

Arya and the exponacci

Arya is very fond of fibonacci numbers. He claimed he can solve any problem on fibonacci number. His clever friend golu gave him a challenge

to prove his skills. He gave him a sequence which he called exponacci. The sequence is given by

$$g(n) = 2^{f(n-1)} \text{ for } n > 0$$

$$g(0) = 1 \text{ for } n = 0$$

$f(n)$ denotes the n th fibonacci number where

$$f(0) = 1$$

$f(1) = 1$ (Obviously golu is not as good as arya in fibonacci numbers so he believes

$f(0) = 1$, anyways we have chosen not to disturb him)

$$f(n) = f(n-1) + f(n-2) \text{ for } n > 1$$

Help arya to find the n th exponacci number. Since the numbers can be very large take mod 10^9+7

Input :

The first line of the input will be the number of test cases ($T \leq 2000$). For each test case first line contains one integer n $0 \leq n \leq 1000000$

Output :

The value of $g(n) \% (10^9+7)$

Sample Cases :

Input:

2
3
5

Output:

4
32