Connect

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	1024 megabytes

Ayumi and Bunji are playing a game called Connect. They take turns to place red and blue tokens respectively on an n by n grid, with Ayumi always playing first.

The rules of the game are as follows.

- To place a token, the player need only select a column; the token must be placed in the bottom-most square of that column which does not already contain a token. Tokens cannot be added to a column where all n squares already contain tokens.
- There is a target number k. The first player to make a horizontal, vertical or diagonal line of k tokens in their colour wins the game.

Ayumi and Bunji have been playing this game for some time. They have meticulously written down the moves that were made, but they forgot to check whether the game has already been won, and by who. Help them determine the result of the game.

Input

The first line of input consists of three space-separated integers n ($1 \leq n \leq 300$), m ($0 \leq m \leq n^2$) and k ($1 \leq k \leq n$), representing the dimension of the grid, the number of moves played and the target number respectively.

The second line of input consists of m space-separated integers, the ith of which is the column selected on the ith move. Each of these integers is between 1 and n inclusive, and you are guaranteed that no column appears more than n times.

Output

If either player has won the game, print a single line consisting of the winning player's name and the move number on which they won.

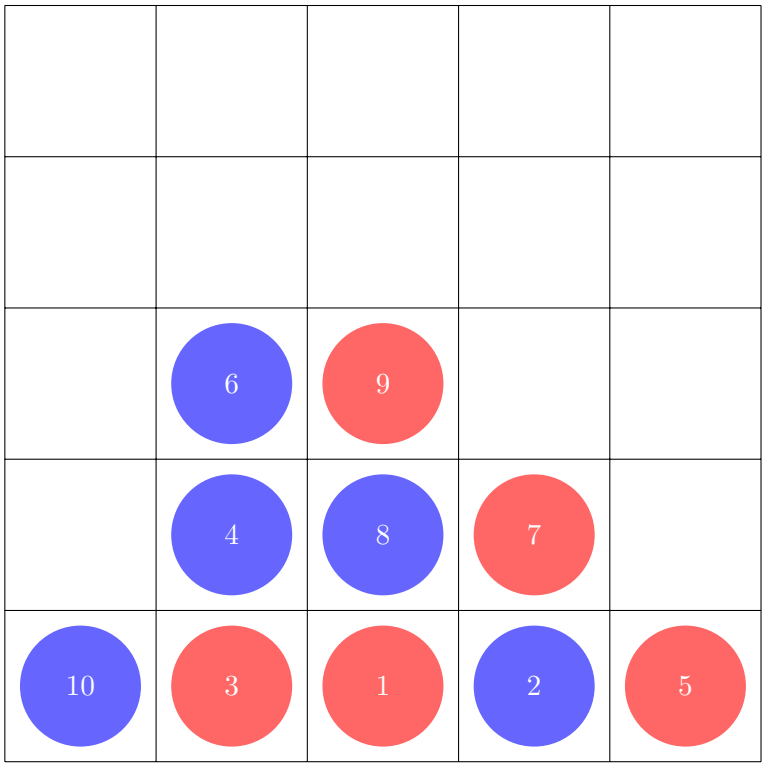
Otherwise, print the phrase "`No winner`" (without punctuation).

Examples

standard input	standard output
5 10 3 3 4 2 2 5 2 4 3 3 1	Bunji 8
3 9 3 1 1 1 3 2 2 3 3 2	No winner
4 1 1 4	Ayumi 1

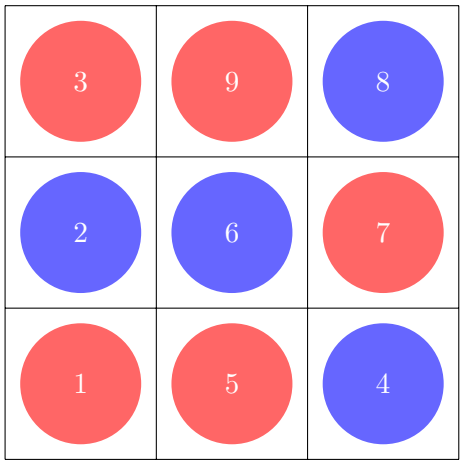
Note

The first sample case corresponds to the following grid (with pieces numbered by the turn on which they were played).



Bunji was the first to meet the winning condition, with his first, third and fourth tokens forming a diagonal line of three. Note that Ayumi also met the winning condition on her next move, but this is immaterial.

The second sample case corresponds to the following grid (with pieces numbered by the turn on which they were played).



Neither player has $k = 3$ in a row, so the game has `No winner`.

In the third sample case, Ayumi wins after playing a single piece, since $k = 1$.