

## Problem F – Forgotten PIN number.

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Febo is a person so distracted that he forgot the PIN of his new credit card a few hours later he received it. The only thing he remembers is all the digits in the PIN are distinct. To create a new PIN, he must follow some procedures in the bank: An executive helps him get the forgotten PIN back and, for obvious security reasons, this has to be changed.

Since Febo knows himself and his terrible memory, decided his new PIN will keep exactly the same digits used in the last one, with this condition: Two characters that were together in the forgotten PIN must not be side by side (in the same order) again.

The bank is so sophisticated that to make their PINs more secure, they use a numeric system with  $10^7$  digits for their PINs, nevertheless, we were not able to print them and instead, we identify them with integer numbers from 1 to  $10^7$ .

Given the forgotten PIN, how many options (with the same digits in Febo's forgotten PIN) are excluded for creating the new one?

### Input

The first line of input contains a single integer number  $T$  such that  $1 \leq T \leq 100$ , and denotes the number of cases you will receive. Each of the next  $T$  lines contains a forgotten PIN, represented as a list of numbers  $p_i$  separated by space ( $1 \leq p_i \leq 10^7$ ), where  $p_i$  is the  $i^{th}$  digit in Febo's forgotten PIN.

### Output

For each test case in the input, print a line with a single integer, representing the number of invalid PINs that can be generated with the given forgotten PIN. Since the answer could be very big, print it modulo  $10^9 + 7$ .

Sample input 1	Sample output 1
3	3
1 2 3	13
3 8 11 4	2921
25 40 400 30 1 4 1000000	