Play with Fibonacci

Input: standard input
Output: standard output

We all know about Fibonacci numbers. Fibonacci number is defined as follows:

```
F0 = 0
F1 = 1
Fn = Fn-1 + Fn-2 ,    for n > 1
```

Following are the first 12 Fibonacci numbers: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89. Manipulating the numbers of this series we can obtain other series also. For example consider the following recurrence:

```
S0 = 2
Sn = Fn+1 + Fn-1 ,    for n > 0
```

Now, your job is to find Sn for a given n.

Input Format

Input will consist of several lines each containing a single non-negative integer n. You can assume that the upper limit for n is 5000. Input will end with a negative number which should not be processed.

Constraints

Empty

Output Format

For each n, output corresponding Sn.

Sample Input 0

```
0
3
6
-1
```

Sample Output 0

```
2
4
18
```

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