Task 1. Heaps

Nini and Mimi are playing a game with N heaps of stones and pebbles. Each heap i has B_i big stones and S_i small pebbles. Nini and Mimi take turns performing moves and once a player has no more moves to do, they lose. Each move consists of choosing a non-empty heap i and removing some stones and/or pebbles from it. Formally, one can remove X stones and Y pebbles, where $0 \le X \le B_i$, $0 \le Y \le S_i$ and $X + Y > 0$. However, every removed stone must be replaced with at least K pebbles; it can be replaced with any natural number of pebbles not less than K. Thus, in any move where $X \ge 1$, first Y pebbles are removed and then the player must add back $Z \ge KX$ pebbles, which are taken from an infinite supply of pebbles. Nini goes first. Before making her move she wonders whether she can win the game if she plays optimally. Write a program heaps.cpp, which answers her question.

Input

From the first line of the standard input, your program should read K and Q. Then Q independent tests with that K will follow. For each test, the first line contains N. The next N lines each have a desription of a heap: B_i and S_i.

Output

On Q lines, your program should output the answers to each of the tests in the order they were given. It should print Win, if Nini can win, and Loss, otherwise.

Constraints

$1 \le Q \le 10$
$1 \le N \le 10^4$
$0 \le K, B_i \le 3000$
$0 \le S_i \le 10^7$

Subtasks

Subtask	Points	K	B_i	Additional constraints
1	8	$= 0$	$= 0$	
2	11	$= 0$	≤ 1	If $B_i = 1$, then $S_i = 0$.
3	12	$= 0$	≤ 300	
4	18	$= 1$	≤ 5	
5	18	≤ 20	≤ 20	
6	10	≤ 100	≤ 100	
7	11	≤ 300	≤ 300	
8	12	≤ 3000	≤ 3000	

Your solution will receive the points for a subtask only if it passes all tests in it.

Sample test

Input	Output
3 2	Win
2	Loss
1 5	
3 2	
3	
0 3	
2 1	
3 2	