## Arya Rage

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

- $g(n)=2^{\wedge} f(n-1)$ for $n>0$
- $g(0)=1$ for $n==0$
$\mathrm{f}(\mathrm{n})$ denotes the nth Fibonacci number where
- $f(0)=1$ (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.)
- $f(1)=1$
- $f(n)=f(n-1)+f(n-2)$ for $n>1$

Help Arya to find the nth exponacci number. Since the numbers can be very large take mod $10^{\wedge} 9+7$.

## Input

The first line of the input will be the number of test cases ( $\mathrm{T}<=2000$ ). For each test case first line contains one integers $\mathrm{n}\left(0<=\mathrm{n}<=10^{\wedge} 15\right)$

## Warning: value of n won't fit in int, use long long int instead.

## Output

The value of $g(n) \%\left(10^{\wedge} 9+7\right)$

## Sample

Input:
2
3
5

## Output:

4
32

