Array Depletion

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	512 megabytes

After a long journey home, the hare Xeni decided to play a game on her bunny phone.

The level in the game is described by an array of length n and an integer x. In one move, you can take 2 adjacent elements of the array whose sum equals x and remove them. After that, the size of the array will decrease by 2. You win the level if, after a certain number of moves, the array becomes empty.

The current level seemed very difficult to her, and she even doubted whether it was possible to complete it — after all, there might be a situation where the game creators did not come up with more levels and made the last level impossible. Xeni turned to you for help — tell her if it is possible to complete this game.

Input

The first line contains two integers n, x — the size of the array and the sum of the elements to be removed ($1 \le n \le 3 \cdot 10^5$, $-10^9 \le x \le 10^9$).

The second line of each test case contains n numbers a_i — the elements of the game array ($-10^9 \le a_i \le 10^9$).

Output

Print «`Yes`», if Xeni can complete the level, and «`No`» otherwise.

Examples

standard input	standard output
4 10 6 7 3 4	Yes
1 7 7	No
6 -3 -3 -9 6 3 -6 0	Yes
6 4 1 5 2 4 33 0	No