A Chehel Sotoun

Time limit: 1.0s
Memory limit: 256MB

In the heart of Isfahan, the *Chehel Sotoun* palace stood as a testament to the timeless elegance of Persian architecture. Twenty columns graced the front of the pavilion, their slender forms mirrored perfectly in the waters of the reflecting pool.

The name Chehel Sotoun, meaning "Forty Columns" in Persian, was inspired by this reflection — twenty actual columns and twenty columns reflected in the water appear to be forty together!

Mohammad had always been captivated by the symmetry and strength of square buildings, especially those adorned with columns. To him, columns were more than architectural supports — they were storytellers embodying the history and grace of their creators. One of his favorite inspirations was Chehel Sotoun, and he would spend hours sketching its slender wooden columns and their perfect reflections in the pool, marveling at how the structure balanced simplicity with grandeur. The way the columns seemed to reach for infinity stirred something within him — a desire to create something just as timeless.

He is so obsessed with the idea of reflecting columns that he wants to someday build a square structure with columns reflecting in the water. Considering the fact that the building should be **square in shape (having four sides)** and **symmetric (each side should have an equal number of columns) with no columns in the corners**, Mohammad is curious to know if his structure can have $\frac{n}{2}$ columns in a way that he calls it "n *Sotoun*"!

Input

The first line contains an integer t ($1 \leq t \leq 10^5$) — the number of test cases.

The following t lines each contain an integer n ($1 \leq n \leq 10^5$) — the number of appeared columns in total (actual and reflected).

Output

For each given number n, if it is impossible to construct the structure, print a single line containing the word "NO" (case-insensitive); otherwise, print "YES" (case-insensitive).

Samples

Sample input 1	Sample output 1
5 2 40 25 16 10	NO YES NO YES NO