Balanced sequences P49052_en

Write a program to tell if a given sequence of integer numbers $x_1 \ldots x_n$ is balanced or not. Let $m = \lceil n/2 \rceil$. In this problem, we say that a sequence is balanced if $n \leq 2$, or if the left-hand half $x_1 \ldots x_m$ and the right-hand half $x_{m+1} \ldots x_n$ have the same sum, and both are balanced.

For instance, the sequence 5 -3 2 0 -1 3 2 is balanced, because the sum of 5 -3 2 0 and the sum of -1 3 2 are 4, and it is easy to see that both sequences are balanced.

Input

Input consists of several cases. Every one begins with n, followed ny n integer numbers. You can assume $0 \leq n \leq 10^4$.

Output

For every case, print "yes" or "no" as required.

Sample input 1

```
7  5 -3 2 0 -1 3 2
0
3  -1 -1 -2
6  2 2 4 3 3 6
```

Sample output 1

```
yes
yes
yes
no
```

Problem information

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