Sinha and Eggs

Sinha is a naughty kid , who always irritates Shukla with his activities. One day Sinha bought some eggs, but indulged in his pranks, forgets them in Shukla's room. Shukla being a considerate friend wanted to teach Sinha a lesson. He puts a condition in front of Sinha, he will give him a number and Sinha has to tell if it has an "Odd" number of factors. If Sinha answers the questions correctly, he shall return the eggs. Since, Sinha can't focus on the problem due to his mischievous nature, he asks you to help him.

Input

You are given a number 't' in first line depicting number of test cases. The next n lines contain a number 'n' each.

Input Constraints:

$1 <= T <= 100000$

$1 <= N <= 10^{11}$

Output

You have to print "YES" if the number 'n' has an odd number of factors, else print "NO".

Example

Input:
3
10
4
6
Output:
NO
YES
NO