一道题往往有不同的解法，都可以试一下。

第 5 题：poj2366 Sacrament of the sum

Sacrament of the sum

Time Limit: 1000MS   Memory Limit: 65536K

Total Submissions: 3002 Accepted: 1252

Description

— The Brother of mine, the Head of Monastic Order wants to know tomorrow about the results long-term researches. He wants to see neither more nor less than the Summering Machine! Even moreover, he wants our Machine — only a machine — to demonstrate its comprehension of the Sacrament of the Sum as deeply as it is possible. He wants our Machine to find two numbers that give the sum equal to the Sacred Number 10 000.
— Tsh-sh-sh! This is madness that borders on blasphemy! How can the Machine calculate the Sacred Number? Twenty seven years we work on it, but we've could teach it to tell if the sum of two introduced numbers greater or lower than 10 000. Can an ordinary mortal find two numbers that there sum will be equal to 10 000?
— But we'll have to do it with the help of our Machine, even if it is not capable. Otherwise we'll have... let's say, big problems, if it is possible to call boiling oil like this. However, I have an idea. Do you remember, last week we've entered two numbers -7 and 13 into the Machine, and it answered that their sum is lower than 10 000. I don't know how to check this, but nothing's left for us than to believe to the fruit of our work. Let's enter now a greater number than -7 and start up the Machine again. We'll do like this again and again until we find a number that being added to 13 will give us 10 000. The only thing we are to do is to prepare an ascending list of numbers.
— I don't believe in this... Let's start with the sum that is obviously greater than the Sacred Number and we'll decrease one of the summand. So we have more chances to avoid boilin... big problems.

Haven't come to an agreement, the Brothers went away to their cells. By next day everyone of them has prepared a list of numbers that, to his opinion, could save them... Can both of the lists save them together?
Your program should decide, if it is possible to choose from two lists of integers such two numbers that their sum would be equal to 10 000.

Input

You are given both of these lists one by one. Format of each of these lists is as follows: in the first line of the list the quantity of numbers Ni of the i-th list is written. Further there is an i-th list of numbers each number in its line (Ni lines).The following conditions are satisfied: 1 <= Ni <= 50 000, each element of the lists lays in the range from -32768 to 32767. The first list is ascending and the second one is descending.

Output

You should write "YES" to the standard output if it is possible to choose from the two lists of integers such two numbers that their sum would be equal to 10 000. Otherwise you should write "NO".

Sample Input

```
4
-175
19
19
10424
3
8951
-424
-788
```

Sample Output

```
YES
```

Hint

This problem has huge input data,use scanf() instead of cin to read data to avoid time limit exceed.

题目大意：
    已知两个给定的序列，一个升序排列，一个降序排列，在这两个序列中各找一个数，它们加起来恰好等于 10000。

提示：可以二分，也可以 hash

第 6 题：poj2503 Babelfish

Babelfish

Time Limit: 3000MS   Memory Limit: 65536K

Total Submissions: 53024 Accepted: 21943

Description

You have just moved from Waterloo to a big city. The people here speak an incomprehensible dialect of a foreign language. Fortunately, you have a dictionary to help you understand them.

Input

Input consists of up to 100,000 dictionary entries, followed by a blank line, followed by a message of up to 100,000 words. Each dictionary entry is a line containing an English word, followed by a space and a foreign language word. No foreign word appears more than once in the dictionary. The message is a sequence of words in the foreign language, one word on each line. Each word in the input is a sequence of at most 10 lowercase letters.

Output

Output is the message translated to English, one word per line. Foreign words not in the dictionary should be translated as "eh".

Sample Input

```
dog ogday
cat atcay
pig igpay
froot ootfray
loops oopslay

atcay
ittenkay
oopslay
```

Sample Output

```
cat
eh
loops
```

Huge input and output,scanf and printf are recommended.

题目大意：

　　输入一个字典，字典格式为 n 行"英语 外语"的对照表。然后是若干个外语单词，让你翻译，输出它们对应的英语单词。如果字典中不存在这个单词，则输出"eh"。

提示：（1）排序+二分、（2）map、（3）hash。

Raid

Time Limit: 5000MS   Memory Limit: 65536K
Total Submissions: 23151 Accepted: 6008

Description

After successive failures in the battles against the Union, the Empire retreated to its last stronghold. Depending on its powerful defense system, the Empire repelled the six waves of Union's attack. After several sleepless nights of thinking, Arthur, General of the Union, noticed that the only weakness of the defense system was its energy supply. The system was charged by N nuclear power stations and breaking down any of them would disable the system.

The general soon started a raid to the stations by N special agents who were paradroped into the stronghold. Unfortunately they failed to land at the expected positions due to the attack by the Empire Air Force. As an experienced general, Arthur soon realized that he needed to rearrange the plan. The first thing he wants to know now is that which agent is the nearest to any power station. Could you, the chief officer, help the general to calculate the minimum distance between an agent and a station?

Input

The first line is a integer T representing the number of test cases.
Each test case begins with an integer N ($1 \leq N \leq 100000$).
The next N lines describe the positions of the stations. Each line consists of two integers X ($0 \leq X \leq 1000000000$) and Y ($0 \leq Y \leq 1000000000$) indicating the positions of the station.
The next following N lines describe the positions of the agents. Each line consists of two integers X ($0 \leq X \leq 1000000000$) and Y ($0 \leq Y \leq 1000000000$) indicating the positions of the agent.

Output

For each test case output the minimum distance with precision of three decimal placed in a separate line.

Sample Input

```
2
4
0 0
0 1
1 0
1 1
2 2
2 3
3 2
3 3
4
0 0
0 0
0 0
0 0
0 0
0 0
0 0
0 0
```

Sample Output

```
1.414
0.000
```

题目大意：有两组坐标，一组是 n 个发电站的坐标，一组是 n 个士兵的坐标。求哪个士兵离发电站的距离最短。

第 8 题：poj3233 Matrix Power Series

Matrix Power Series

Description

Given a $n \times n$ matrix A and a positive integer k, find the sum $S = A + A^2 + A^3 + \ldots + A^k$.

Input

The input contains exactly one test case. The first line of input contains three positive integers n ($n \le 30$), k ($k \le 10^9$) and m ($m < 10^4$). Then follow n lines each containing n nonnegative integers below 32,768, giving A's elements in row-major order.

Output

Output the elements of S modulo m in the same way as A is given.

Sample Input
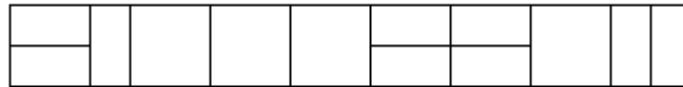
```
2 2 4
0 1
1 1
```

Sample Output

```
1 2
2 3
```

题目大意：已知一个 n*n 的矩阵 A，计算 $S = A + A^2 + A^3 + \cdots + A^k$，S 的值对 m 取模。

提示：分治，注意效率。

选作：poj2506 Tiling

Description

In how many ways can you tile a 2xn rectangle by 2x1 or 2x2 tiles?
Here is a sample tiling of a 2x17 rectangle.

Input

Input is a sequence of lines, each line containing an integer number 0 <= n <= 250.

Output

For each line of input, output one integer number in a separate line giving the number of possible tilings of a 2xn rectangle.

Sample Input

```
2
8
12
100
200
```

Sample Output

```
3
171
2731
845100400152152934331135470251
1071292029505993517027974728227441735014801995855195223534251
```

提示：递推、大数