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Is Fibo

locked

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Problem

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You are given an integer, N . Write a program to determine if N is an element of the *Fibonacci sequence*.

The first few elements of the Fibonacci sequence are **0, 1, 1, 2, 3, 5, 8, 13, ...**. A Fibonacci sequence is one where every element is a sum of the previous two elements in the sequence. The first two elements are **0** and **1**.

Formally:

$$\begin{aligned} fib_0 &= 0 \\ fib_1 &= 1 \\ &\vdots \\ fib_n &= fib_{n-1} + fib_{n-2} \forall n > 1 \end{aligned}$$

Input Format

The first line contains T , number of test cases.

T lines follow. Each line contains an integer N .

Output Format

Display `IsFibo` if N is a Fibonacci number and `IsNotFibo` if it is not. The output for each test case should be displayed in a new line.

Constraints

$$1 \leq T \leq 10^5$$

$$1 \leq N \leq 10^{10}$$

Sample Input

```
3
5
7
8
```

Sample Output

```
IsFibo
IsNotFibo
IsFibo
```

Explanation

5 is a Fibonacci number given by $fib_5 = 3 + 2$

7 is not a Fibonacci number

8 is a Fibonacci number given by $fib_6 = 5 + 3$



Time Limit

Time limit for this challenge is given [here](#).

Submissions: 4025

Max Score: 15

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C++



```
1 #include <bits/stdc++.h>
2
3 using namespace std;
4
5 // Complete the solve function below.
6 string solve(long n) {
7
8
9 }
10
11 int main()
12 {
13     ofstream fout(getenv("OUTPUT_PATH"));
14
15     int t;
16     cin >> t;
17     cin.ignore(numeric_limits<streamsize>::max(), '\n');
18
19     for (int t_itr = 0; t_itr < t; t_itr++) {
20         long n;
21         cin >> n;
22         cin.ignore(numeric_limits<streamsize>::max(), '\n');
23
24         string result = solve(n);
25
26         fout << result << "\n";
27     }
28
29     fout.close();
30
31     return 0;
32 }
33
```

Line: 33 Col: 1

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