URI Online Judge | 1221

**Fast Prime Number**

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**Timelimit: 1**

Mary knows that a Prime Number is a number that is divisible only by 1 (one) and by itself. For example the number 7 is Prime, because it can be divided only by 1 and by 7. So she asked you to write a program that reads many numbers ​​and inform if each one of these numbers are prime or not. But Patience is not one of the virtues of Mariazinha, so she wants that the execution of all test cases (instances) created by herself happen at the maximum in one second, because she hates waiting :>).

**Input**

The first input line contains an integer **N** (1 ≤ **N** ≤ 200), corresponding to the number of test cases. Follow **N**lines, each one containig one integer number **X** (1 < **X** < 231) that can be or not a prime number

**Output**

For each test case output the message “Prime” or “Not Prime” according to the to following example.

| **Sample Input** | **Sample Output** |
| --- | --- |
| 3 123321 123 103 | Not Prime Not Prime Prime |

<https://www.urionlinejudge.com.br/judge/es/problems/view/1221>

static bool esPrimo(long n)

{

if (n < 2) return false;

if (n == 2) return true;

if (n % 2 == 0) return false;

long sqr = (long)Math.Sqrt(n);

for (int i = 3; i <= sqr; i += 2)

{

if (n % i == 0) return false;

}

return true;

}

static void Main(string[] args)

{

int N = int.Parse(Console.ReadLine());

while (N-- > 0)

{

int X = int.Parse(Console.ReadLine());

if (esPrimo(X))

{

Console.WriteLine("Prime");

}

else

{

Console.WriteLine("Not Prime");

}

}

Console.ReadLine();

}