A word is a string of lower-case letters. A cool word has at least 2 different letters and the number of occurrences of each different letter is different.

Here is a formal definition. Let *w* be a word and *S* be the set of letters in word *w*, then *w* is cool if and only if all *f*(*c*) (for each character *c* in *S*) is all different. Here *f*(*c*) means the number of occurrences of *c* in *w*.

For example, the word “ada” is cool because *f*(*a*) = 2, *f*(*d*) = 1, and they’re different. “banana” is also cool because *f*(*a*) = 3, *f*(*n*) = 2, *f*(*b*) = 1. But the word “bbacccd” is not cool because *f*(*a*) = *f*(*d*) = 1. Some other interesting cool words include: mammal, needed, papaya, referee, senselessness.

Read a list of words and count the number of cool words.

# Input

There will be at most 30 test cases. Each case begins with an integer *n* (1 ≤ *n* ≤ 30), the number of test cases. Following line will contain an integer m ( 1 ≤ *n* ≤ 10000), the number of words to check. Each of the following n lines contains a word containing at least one and at most 30 letters.

Output

For each test case, print the case number and the number of cool words.

# Sample Input

2

2

ada

bbacccd

2

illness

a

# Sample Output

Case 1: 1

Case 2: 0