Contact List

A few days ago, Lea experienced one of the horrors of modern life: She dropped her smartphone. Now, her screen is cracked and sometimes random locations on the screen act as if they had just been pressed. When sending a message to one of her contacts, she enters the name of the contact into a searchbox. If the name matches exactly, she can send the message with just another click. However, now that her screen is cracked, this means that sometimes her phone already sends the message to "Bob", while Lea meant for it to be sent to "Bobby", which are totally different people. This has embarassed Lea quite a few times now, so she wants to rename some of her contacts such that no contact is a prefix of another one. Can you tell her how many contacts she has to rename?

Input

The first line of the input contains an integer t. t test cases follow, each of them separated by a blank line.

Each test case consists of an integer n, the amount of contacts Lea has in her phone. n lines follow, each line containing the name of a contact (where the first letter is in "A" to "Z" and the rest is in "a" to "z").

Output

For each test case, output one line containing "Case #i: x" where i is its number, starting at 1, and x is the minimal amount of contacts Lea has to rename. Each line of the output should end with a line break.

Constraints

- $1 \leq t \leq 20$
- $1 \leq n \leq 10000$
- Contact names are unique.
- Contact names are not longer than 500 characters.

Sample Input 1	Sample Output 1
1 7 Bob Bobby Boba Charles Charly Julia Julian	Case #1: 2

Sample Input 2	Sample Output 2
7 4 Bfugw Ksdb Ctg Bfug 3 Pgqh Mlvo Pgqhzot 7 Opmp Faokkia Fao Opmpn Qkqv Qewyu Faos 3 Ct Qxhu Qxhuzr 8 Olp Wafgmp Olpt Wafgm Olpv Wbgl Wbglhlq Waf 4 Alna Al Nl Mmybw 8 Wlyppv Etdtfz Wl Wly Etdtf Etdtfzu Spwaw Aogja	Case #1: 1 Case #2: 1 Case #3: 2 Case #4: 1 Case #5: 4 Case #6: 1 Case #7: 4