E. Guess the Tree

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

Iahub and Iahubina went to a picnic in a forest full of trees. Less than 5 minutes passed before Iahub remembered of trees from programming. Moreover, he invented a new problem and Iahubina has to solve it, otherwise Iahub won't give her the food.

Iahub asks Iahubina: can you build a rooted tree, such that

- each internal node (a node with at least one son) has at least two sons;
- node i has c_i nodes in its subtree?

Iahubina has to guess the tree. Being a smart girl, she realized that it's possible no tree can follow Iahub's restrictions. In this way, Iahub will eat all the food. You need to help Iahubina: determine if there's at least one tree following Iahub's restrictions. **The required tree must contain n nodes**.

Input

The first line of the input contains integer n ($1 \le n \le 24$). Next line contains n positive integers: the i-th number represents c_i ($1 \le c_i \le n$).

Output

Output on the first line "YES" (without quotes) if there exist at least one tree following Iahub's restrictions, otherwise output "NO" (without quotes).

Examples

input
4 1 1 1 4
output
YES

input
5 1 1 5 2 1
output
NO