1573 - Just Another Easy Problem

Description

Bugi, also known in her classroom as "The Maths Girl", is always testing her classmates' maths skills. Today, she came up with the following question: given an integer N, can you say whether the sum of all natural numbers from 1 to N is a multiple of N? To make things more interesting, she states the number will always be given in hexadecimal notation (i.e. all numbers will be given in a 16-based system and the digits will be numbers from 0 to 9 and uppercase letters from A to F).

Input specification

Input begins with a single integer **T (1 <= T <= 1000)** denoting the number of test cases. Each test case is described with a single hexadecimal integer **N (1 <= N <= 2 ^ 63 - 1)** in a line.

Output specification

Output a single line per test case containing **YES** if the required condition holds for this test case. Otherwise the line will say **NO**.

Sample input

```
3
1
2
F
```

Sample output

```
YES
NO
YES
```

Hint(s)