Problem C. Reduce the Sequence

Input file:	`sequence.in`
Output file:	`sequence.out`
Time limit:	2 seconds
Memory limit:	256 megabytes

You are given a sequence consisting of non-negative integer numbers. In one move, you can take any two adjacent positive numbers and reduce both of them by 1. Sequence is called `good` if there is no valid move left. Count the number of different `good` sequences that you can get from the given one. The answer may be large, so you have to give it modulo $10^9 + 7$.

Input

The first line of input contains a single integer N ($1 \le N \le 100\,000$), the length of the sequence. The second line contains N non-negative integers: the initial sequence itself. Each element of the sequence does not exceed 300.

Output

Print the number of different good sequences modulo $10^9 + 7$.

Examples

sequence.in	sequence.out
2 4 2	1
3 1 2 3	2