Coding Area

Factor of 3

Problem Description

Given an array arr, of size N, find whether it is possible to rearrange the elements of array such that sum of no two adjacent elements is divisible by 3.

Constraints

1 <= T <= 10

2 <= N <= 10^5

1 <= arr[i] <= 10^5

Input

First line contains integer T denoting the number of testcases.

Each test cases consists of 2 lines as follows-

First line contains integer N denoting the size of the array.

Second line contains N space separated integers.

Output

For each test case print either "Yes" or "No" (without quotes) on new line.

Time Limit

1

Examples

Example 1

Input

1

4

1 2 3 3

Output

Yes

Explanation

Some of the rearrangements can be {2,1,3,3}, {3,3,1,2}, {2,3,3,1}, {1,3,3,2},...

We can see that there exist at least 1 combination {3,2,3,1} where sum of 2 adjacent number is not divisible by 3. Other combinations can be {1,3,2,3}, {2,3,1,3}.

Hence the output is Yes.

Example 2

Input

1

4

3 6 1 9

Output

No

Explanation

All possible combination of {3,6,1,9} are

{1,3,6,9}, {1,3,9,6}, {1,6,9,3}, {1,6,3,9}, {1,9,3,6}, {1,9,6,3},

{6,1,3,9}, {6,1, 9,3}, {6,3,1,9}, {6,3,9,1}, {6,9,1,3}, {6,9,3,1},

{3,1,6,9}, {3,1,9,6}, {3,9,1,6}, {3,9,6,1}, {3,6,1,9}, {3,6,9,1},

{9,1,3,6}, {9,1,6,3}, {9,3,1,6}, {9,3,6,1}, {9,6,1,3}, {9,6,3,1}.

Since none of these combinations satisfy the condition, the output is No.

Upload Solution [Question : B]

☐ I, **abhijeet singh** confirm that the answer submitted is my own.

☐ Took help from online sources (attributions)

Choose a File ...

© 2020 Tata Consultancy Services Limited. All Rights Reserved.