

Did He Just Steal An Idea?!

The French mathematician, Edouard Lucas (1842-1891), who gave the series of numbers 0, 1, 1, 2, 3, 5, 8, 13, ... the name *the Fibonacci Numbers*, found a similar series occurs often when he was investigating Fibonacci number patterns:

2, 1, 3, 4, 7, 11, 18, ...

The Fibonacci rule of adding the last two values to get the next is kept, but here we start from 2 and 1 (in this order) instead of 0 and 1 for the (ordinary) Fibonacci numbers.

The series is called the **Lucas Numbers**.

Your task is to identify nth terms of the Lucas series. The text file will contain a list of term values and your output must display the value at that term.

Input Sample:

1
2
3
10
200

Output Sample:

1
3
4
123
627376215338105766356982006981782561278127

(You will need to use the class `BigInteger` in order to come up with a solution to this question.)

Ask questions about the `BigInteger` class before tackling this question.