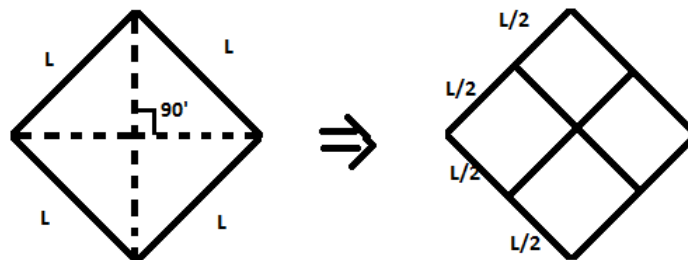


Sherlock and Square



Watson gives a square of side length 1 to Sherlock. Now, after each second, each square of some arbitrary side L will break into four squares each of side $L/2$ (as shown in the image below).



Now, Watson asks Sherlock: What will be the sum of length of solid lines after N seconds?

As the number can be large print result mod $(10^9 + 7)$.

For example, after 0 seconds, the length is 4.

After 1 second, the length is 6.

Input Format

First line contains T , the number of testcases. Each testcase contains N in one line.

Output Format

For each testcase, print the required answer in a new line.

Constraints

$$1 \leq T \leq 10^5$$

$$0 \leq N \leq 10^9$$

Sample input

```
3
0
1
5
```

Sample output

```
4
6
66
```