

A. Young Physicist

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

A guy named Vasya attends the final grade of a high school. One day Vasya decided to watch a match of his favorite hockey team. And, as the boy loves hockey very much, even more than physics, he forgot to do the homework. Specifically, he forgot to complete his physics tasks. Next day the teacher got very angry at Vasya and decided to teach him a lesson. He gave the lazy student a seemingly easy task: You are given an idle body in space and the forces that affect it. The body can be considered as a material point with coordinates $(0; 0; 0)$. Vasya had only to answer whether it is in equilibrium. "Piece of cake" — thought Vasya, we need only to check if the sum of all vectors is equal to 0. So, Vasya began to solve the problem. But later it turned out that there can be lots and lots of these forces, and Vasya can not cope without your help. Help him. Write a program that determines whether a body is idle or is moving by the given vectors of forces.

Input

The first line contains a positive integer n ($1 \leq n \leq 100$), then follow n lines containing three integers each: the X_i coordinate, the Y_i coordinate and the Z_i coordinate of the force vector, applied to the body ($-100 \leq X_i, Y_i, Z_i \leq 100$).

Output

Print the word "YES" if the body is in equilibrium, or the word "NO" if it is not.

Examples

input	output
<pre>3 4 1 7 -2 4 -1 1 -5 -3</pre>	NO
input	output
<pre>3 3 -1 7 -5 2 -4 2 -1 -3</pre>	YES

→ Attention

Package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then value 800 ms will be displayed and used to determine the verdict.

Codeforces Beta Round #63 (Div. 2)

Finished

→ 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 ACM-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

implementation math

No tag edit access

→ Contest materials

- Announcement 
- Tutorial 