

C: Rebound Sequences

- Time Limit: 2 sec

An integer sequence a is **rebound sequence** if there are three integers i, j, k ($1 \leq i < j < k \leq N$) satisfying $a_i > a_k > a_j$. You are given an integer sequence s . Your task is to count the number of rebound sequences that can be obtained by permuting the elements of s .

Input

The input consists of a single test case in the format below.

N
 $s_1 \ s_2 \ \dots \ s_N$

The first line contains a single integer N ($1 \leq N \leq 200$). The second line contains N integers s_i ($1 \leq s_i \leq N$), which is the i -th element of s .

Output

Output the number of rebound sequences that can be obtained by permuting the elements of s modulo $10^9 + 7$.

Examples

Input	Output
4 1 2 3 4	10
12 1 2 3 4 5 6 7 8 9 10 11 12	478793588
5 3 1 4 1 5	32
20 1 1 1 2 3 4 4 7 7 8 11 12 13 14 15 16 17 17 19 20	959127228