

A. Three Decks

time limit per test: 2 seconds
 memory limit per test: 512 megabytes

Monocarp placed three decks of cards in a row on the table. The first deck consists of a cards, the second deck consists of b cards, and the third deck consists of c cards, with the condition $a < b < c$.

Monocarp wants to take some number of cards (at least one, but no more than c) from the **third** deck and distribute them between the first two decks so that each of the taken cards ends up in either the first or the second deck. It is possible that all the cards taken from the third deck will go into the same deck.

Your task is to determine whether Monocarp can make the number of cards in all three decks equal using the described operation.

Input

The first line contains a single integer t ($1 \leq t \leq 10^4$) — the number of test cases.

The only line of each test case contains three integers a, b , and c ($1 \leq a, b, c \leq 10^8$) — the number of cards in the first, second, and third decks, respectively.

Additional constraint on the input: $a < b < c$.

Output

For each test case, output "YES" (without quotes) if Monocarp can make the number of cards in all three decks equal using the described operation. Otherwise, output "NO" (without quotes).

Example

input	Copy
4	
3 5 10	
12 20 30	
3 5 7	
1 5 6	
output	Copy
YES	
NO	
YES	
NO	

Note

In the first test case, Monocarp has to take 4 cards from the third deck, put 3 cards in the first deck, and 1 card in the second deck. Thus, there will be 6 cards in all three decks.

In the second test case, it is impossible to make the number of cards in all three decks equal.

In the third test case, Monocarp has to take 2 cards from the third deck and put both in the first deck. Thus, there will be 5 cards in all three decks.

In the fourth test case, it is also impossible to make the number of cards in all three decks equal.

Educational Codeforces Round 178 (Rated for Div. 2)

Contest is running

01:49:36

Contestant



→ Submit?

Language: GNU G++23 14.2 (64 bit, ms)

Choose file: No file chosen

→ Last submissions

Submission	Time	Verdict
317590595	Apr/28/2025 17:42	Accepted

