Problem E. Elfstedentocht

Input file:	*standard input*
Output file:	*standard output*
Time limit:	2 seconds
Memory limit:	1024 mebibytes

It is the 25th of January 2027, and it giet oan: the sixteenth Elfstedentocht is finally being held! The Elfstedentocht is a famous ice skating competition across all eleven historic cities in Fryslân. Being a Frisian patriot, you obviously immediately decide to participate. Unfortunately, the form to enter the competition is very unclear. It looks like it has not been used in 30 years (and 21 days)! The text consists of a string s of signs. You can determine that 26 different signs have been used, but you do not know which letter from a to z is meant by each sign (each sign corresponds to a different letter).



Figure 5: There has not actually been an Elfstedentocht in ages, due to insufficient frost.

Of course, you do not want to apply for the wrong event. Luckily, you have a plan: there are k words $w_1, w_2, \ldots, w_k$ that you expect to appear in s. To get a rough idea of how likely it is that the form is the correct one, you want to determine the total number of occurrences of the k words as substrings of s over all 26! possible assignments of signs to letters. Note that the occurrences of words (even the same word) **are** allowed to overlap, and each occurrence needs to be counted separately. As the answer can be huge, output it modulo $10^9 + 7$.

Input

The first line contains a string s ($1 \le |s| \le 10^6$), consisting only of uppercase English letters (they represent the 26 distinct symbols you cannot read).

The second line contains an integer k ($1 \le k \le 10^6$), the number of words that you expect to appear in s.

The next k lines each contain a string w_i ($1 \le |w_i| \le 10^6$), consisting only of lowercase English letters, representing the i'th word.

It is guaranteed that the total sum of lengths of all the words is at most 10^6 ($\sum_{i=1}^{k} |w_i| \le 10^6$).

Output

Output one integer, the total number of occurrences of all the words modulo $10^9 + 7$.

Examples

standard input
AABBCC 1 aa
standard output
322197157

standard input
AABBCCDEF 2 aa abc
standard output
43666263

standard input
DETOCHTFIERTLANSLJOUWERTSNITSDRYLTSSLEATSTARUMHYLPENWARKUMBOALSERTHARNSFRJENTSJERENDOKKUM 11 ljouwert snits drylts sleat starum hylpen warkum boalsert harns frjentsjer dokkum
standard output
537659403

Note

In the first example, we have only one word `aa`. This word can occur in the place of `AA` in s, assuming that `A` gets mapped to `a`. There are 25! possible ways of choosing a mapping where the `A` is already fixed. Similarly, for `BB` and `CC`, we get 25! occurrences each. The substring `AB` of s can never be an occurrence of `aa`, because `A` and `B` are known to be distinct characters, and the same holds for `BC`. In total, the number of occurrences of the word `aa` is $25! \cdot 3 \equiv 322\,197\,157 \pmod{10^9 + 7}$.