

Sticks

Problem description

There is a playfield of a given length l and k sticks with lengths l_1, \dots, l_k . In a two-player game the players play a move alternatingly. The player who makes the last move wins. One move is to take a stick and lay it on the playfield. You cannot make a move if no sticks are left or if the remaining space on the playfield is too small for any stick left.

Here is an example of a game: Let $l = 5$, $k = 3$, $l_1 = 1$, $l_2 = 2$, and $l_3 = 3$. The first player places the second stick. The remaining space is then 3. Then the second player places the third stick and wins.

The input consists of two numbers k and n , followed by l_1, \dots, l_k . The output should consist of m lines containing l YES or l NO for each playfield length l from 0 to m . YES means that the first player can win the game however well the second player acts. NO means that the first player cannot win if the second player acts optimally.

Sample input/output

Input	Output
	0 LOSE
	1 WIN
	2 WIN
	3 WIN
5	4 WIN
10	5 WIN
1	6 WIN
2	7 LOSE
3	8 WIN
4	9 WIN
5	10 WIN