

# Acronym II

An acronym is made of up the initial letter(s) of the words in a phrase, such as EU (European Union) and BREXIT (BRitish EXIT). In this problem, we can also either ignore or consider the conjunction "**and**", and the following adpositions "**in**", "**on**", "**at**", "**to**", "**of**", "**from**", "**for**" and "**with**" when making the acronym, such as BENELUX (BElgium, NEtherlands and LUXembourg) and RADAR (RAdio Detection And Ranging).

Given an acronym **A**, and a list of **N** strings **W**<sub>1</sub>, **W**<sub>2</sub> ... **W**<sub>N</sub>, you would like to find out the number of possible combinations of making the given acronym by using all the N strings following their order. That is, the acronym must be made up of at least one initial letter of each word, except the above-mentioned conjunction and adpositions (either skip or use it). Both **A** and the **N** strings only consist of lowercase latin letters. Since the answer can be large, output the answer modulo **1000000007**.

**Note:** This is a harder version of the problem [ACRYM](#), with larger constraints. Please read the input section carefully.

## Input

The first line is the number of test cases **T**. ( $1 \leq T \leq 20$ )

For each test case, it starts with one integer **N**. ( $1 \leq N \leq 200$ )

Next line is a string **A**. ( $1 \leq |A| \leq 50000$ )

Following N lines, each consisting of one string **W**<sub>i</sub>. ( $1 \leq |W_i| \leq 250$ )

It is guaranteed that **W**<sub>1</sub> is neither conjunction nor adposition.

## Output

Output one integer indicating the number of possible combinations.

## Example

**Input:**

```
3
3
duckhim
duck
hello
moto
7
natiofforessaa
national
office
for
forest
safety
in
aachen
```

4  
whiskey  
what  
is  
secret  
key

**Output:**

0  
4  
1

## **Explanation**

In case 1, no combination is possible.

In case 2, there are four possible combinations:

- **NATIONAL Office for FORESt SAfety in Aachen**
- **NATIONAL Office for FORESt Safety in AAchen**
- **NATIONAL Office For FORESt SAfety in Aachen**
- **NATIONAL Office For FORESt Safety in AAchen**

In case 3, only one possible combination exists:

- **WHat Is Secret KEY**