

# Make The Sum Equal to Zero

Input file:            `standard input`  
Output file:         `standard output`  
Time limit:          3 seconds  
Memory limit:       512 megabytes

You are given an array  $A$  of  $n$  integers, you can do the following operation any number of times (possibly zero):

- Pick any element of the array and flip its sign, from negative to positive or vice versa. (Yes, you can change the same element multiple times).

Can you make the sum of the array equal to zero?

## Input

The first line of the input contains a single integer  $n$  ( $1 \leq n \leq 500$ ), the size of the array.

The second line contains  $n$  integers  $a_1, a_2, \dots, a_n$  ( $-400 \leq a_i \leq 400$ ).

## Output

Output "YES" if you can make the sum equal to zero, otherwise print "NO".

## Examples

standard input	standard output
6 0 -400 0 100 400 100	YES
5 16 -2 4 -8 -1	NO

## Note

In the first testcase, it is enough to flip the 6-th element from 100 to  $-100$  and the sum becomes 0.

In the second test case it is impossible to make the sum equal to zero.