

## Problem A. Nutella's Life

Input file: *standard input*  
Output file: *standard output*  
Time limit: 2 seconds  
Memory limit: 512 mebibytes

Website `chefforces.at` has just published a schedule of contests for the next year! There will be  $n$  contests and no changes in the schedule. Oleg got really excited and decided to maximize the fun.

After a thorough analysis of each contest's problem setters Oleg came up with  $n$  integers  $a_i$ , one for each contest. The number  $a_i$  is the amount of fun Oleg will get while playing the  $i$ -th contest. Note that, due to a *notorious coincidence*, some numbers  $a_i$  can be negative.

However, Oleg does not want to miss contests and, especially, to miss several contests in a row. Formally, if Oleg decides to skip a contest, and he has already skipped  $x$  contests which took place immediately before this one, his total fun decreases by  $x + 1$ .

Finally, Oleg wants each contest to be at least as fun as the previous one in which he has participated. In other words, if Oleg participates in contests with numbers  $i$  and  $j$ ,  $i < j$ , then the condition  $a_i \leq a_j$  must hold.

Help Oleg to decide in which contests he has to participate in order to maximize the total fun.

### Input

The first line contains an integer  $n$ , the number of contests in the schedule ( $1 \leq n \leq 10^5$ ).

The second line contains  $n$  integers  $a_i$  ( $-10^9 \leq a_i \leq 10^9$ ).

### Output

The only line of the output must contain an integer: the maximal amount of fun Oleg can get.

### Examples

standard input	standard output
7 1 3 2 7 3 2 4	7
7 -3 -4 -2 -2 -6 -8 -1	-11