

Problem 1: Key Treasure

Input file: Problem1.txt

In the current scenario of elections in Pakistan, both parties need that their communication should be safe (no other party member can understand their message that what it is), to make communication of the both parties safe a new company HCL (Hyper Communication Ltd.) came on the front and provided the solution for this problem. HCL's chief security officer Salem Ahmed Khan designed some new encoding and decoding method for secure communication.

This method works on the basis of a key pair, one key is used to decode and the other key is used to encode, he provided one key to the user for the transmission of the messages and other key to the receivers to decode the message (but no one knows how these keys work). He has developed many sets of such unique keys and saved these key pairs in some secure location on his cloud server drive. Someone hacked that server and deleted some data from his secure drive where all the key pairs were safe.

Your task is to find the available key pairs in that drive.

Input

The input consists of multiple test cases. The first line of input is the number of test cases **N** ($1 \leq N \leq 50$). After that, the next line will tell you the number of character **strings S** ($1 \leq S \leq 200$), available for this test case, the next S lines will have the strings in this test case. Every key has no repeated character and the length of the key is **L** ($1 \leq L \leq 15$).

Output

For each test case in the input, first output "Case #n: " where n is the test case number, followed by the total number of key pairs available you have found.

Sample Input

3
5



samrdn
dgmq
mrads
cat1
mgdq
4
mercuny
hamsbnd
wife
fire
6
clock
time
clock
maze
hardwosmnqp
zaberlion

Sample Output

Case #1: 2
Case #2: 0
Case #3: 1