

Jack and Jim are playing an interesting stone game. At the beginning of the game there are N piles of stones. Each pile has P_i ($i = 1..N$, $1 \leq P_i \leq 2 * 10^9$) stones. They take turns to take away some of the stones. There are some rules: they must choose one pile at a time. They can take away any number of stones except 0, of course, not bigger than the number of stones in the pile. One who takes away the last stone will win the game. Jack is the first to fetch the match, and Jim is the second. Now Jack asks you for help, to decide while facing some initializations whether he is sure to win or not.

Input

The input file contains several scenarios. Each of them consists of 2 lines:

The first line consists of a number N . The second line consists of N numbers, meaning P_i ($i = 1..N$). There is only one space between two border numbers.

The input file is ended with $N = 0$.

Output

For each scenario, print a line containing 'Yes' if he is sure to win, or 'No' otherwise.

Sample Input

```
1
100
3
1 5 1
4
1 1 1 1
0
```

Sample Output

```
Yes
Yes
No
```