Problem M. Counting Problem

Time Limit	2500 ms
Code Length Limit	50000 B
OS	Linux

You are given an array $A = [A_1, A_2, \ldots, A_N]$.

Is it possible to partition A into two non-empty subsequences S_1 and S_2 such that $sum(S_1) \times sum(S_2)$ is **odd**?

Here, $sum(S_1)$ denotes the sum of elements in S_1, and $sum(S_2)$ is defined similarly.

Note: S_1 and S_2 must *partition* A, that is:

- S_1 and S_2 must be non-empty
- Every element of A must be in either S_1 or S_2
- S_1 and S_2 must be disjoint (in terms of which indices their subsequences represent)

Input Format

- The first line of input will contain a single integer T, denoting the number of test cases.
- Each test case consists of 2 lines of input.
  - The first line of each test case contains a single integer N, the size of the array.
  - The next line contains N space-separated integers $A_1, A_2, \ldots, A_N$: the elements of the array.

Output Format

For each test case, print on a new line the answer: `YES` if the array can be partitioned into two subsequences satisfying the condition, and `NO` otherwise.

Each character of the output may be printed in either uppercase or lowercase, i.e, `YES`, `yes`, `YEs`, and `yEs` will all be treated as equivalent.

Constraints

- $1 \leq T \leq 10^5$

- $2 \leq N \leq 10^5$
- $1 \leq A_i \leq 10^9$
- The sum of N across all test cases won't exceed 10^6.

Sample 1

Input	Output
4 4 1 1 2 2 6 1 2 4 6 8 10 2 3 5 3 1 3 5	YES NO YES NO

Test case 1: We have $A = [\underline{1}, 1, \underline{2}, 2]$. Let S_1 be the underlined elements and S_2 be the other ones. $sum(S_1) \times sum(S_2) = 3 \times 3 = 9$.

Test case 2**:** It can be proved that no partition of A into S_1, S_2 satisfies the condition.

Test case 4**:** Choose $S_1 = \{3\}, S_2 = \{5\}$.

Test case 4**:** It can be proved that no partition of A into S_1, S_2 satisfies the condition.