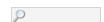
Problem - B - Codeforces 15/02/24, 7:15 PM





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PROBLEMS SUBMIT CODE

MY SUBMISSIONS STATUS HACKS STANDINGS CUSTOM INVOCATION

B. Make Equal

time limit per test: 2 seconds memory limit per test: 256 megabytes input: standard input output: standard output

There are *n* containers of water lined up, numbered from left to right from 1 to *n*. Each container can hold any amount of water; initially, the i-th container contains a_i units of water. The sum of a_i is divisible by n.

You can apply the following operation any (possibly zero) number of times: pour any amount of water from the i-th container to the i-th container, where i must be **less** than i (i.e. i < i). Any index can be chosen as i or j any number of times.

Determine whether it is possible to make the amount of water in all containers the same using this operation.

Input

The first line of the input contains a single integer t ($1 \le t \le 10^4$) — the number of test cases. Then the descriptions of the test cases follow.

The first line of each test case contains a single integer n ($1 \le n \le 2 \cdot 10^5$) — the number of containers with water.

The second line of each test case contains *n* integers a_1, a_2, \ldots, a_n $(0 \le a_i \le 10^9)$ — the amounts of water in the containers. It is guaranteed that the sum of a_i in each test case does not exceed $2 \cdot 10^9$. Also, the sum of a_i is divisible by n.

It is guaranteed that the sum of n over all test cases in the input does not exceed $2 \cdot 10^5$.

Output

Output t lines, each of which is the answer to the corresponding test case. As the answer, output "YES" if it is possible to make the amount of water in all containers the same using the described operation. Otherwise, output "NO".

You can output each letter in any case (lowercase or uppercase). For example, the strings "yEs", "yes", "Yes", and "YES" will be accepted as a positive answer.

Example

input	Сору
6	
1	
43	
2 1 3	
5 4 5 2 1 3	
3 1 2 3	
7 4 5 5 0 6 4 4	
7 6 5 5 1 3 4 4	
output	Сору
YES NO	
YES NO	

Codeforces Round 925 (Div. 3)

Finished

→ Practice?

Want to solve the contest problems after the official contest ends? Just register for practice and you will be able to submit solutions.

Register for practice

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Problem tags greedy No tag edit access

→ Contest materials

- Announcement
- Tutorial

×

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YES		
NO		
NO		
YES		

Note

In the third test case of the example (a = [4, 5, 2, 1, 3]), you can proceed as follows:

- pour 1 unit of water from the first vessel to the fourth, then a = [3, 5, 2, 2, 3];
- pour 1 unit of water from the second vessel to the third, then a = [3, 4, 3, 2, 3];
- pour 1 unit of water from the second vessel to the fourth, then a = [3, 3, 3, 3, 3].

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