Problem B
Birthday Gift
Time Limit: 2 Second(s)

It's your Venusian friend's birthday. You don't remember their exact age, but you are sure it had to be no more than 10^{18} years. You will give them a decimal number (without leading zeros) for their birthday. You want the number of digits to be equal to their age. To make the number more interesting you will ensure that no adjacent pairs of digits will be identical.

Their exact day of birth is represented as an integer in the range 0 to 224 (since Venus has 225 days in a year). To make their gift more personal you want the given number to have the same remainder as their birthday when divided by 225.

There are potentially a lot of possible gifts that you could give. You may decide to give more than one gift. Determine the number of possible gifts modulo $10^9 + 7$.

Input

The single line of input contains two space separated integers a ($1 \leq a \leq 10^{18}$) and b ($0 \leq b < 225$), where a is the age of your friend and b is the birthdate of your friend.

Output

Output a single integer, which is the number of interesting personalized numbers you could give. Since this number may be quite large, output it modulo $10^9 + 7$.

Sample Input 1	Sample Output 1
12345 200	323756255

Sample Input 2	Sample Output 2
100 87	896364174

Sample Input 3	Sample Output 3
100 35	785970618

Sample Input 4	Sample Output 4
5000 5	176058968

Sample Input 5	Sample Output 5
888888 88	906317283

Sample Input 6	Sample Output 6
9999999 99	133442170

Sample Input 7	Sample Output 7
101010101010 127	893501348