E – Evaluation

Memory limit: 1024 MB
Time limit: 1 s

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We have a string consisting of n non-zero digits. We can produce an expression by inserting at most one of the characters + (plus) or · (multiply) between any two consecutive digits. For instance, from the string "231" we can produce nine expressions:

$$231, \quad 23+1, \quad 23\cdot 1, \quad 2+31, \quad 2\cdot 31, \quad 2+3+1, \quad 2+3\cdot 1, \quad 2\cdot 3+1, \quad 2\cdot 3\cdot 1.$$

We evaluate these expressions with the standard order of operations, and calculate the sum of all values. For our example we get

$$231+24+23+33+62+6+5+7+6=397.$$

Calculate the above sum modulo 10^9+7.

Input

The first line of the input contains one integer n ($1 \le n \le 10^6$), denoting the length of the string. The second line contains a string of length n consisting of digits 1–9.

Output

Output one integer, the sum of all expressions modulo 10^9+7.

Example

For the input data:	the correct result is:
3 231	397