

Problem A

The Fibonacci Primes

Input: standard input

Output: standard output

Time Limit: 8 seconds

Memory Limit: 32 MB

The Fibonacci number sequence is **1, 1, 2, 3, 5, 8, 13** and so on. You can see that except the first two numbers the others are summation of their previous two numbers. A Fibonacci Prime is a Fibonacci number which is relatively prime to all the smaller Fibonacci numbers. First such Fibonacci Prime is **2**, the second one is **3**, the third one is **5**, the fourth one is **13** and so on. Given the serial of a Fibonacci Prime you will have to print the first nine digits of it. If the number has less than nine digits then print all the digits.

Input

The input file contains several lines of input. Each line contains an integer $N(0 \leq N \leq 22000)$ which indicates the serial of a Fibonacci Prime. Input is terminated by End of File.

Output

For each line of input produce one line of output which contains at most nine digits according to the problem statement.

Sample Input

1
2
3

Sample Output

2
3
5

(World Finals Warmup Contest , Problem setter: Shahriar Manzoor)

“Floating Point Errors are more often caused by our limitations
than the limitations of the Computer.”