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Hide And Seek   🔒 locked

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A group of friends $(F_{1..n})$ are about to play hide and seek. First they need to decide who will seek first. So they stand in a circle and starts counting clockwise while singing a counting rhyme. When the rhyme ends, the friend that is counted on the last word is safe(see sample testcase).

When the counting ends and a friend is safe, he/she goes out of the scircle and the remaining friends start counting again. If the friend that started counting in the previous round is still in the circle, that friend will start the counting in the next round as well. Otherwise the friend that was counted after the first friend will start.

This counting is repeated until only one friend is remaining on the circle and that friend will have to seek.

You are given the names of the friends and the rhyme they sing. Find out who has to seek.

Input Format

one line containing t : the number of testcases
followed by t occurences of,
- n number of Friends in the testcase
- n lines with each friend's name
- One Line with the words of the counting rhyme.

Constraints

$10 \leq t, n \leq 10^3$

$2 \leq$ number of words in the rhyme ≤ 4000

Words in the rhyme are sepereated by spaces.

Output Format

t lines containing the name of the last friend remaining

Sample Input 0

```
1
5
John
Jane
Juan
Jean
June
Eeny meeny miny moe Catch a tiger by the toe
```

Sample Output 0

```
Juan
```

Explanation 0

```
First Count
Friends Left : John Jane Juan Jean June
John Jane  Juan Jean June  John Jane  Juan Jean June
Eeny meeny miny moe  Catch a    tiger by   the  toe
```

```
June is Safe

Second Count
Friends Left : John Jane Juan Jean
John Jane  Juan Jean John  Jane Juan  Jean John Jane
Eeny meeny miny moe  Catch a     tiger by    the  toe
Jane is Safe

Third Count
Friends Left : John Juan Jean
John Juan  Jean John Juan  Jean John  Juan Jean John
Eeny meeny miny moe  Catch a     tiger by    the  toe
John is Safe

Fourth Count
Friends Left : Juan Jean
Juan Jean  Juan Jean Juan  Jean Juan  Jean Juan Jean
Eeny meeny miny moe  Catch a     tiger by    the  toe
Jean is Safe

Only Juan is left, he will seek
```

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Submissions: 12
Max Score: 100

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```
C++                                      ⤢   ⚙
```

```cpp
 1  #include <cmath>
 2  #include <cstdio>
 3  #include <vector>
 4  #include <iostream>
 5  #include <algorithm>
 6  using namespace std;
 7
 8
 9  int main() {
10      /* Enter your code here. Read input from STDIN. Print output to STDOUT */
11      return 0;
12  }
13
```

Line: 1 Col: 1

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