

## E. Mod Mod Mod

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

You are given a sequence of integers  $a_1, a_2, \dots, a_n$ . Let  $f(x)$ , and for  $1 \leq i < n$ . Here,  $\%$  denotes the modulus operation. Find the maximum value of  $f(x, 1)$  over all nonnegative integers  $x$ .

### Input

The first line contains a single integer  $n$  ( $1 \leq n \leq 200000$ ) — the length of the sequence.

The second lines contains  $n$  integers  $a_1, a_2, \dots, a_n$  ( $1 \leq a_i \leq 10^{13}$ ) — the elements of the sequence.

### Output

Output a single integer — the maximum value of  $f(x, 1)$  over all nonnegative integers  $x$ .

### Examples

<b>input</b>
2 10 5
<b>output</b>
13

<b>input</b>
5 5 4 3 2 1
<b>output</b>
6

<b>input</b>
4 5 10 5 10
<b>output</b>
16

### Note

In the first example you can choose, for example,  $x = 19$ .

In the second example you can choose, for example,  $x = 3$  or  $x = 2$ .