# B. Block Adventure

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

Gildong is playing a video game called *Block Adventure*. In Block Adventure, there are $n$ columns of blocks in a row, and the columns are numbered from $1$ to $n$. All blocks have equal heights. The height of the $i$-th column is represented as $h_i$, which is the number of blocks stacked in the $i$-th column.

Gildong plays the game as a character that can stand only on the top of the columns. At the beginning, the character is standing on the top of the $1$-st column. The goal of the game is to move the character to the top of the $n$-th column.

The character also has a bag that can hold infinitely many blocks. When the character is on the top of the $i$-th column, Gildong can take one of the following three actions as many times as he wants:

- if there is at least one block on the column, remove one block from the top of the $i$-th column and put it in the bag;
- if there is at least one block in the bag, take one block out of the bag and place it on the top of the $i$-th column;
- if $i < n$ and $|h_i - h_{i+1}| \le k$, move the character to the top of the $i+1$-st column. $k$ is a non-negative integer given at the beginning of the game. Note that it is only possible to move to the **next** column.

In actions of the first two types the character remains in the $i$-th column, and the value $h_i$ changes.

The character initially has $m$ blocks in the bag. Gildong wants to know if it is possible to win the game. Help Gildong find the answer to his question.

## Input

Each test contains one or more test cases. The first line contains the number of test cases $t$ ($1 \le t \le 1000$). Description of the test cases follows.

The first line of each test case contains three integers $n$, $m$, and $k$ ($1 \le n \le 100$, $0 \le m \le 10^6$, $0 \le k \le 10^6$) — the number of columns in the game, the number of blocks in the character's bag at the beginning, and the non-negative integer $k$ described in the statement.

The second line of each test case contains $n$ integers. The $i$-th integer is $h_i$ ($0 \le h_i \le 10^6$), the initial height of the $i$-th column.

## Output

For each test case, print "YES" if it is possible to win the game. Otherwise, print "NO".

You can print each letter in any case (upper or lower).

### Example

**input** Copy

```
5
3 0 1
4 3 5
3 1 2
1 4 7
4 10 0
10 20 10 20
2 5 5
0 11
1 9 9
99
```

**output** Copy

```
YES
NO
YES
NO
YES
```

### Note

In the first case, Gildong can take one block from the $1$-st column, move to the $2$-nd column, put the block on the $2$-nd column, then move to the $3$-rd column.

In the second case, Gildong has to put the block in his bag on the $1$-st column to get to the $2$-nd column. But it is impossible to get to the $3$-rd column because $|h_2 - h_3| = 3 > k$ and there is no way to decrease the gap.

In the fifth case, the character is already on the $n$-th column from the start so the game is won instantly.