E-mail

Time limit: 1.0 second

Vasya started to use the Internet not so long ago, so he has only two e-mail accounts at two different servers. For each of them he has a password, which is a non-empty string consisting of only lowercase Latin letters. Both mail servers accept a string as a password if and only if the real password is its subsequence.

Vasya has a hard time memorizing both passwords, so he would like to come up with a single universal password, which both servers would accept. Vasya can't remember too long passwords, hence he is interested in a universal password of a minimal length. You are to help Vasya to find the number of such passwords.

Input

The input consists of 2 lines, each of them containing the real password for one of the servers. The length of each password doesn't exceed 2000 characters.

Output

Output the number of universal passwords of minimal length modulo $10^9 + 7$.

Samples

input	output
b ab	1
abcab cba	4

Notes

In the second sample, the passwords of minimal length are the following: **abcaba, abcbab, acbcab, cabcab**.