Bachet's game is probably known to all but probably not by this name. Initially there are n stones on the table. There are two players Stan and Ollie, who move alternately. Stan always starts. The legal moves consist in removing at least one but not more than k stones from the table. The winner is the one to take the last stone.

Here we consider a variation of this game. The number of stones that can be removed in a single move must be a member of a certain set of m numbers. Among the m numbers there is always 1 and thus the game never stalls.

Input

The input consists of a number of lines. Each line describes one game by a sequence of positive numbers. The first number is $n \leq 1000000$ the number of stones on the table; the second number is $m \leq 10$ giving the number of numbers that follow; the last m numbers on the line specify how many stones can be removed from the table in a single move.

Output

For each line of input, output one line saying either 'Stan wins' or 'Ollie wins' assuming that both of them play perfectly.

Sample Input

```
20 3 1 3 8
21 3 1 3 8
22 3 1 3 8
23 3 1 3 8
1000000 10 1 23 38 11 7 5 4 8 3 13
999996 10 1 23 38 11 7 5 4 8 3 13
```

Sample Output

```
Stan wins
Stan wins
Ollie wins
Stan wins
Stan wins
Ollie wins
```