Boring Game (Easy)

You are playing a boring game. This game has n stages numbered by integers from 1 to n. You just try to clear the stages in the order of $1,2,\ldots,n$. After you clear all the stages, the game is finished. You have an ability to clear all stages if you want. As this game is boring, you must finish the game!

In the start of the game, your score is 000001. When you clear stage i $(1 \le i \le n)$, the score is supposed to be multiplied by a_i, which is a positive integer. However, the screen that displays the score only have space for 6 digits, so if the score exceeds 999999, only the last 6 digits are left. For example, if your score was 019213 and you cleared stage 10 with $a_{10} = 112$, your score becomes 151856 since $19213 \times 112 = 2\mathbf{151856}$.

You are trying to *maximize* your score after the game is finished. However, you are allowed to **skip at most one stage** (including the first and the last stage). That is, you can finish the game even if you skip one stage!

So the problem is.. find the maximum score you can achieve in this boring game by skipping at most one stage.

Input

Your input consists of an arbitrary number of records, but no more than 20.
The first line of the record contains an integer n $(1 \le n \le \mathbf{1,000})$, the number of stages. The second line of the record contains positive integers $a_1, a_2, \cdots, a_n$ $(1 \le a_i < 10^6)$.
The end of input is indicated by a line containing only the value -1.

Output

For each input record, print the maximum score you can achieve. You must print all 6 digits of the score.

Example

Standard input	Standard output
1 5 5 91249 1281 84112 41823 1328 4 13 57 24 68 -1	000005 798272 209312

Notes

First example: If we skip stage 1, the score is 000001. If we clear stage 1, the score is 000005. So the answer is 000005.

Second example: If we skip stage 2, the score is $91249 \times 84112 \times 41823 \times 1328 \equiv 798272$.

Third example: If we clear all stages, the score is $13 \times 57 \times 24 \times 68 \equiv 209312$.

Take a look at the Hints section of the problem 'Balance of Brahan'.

Time Limit

2 seconds.