### Weeding

Chef purchased a new herbicide, and now wants to test its effectiveness.

Initially, there are no weeds in Chef's garden.  
For each i=1,2,3,…,Ni=1,2,3,…,N, **exactly one** new weed will pop up in the garden at the start of day AiAi​.  
It is known that A1<A2<…<ANA1​<A2​<…<AN​.

Chef can spray the herbicide at most once per day.  
Any weed that receives the spray KK or more times in total will die.

Chef would like to know: is it possible that after MM days, all the weeds are gone?

### Input Format

* The first line of input will contain a single integer TT, denoting the number of test cases.
* Each test case consists of two lines of input.
  + The first line of each test case contains three space-separated integers NN, MM, and KK — the number of weeds, the total number of days, and the number of sprays needed to kill a weed, respectively.
  + The second line of each test case contains NN space-separated integers A1,A2,…,ANA1​,A2​,…,AN​: the days on which new weeds show up.

### Output Format

For each test case, output on a new line the answer: Yes if all the weeds are gone after MM days, and No otherwise.

Each letter of the output may be printed in either uppercase or lowercase, i.e, the strings Yes, YES, yes, and YeS will all be treated as equivalent.

### Constraints

* 1≤T≤1051≤T≤105
* 1≤N≤1051≤N≤105
* 1≤A1<A2<A3<…<AN≤M≤1091≤A1​<A2​<A3​<…<AN​≤M≤109
* 1≤K≤1091≤K≤109
* The sum of NN across all tests won't exceed 2⋅1052⋅105.

### Sample 1:

Input

Output

3

3 10 1

4 7 10

3 10 2

4 7 10

4 10 5

1 2 3 4

Yes

No

Yes

### Explanation:

**Test case** 11**:** Each weed needs only one spray to be killed. So, Chef can spray the herbicide whenever a weed pops up and it will die the same day.

**Test case** 22**:** Each weed needs two sprays to be killed.  
The last weed shows up on day 1010, and there's not enough time to kill it by day 1010 since it can only be sprayed once.

**Test case** 33**:** Chef can spray the herbicide every day; and all the weeds will be dead by day 1010.

More Info

Time limit2 secs

Memory limit1.5 GB

Source Limit50000 Bytes

#include <bits/stdc++.h>

using namespace std;

using ll = long long;

void solve()

{

int n, m, k;

cin >> n >> m >> k;

int weed=0;

for (int i=0; i < n; ++i)

{

int x;

cin >> x;

weed=max(x,weed);

}

if(weed+k<=m+1) cout<<"Yes"<<endl;

else cout<<"No"<<endl;

}

int main()

{

ios\_base::sync\_with\_stdio(false);

cin.tie(nullptr);

int TC = 1;

cin >> TC;

cin.ignore();

while (TC--)

solve();

}