CodeVita
The TCS Global Coding Contest

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Olympic village

Problem Description

For upcoming Olympic games, the organizers have to plan accommodation for players of different games. Olympic village is built with a certain number of rooms. Now the organizers are faced with the task of allocation rooms to athletes, subject to certain constraints. The constraints are

· Players of same teams should stay in same room.

· Single player can stay anywhere.

· All the rooms in the Olympic village should be fully occupied.

Write a program to validate that accommodations can be done without violating constraints. Print “Yes” if and only if all the Accommodations honour all constraints, else print “No”.

Constraints

0 < N <= 10000

Note: You have to allocate already formed teams to same team in virtual room.

Input Format

First line contains two space-separated integers, N and R, which denote total number of players coming and number of rooms

Second line contains numbers of teams already formed and individual participants to be allocated to room M.

Next line contains M number of team sizes or 1 in case of individual participants separated by whitespace.

Output

Yes / No

“Yes” if and only if all the accommodations honour all constraints, else print “No”.

Test Case

Explanation

Example 1

Input

12 4

8

1 3 2 2 1 1 1 1

Output

Yes

Explanation

So here total number of players coming N is 12 and rooms R is 4. So there will be total of 12/4= 3 players in given room.

Team Allocation details are as follows:

Team 1: 1 3

Team 2: 2 2

Team 3: 1 1 1 1

Since all players are allocated in rooms without violating constraints, so output is Yes

Example 2

Input

12 4

4

3 3 3 3

Output:

No

Explanation:

So here total number of players coming N is 12 and rooms R is 4. So there will be total of 12/4= 3 players in given room.

Team Allocation details are as follows:

Team 1: 3

Team 2: 3

Team 3: 3

Since we cannot allocate last three players of same team in same room. So output is No

Upload Solution [Question : D]

I, **Christian** confirm that the answer submitted is my own.

Took help from online sources (attributions)

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