## 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 $\bmod \left(10^{9}+7\right)$.
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

## Sample output

4
6
66

