

A. Numeric sequence (16 Mb, 1 sec)

An infinite numeric integer sequence F is defined by the following relations:

$$\begin{cases} F_1 = 1 \\ F_2 = 1 \\ F_i = F_{i-1} + F_{i-2} \quad (i \neq 1, i \neq 2) \end{cases}$$

Write a program that calculates the value of n -th element in the sequence F .

Input

The first line of the input file contains one integer n – the index of the element in the sequence.

Output

The output file should contain one integer – the value F_n .

Limitations

$$-40 \leq n \leq +40$$

<u>Sample Input 1</u>	<u>Sample Output 1</u>
1	1
<u>Sample Input 2</u>	<u>Sample Output 2</u>
10	55