**Marvel’s Smartest**

**Time limit: 0.2 second**

Amedeus Cho helped Bruce Banner survive a radiation explosion and in the process he was exposed to the gamma radiation, becoming the “Totally Awesome Hulk”. Amedeus , with the help of his genious sister Madame Cho, roams in New York and fights crime with a chilled mood, turning into a jolly yet gruesome Hulk. Amedues is ranked as the 8th smartest person in the Marvel Universe, behind Hank Pym, Moon Girl, Bruce Banner, Tony Stark, Hank McCoy, Dr.Doom, T’Chala. But Madame Cho thinks her brother is naive and not smarter than her. To test Amedeus’s intelligence, she thought of a mathematical question.

And here she is, Madame Cho, asking him the question,

“ Let us call a n-digit number (n is an integer , 1<=n<=100000) a ***Meme-number*** if it consists of digits from 0,1,2,3,4 and the difference between any two consecutive digit in the number is exactly two. How many n-digit numbers are there who are ***Meme-numbers***?”

Input

Input will consist of N+1 lines in separate line ( 1<=N <=10000)

First line will contain N, the number of values of n.

Next N line will contain one integer each denoting the value of n.

Output

For each n, print the number of n-digit numbers which are ***Meme-number***s. You should print the answer **modulo 109+7**.

Sample input

2

1

2

Sample Output

5

6

Explanation:

There are 2 inputs: n=1,2

For n=1, possible ***Meme-numbers*** are { 0, 1, 2, 3, 4}=>5

For n=2, possible ***Meme-numbers*** are {20, 31, 02, 42,13, 24}=>6