Balanced sequences   P49052_en
Examen final d'Informàtica, FME (2015-01-12)

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

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

Sample output

```
yes
yes
yes
no
```

Problem information

Author : Salvador Roura
Translator : Salvador Roura
Generation : 2024-05-02 18:24:54