

Time limit: 1s; Memory limit: 512 MB

Given array A consisting of n integers a_i . Tuan wants to remove at most 1 element in array A so that the product of all remaining elements in that array is the largest. Please help Tuan do it!

Your task is to calculate the product of all remaining elements in that array after removed at most 1 element.

Input

- The first line contains a positive integer n ($2 \leq n \leq 1000$).
- Next line contains n integers a_i separated by a space ($-10^9 \leq a_i \leq 10^9$).

Output

- Print the result of the problem. Since it may be too big, print it after taking modulo 10^9+7 .

Sample

Input	Output
4 4 2 3 5	120
5 -1 -2 -4 1 2	16

Explanation Example 1:

- Without dropping any elements, the product of 4 elements is $4 \times 2 \times 3 \times 5 = 120$.

Explanation Example 2:

- Remove -1, the product of the remaining 4 elements is $-2 \times (-4) \times 1 \times 2 = 16$