

Yak Caravan Load Balance

Time: 2s | Memory: 256 MB

Problem Statement

A caravan of merchants is crossing the Himalayan passes of Bhutan using yaks to transport goods. Each yak must carry an equal amount of total weight to maintain balance and avoid accidents on steep terrain.

The head merchant is trying to decide whether the goods can be split into two groups such that both yaks carry exactly the same total weight. No item can be broken.

If such a division is possible, the caravan can proceed safely. Otherwise, the journey must be postponed.

Your task is to determine whether the goods can be evenly split between the two yaks.

Input Format

Line 1: integer N — number of items.

Line 2: N integers $A_1 A_2 \dots A_N$ — weights.

Output Format

Print YES if a valid split exists, otherwise NO.

Constraints / Notes

$1 \leq N \leq 20$ | $0 \leq A_i \leq 10^9$

Sample Input

```
4
1 5 11 5
```

Sample Output

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YES
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