Problem K

Adding Numbers

Samouel has an array A of N integers indexed from 1 to N. Initially, all of the integers are 0. His friend, Gregor also has an array B of N integers indexed from 1 to N.

Samouel wants to modify his array such that his array becomes equal to Gregor's. To achieve that, Samouel can apply the following operation: choose two consecutive indices i and i + 1 (1 ≤ i < N) and do either the following :

- Increment A_i by 1 and increment A_{i+1} by 2, or
- Increment A_i by 2 and increment A_{i+1} by 1.

Determine whether it is possible for Samouel to achieve his goal.

Input

The first line contains one integer: N (1 ≤ N ≤ 100) in a line denoting the length of both array A and B. The second line contains N integers: $B_1, B_2, \cdots, B_N$ (0 ≤ B_i ≤ 50,000) in a line denoting the value of array B.

Output

Output “YES" in a line if it is possible for Samouel to achieve his goal, or "NO" otherwise.

Sample Input	Output for Sample Input
6 1 3 2 0 4 2	YES
3 2 8 2	YES
3 2 2 8	NO
5 0 0 0 0 3	NO
5 0 0 0 0 1	NO

Explanation for the 1st sample case

On the first sample, Samouel can apply the following operations :

- Increment A_1 by 1 and increment A_2 by 2. A becomes {1, 2, 0, 0, 0, 0}.
- Increment A_2 by 1 and increment A_3 by 2. A becomes {1, 3, 2, 0, 0, 0}.
- Increment A_5 by 2 and increment A_6 by 1. A becomes {1, 3, 2, 0, 2, 1}.
- Increment A_5 by 2 and increment A_6 by 1. A becomes {1, 3, 2, 0, 4, 2}.

Explanation for the 2nd sample case

On the second sample, Samouel can apply the following operations :

- Increment A_1 by 1 and increment A_2 by 2. A becomes {1, 2, 0}.
- Increment A_1 by 1 and increment A_2 by 2. A becomes {2, 4, 0}.
- Increment A_2 by 2 and increment A_3 by 1. A becomes {2, 6, 1}.
- Increment A_2 by 2 and increment A_3 by 1. A becomes {2, 8, 2}.

Explanation for the 3rd, 4th, 5th sample case

On the third, fourth, and fifth sample, there is no way for Samouel to construct B using only the allowed operations.