Problem G. 4-adjacent

Time limit 2000 ms
Mem limit 262144 kB

Problem Statement

We have a sequence of length N, $a = (a_1, a_2, ..., a_N)$. Each a_i is a positive integer.

Snuke's objective is to permute the element in a so that the following condition is satisfied:

- For each $1 \leq i \leq N - 1$, the product of a_i and a_{i+1} is a multiple of 4.

Determine whether Snuke can achieve his objective.

Constraints

- $2 \leq N \leq 10^5$
- a_i is an integer.
- $1 \leq a_i \leq 10^9$

Input

Input is given from Standard Input in the following format:

N
a_1 a_2 ... a_N

Output

If Snuke can achieve his objective, print `Yes`; otherwise, print `No`.

Sample 1

Input	Output
3 1 10 100	Yes

One solution is $(1, 100, 10)$.

Sample 2

Input	Output
4 1 2 3 4	No

It is impossible to permute a so that the condition is satisfied.

Sample 3

Input	Output
3 1 4 1	Yes

The condition is already satisfied initially.

Sample 4

Input	Output
2 1 1	No

Sample 5

Input	Output
6 2 7 1 8 2 8	Yes