

Easy Fibonacci

Fibonacci numbers are well-known in mathematics. But there is a problem. Your friend keeps asking you the n^{th} fibonacci number. He understands that the number can be very big. So, he asks you to modulo it by $10^8 + 7$ before you give your answer to him.

In this case, the first 5 fibonacci numbers are 1, 1, 2, 3, 5.

Input

First line contains an integer **T** ($0 < T \leq 10^6$) defining the number of test case.

Each of next **T** lines contains **n** ($0 < n \leq 5 \cdot 10^5$).

Output

For every test case, print an n^{th} fibonacci number in a line after it has been moduloed by $10^8 + 7$.

Example

Input:

```
5
1
2
3
4
5
```

Output:

```
1
1
2
3
5
```