数字重组整除问题

Description

Babul’s favourite number is 17. He likes the numbers which are divisible by 17. This time what he does is that he takes a number N and tries to find the largest number which is divisible by 17, by rearranging the digits. As the number increases he gets puzzled with his own task. So you as a programmer have to help him to accomplish his task.Note: If the number is not divisible by rearranging the digits, then print “Not Possible”. N may have leading zeros.

Input

The first line of input contains an integer T denoting the no of test cases. Each of the next T lines contains the number N.

Output

For each test case in a new line print the desired output.

Sample Input 1

4

17

43

15

16

Sample Output 1

17

34

51

Not Possible

素数和问题

Description

Given an even number ( greater than 2 ), return two prime numbers whose sum will be equal to given number. There are several combinations possible. Print only first such pair.

NOTE: A solution will always exist, read Goldbach’s conjecture.Also, solve the problem in linear time complexity, i.e., O(n).

Input

The first line contains T, the number of test cases. The following T lines consist of a number each, for which we'll find two prime numbers.Note: The number would always be an even number.

Output

For every test case print two prime numbers space separated, such that the smaller number appears first. Answer for each test case must be in a new line.

Sample Input 1

5

74

1024

66

8

9990

Sample Output 1

3 71

3 1021

5 61

3 5

17 9973

字符串5

Description

Archana is very fond of strings. She likes to solve many questions related to strings. She comes across a problem which she is unable to solve. Help her to solve. The problem is as follows:-Given is a string of length L. Her task is to find the longest string from the given string with characters arranged in descending order of their ASCII code and in arithmetic progression. She wants the common difference should be as low as possible(at least 1) and the characters of the string to be of higher ASCII value.

Input

The first line of input contains an integer T denoting the number of test cases. Each test contains a string s of lengthL.

1<= T <= 100

3<= L <=1000

A<=s[i]<=Z

The string contains minimum three different characters.

Output

For each test case print the longest string.Case 1:Two strings of maximum length are possible- “CBA” and “RPQ”. But he wants the string to be of higher ASCII value therefore, the output is “RPQ”.Case 2:The String of maximum length is “JGDA”.

Sample Input 1

2

ABCPQR

ADGJPRT

Sample Output 1

RQP

JGDA

字符串6

Description

Given an array of strings A[ ], determine if the strings can be chained together to form a circle. Astring X can be chained together with another string Y if the last character of X is same as firstcharacter of Y. If every string of the array can be chained, it will form a circle.For eg for the array arr[] = {"for", "geek", "rig", "kaf"} the answer will be Yes as the given strings can be chained as "for", "rig", "geek" and "kaf"

Input

The first line of input contains an integer T denoting the number of test cases. Then T test cases follow.

The first line of each test case contains a positive integer N, denoting the size of the array.

The second line of each test case contains a N space seprated strings, denoting the elements of the array A[ ].

1 <= T <= 100

0 < N <= 30

0 < A[i] <= 10

Output

If chain can be formed, then print 1, else print 0.

Sample Input 1

2

3

abc bcd cdf

4

ab bc cd da

Sample Output 1

0

1

距离问题

Description

In a given cartesian plane, there are N points. We need to find the Number of Pairs of points(A,B) such that

1. Point A and Point B do not coincide.
2. Manhattan Distance and the Euclidean Distance between the points should be equal.

Note : Pair of 2 points(A,B) is considered same as Pair of 2 points(B,A).

Manhattan Distance = |x2-x1|+|y2-y1|

Euclidean Distance = ((x2-x1)^2 + (y2-y1)^2)^0.5 where points are (x1,y1) and (x2,y2).

Constraints:1<=T <= 50, 1<=N <= 2\*10 ^ 5, 0<=(|Xi|, |Yi|) <= 10^9

Input

First Line Consist of T - number of test cases. For each Test case:First Line consist of N , Number of points. Next line contains N pairs contains two integers Xi and Yi，i.e, X coordinate and the Y coordinate of a Point

Output

Print the number of pairs as asked above.

Sample Input 1

1

2

1 1

7 5

Sample Output 1

0