

Charu and Coin Distribution

One day Charu went to deposit his pocket money in the Bank .
But there was one problem that he wanted to deposit exactly "N" rupees ,and he has coins of 0.25,0.50,1.0, and 2.0 rupees; and number of coins of each type are "4*N"; So he wants to know how many ways are there such that he can deposit exactly "N" rupees in bank using any number of coins of each type. As Charu is poor in counting he wants your help ,Given input "N" give the number of ways of depositing "N" rupees using coins of 0.25,0.50,1.0,and 2.0 rupees. Since the answer can be really large, output the remainder when the answer is divided by 1000000007.

Input

First line will be t ,test cases
 $T \leq 10000$;
The next t lines ,each line contains N
 $N \leq 1e9$

Output

The output should contain one line per testcase, representing the answer to the given problem.

Example

Input:

2
1
2

Output:

4
10

Explanation :

In first case { .25, .25, .25, .25 } , { .50, .25, .25 } , { 1 } , { .50, .50 }