D. Retaliation

time limit per test: 2 seconds
memory limit per test: 256 megabytes

Yousef wants to explode an array $a_1, a_2, \ldots, a_n$. An array gets exploded when all of its elements become equal to zero.

In one operation, Yousef can do **exactly** one of the following:

1. For every index i in a, decrease a_i by i.
2. For every index i in a, decrease a_i by $n - i + 1$.

Your task is to help Yousef determine if it is possible to explode the array using any number of operations.

Input

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

The first line of each test case contains an integer n ($2 \leq n \leq 2 \cdot 10^5$) — the size of the array.

The second line of each test case contains n integers $a_1, a_2, \ldots, a_n$ ($1 \leq a_i \leq 10^9$) — the elements of the array.

It is guaranteed that the sum of n over all test cases doesn't exceed $2 \cdot 10^5$.

Output

For each test case, print "YES" if Yousef can explode the array, otherwise output "NO".

You can output the answer in any case (upper or lower). For example, the strings "yEs", "yes", "Yes", and "YES" will be recognized as positive responses.

Example

input Copy

```
6
4
3 6 6 3
5
21 18 15 12 9
10
2 6 10 2 5 5 1 2 4 10
7
10 2 16 12 8 20 4
2
52 101
2
10 2
```

output Copy

```
NO
YES
NO
NO
YES
NO
```

Note

In the second test case, we can do the following:

- Perform 1 operation of the first type. The array becomes $[20, 16, 12, 8, 4]$.
- Perform 4 operations of the second type. The array becomes $[0, 0, 0, 0, 0]$.

In the first, third, fourth, and sixth test cases, it can be proven that it is impossible to make all elements equal to zero using any number of operations.