Ultra-even

An array is 'ultra even' if the sum of every subarray of the array is even. Given an array of length n, you are to determine whether a subarray is even or not.

For example, the array $[1, 4, 5, 2]$ is not 'ultra even' because the subarray $[4, 5]$ has a sum of 9 which is not even (it also has other odd subarrays).

A subarray of an array is defined as some consecutive elements of the array (including of size one). For example, given the array $[1, 4, 5, 2]$ then $[4, 5, 2]$ is a subarray but $[4, 2]$ is not.

Input

Your first line will contain a single integer n, representing the length of your given array.

Your next n lines will contain n space-separated integers, being the integers of the array in order.

$1 \leq n \leq 10^5$

Output

You should output YES if the array is 'ultra even', otherwise output NO.

Input 1
4
1 4 5 2
Output 1
NO
Input 2
3
2 4 6
Output 2
YES