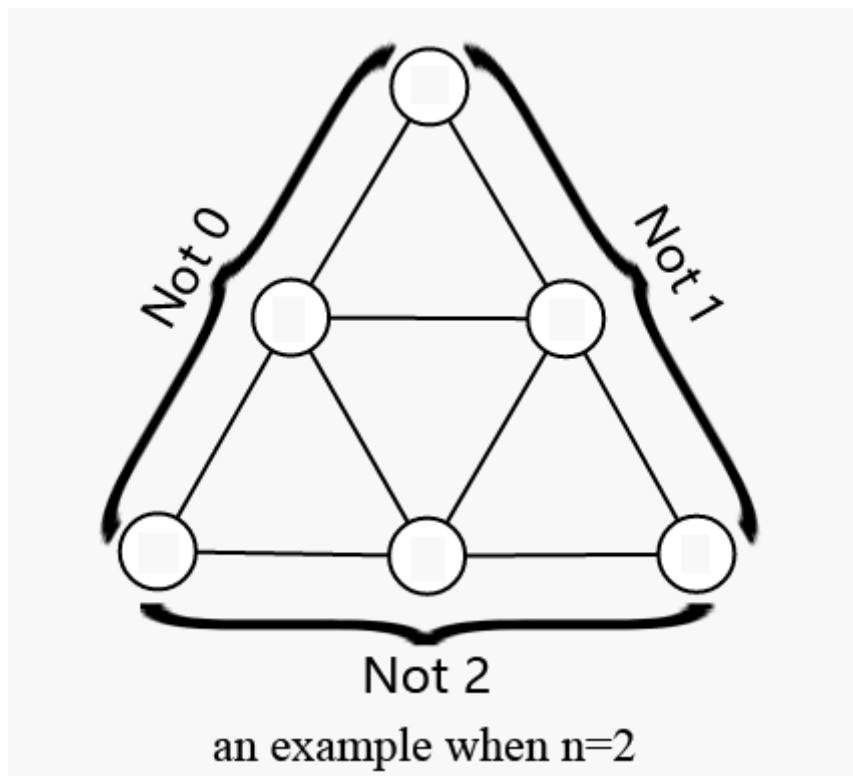


Problem 1004. Link with Equilateral Triangle

Link has a big equilateral triangle with side length n . The big triangle consists of n^2 small equilateral triangles with side length 1.

Link is going to fill numbers into each vertex of the small triangle with the following limits:

- The number filled in should be 0, 1, or 2.
- The left side of the big triangle should not be filled with 0. The right side of the big triangle should not be filled with 1. The bottom side of the big triangle should not be filled with 2.
- For each small triangle with side length 1, the sum of three vertices should not be a multiple of 3.



Link went crazy when he tried to do so because he couldn't find any triangle satisfying all conditions above. Now, he turns to you for help.

Please tell Link: Is it possible to fill the triangle so that it satisfies all conditions above?

Input

Each test contains multiple test cases. The first line contains the number of test cases T ($1 \leq T \leq 1000$). Description of the test cases follows.

For each test case, there is only one line containing a single integer n ($1 \leq n \leq 10^3$).

Output

For each test case, output Yes if it is possible to do so. Output No if it is impossible to do so.

Example Input

```
2
1
2
```

Example Output

```
No
No
```