

Fibonaccibonacci (easy)

Leo would like to play with some really big numbers, OK...

Let FIB the Fibonacci function :

$FIB(0)=0$; $FIB(1)=1$

and

for $N \geq 2$ $FIB(N) = FIB(N-1) + FIB(N-2)$

Example : we have $FIB(6)=8$, and $FIB(8)=21$, so $FIB(FIB(6))=21$

Input

The input begins with the number T of test cases in a single line.

In each of the next T lines there are an integer N.

Output

For each test case, print $FIB(FIB(N))$,
as the answer could not fit in a 64bit container,
give your answer modulo 1000000007.

Example

Input:

3
0
5
6

Output:

0
5
21

Constraints

$1 \leq T \leq 10^4$

$0 \leq N \leq 10^{100}$

Time limit is set to allow (sub-optimal) 500B of python3 code to get AC.

A near optimal solution is within 0.02 and 0.04s with a fast language, and around 1s in Python2 without psyco.

Edit(20/1/2015) With Cube cluster, it is not hard to get 0.0s with fast languages, and my old code ended in 0.08s using PY3.4.