

D. Numbers

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Furik loves writing all sorts of problems, especially such that he can't solve himself. You've got one of his problems, the one Furik gave to Rubik. And Rubik asks you to solve it.

There is integer n and array a , consisting of ten integers, indexed by numbers from 0 to 9. Your task is to count the number of positive integers with the following properties:

- the number's length does not exceed n ;
- the number doesn't have leading zeroes;
- digit i ($0 \leq i \leq 9$) occurs in the number at least $a[i]$ times.

Input

The first line contains integer n ($1 \leq n \leq 100$). The next line contains 10 integers $a[0], a[1], \dots, a[9]$ ($0 \leq a[i] \leq 100$) — elements of array a . The numbers are separated by spaces.

Output

On a single line print the remainder of dividing the answer to the problem by 1000000007 ($10^9 + 7$).

Examples

input
1 0 0 0 0 0 0 0 0 0 1
output
1

input
2 1 1 0 0 0 0 0 0 0 0
output
1

input
3 1 1 0 0 0 0 0 0 0 0
output
36

Note

In the first sample number 9 meets the requirements.

In the second sample number 10 meets the requirements.

In the third sample numbers **10, 110, 210, 120, 103** numbers, 36 in total.

meet the requirements. There are other suitable