

Count Subsets

You are given a set $S = \{1, 2, 3, \dots, n\}$. Your task is simple. You have to calculate the number of ways of selecting non empty subsets A and B such that A is not a subset of B and B is not a subset of A . Since answer can be large output the result mod $10^9 + 7$.

Input

First line of input contains single integer t denoting number of test cases.

Next t lines contain a single integer n .

Output

For each test case output answer to problem by taking mod with $10^9 + 7$.

Constraints

$1 \leq t \leq 100000$

$1 \leq n \leq 1000000$

Example

SAMPLE INPUT:

2
4
8

SAMPLE OUTPUT:

110
52670