Lyndon's Golf Contest 1 P9 - Fibonacci: The Finale

Time limit: 2.0s **Memory limit:** 256M

Your task this time will be on computing Fibonacci numbers. Sounds easy!... or is it?

The Fibonacci numbers are a sequence of numbers generated by taking the sum of the preceding two values. Formally, the sequence is defined as:

$$f(n) = \begin{cases} 1 & \text{if } n = 1 \\ 1 & \text{if } n = 2 \\ f(n-1) + f(n-2) & \text{if } n \geq 3 \end{cases}$$

Given an integer n $(1 \leq n \leq 50)$, you are to output the n^{th} Fibonacci number.

Note: You may only submit to this problem in Python 3.

Input Specification

The first line of input contains a single integer n.

Output Specification

Output on a single line, the n^{th} Fibonacci number.

Scoring

Your score will be computed based on the **length of your source code**, the shorter the better. For an L-byte program,

- if $L \leq 43$, you will receive the full 100 points.
- if $44 \leq L \leq 47$, you will receive $80 - 10 \times (L - 44)$ points.
- if $48 \leq L$, you will receive $\lfloor 2^{0.16(80-L)} \rfloor$ points.

Sample Input

```
8
```

Sample Output

```
21
```