**Problem Name :** CODE, EAT, SLEEP

**Problem Code :**

**Problem Statement :**

Given the lockdown due to Corona, all Shriram does in a day is Code, Eat and Sleep (and some other things too, leave them for now). The first event he does in a day is uncertain and he would start his day with code with a probability of 1/3, sleep with a probability of 1/6, and eat with a probability of 1/2.

There isn’t a big change in Aniswar’s activities due to the lockdown and as usual he is stalking Shriram. This time he has a genuine concern since the number of holidays are limited. He expects shriram to start the day with code for k consecutive days, but is not sure how many days he needs to stalk him to find that out.

Being lazy (not that he doesn’t know), he asks you to find the expected number of days he needs to stalk to see shriram start a day with coding, continuously for k days. Help him and put a Oo..Hehe smile on his face :)

The answer can be large or even fractional so output it modulo 1000000007, after using modular inverse(s) if necessary.

**Input Format :**

The first line contains the number of Test Cases - T.

Each test case has a single line having one input - k.

**Output Format :**

For every test case print the answer (the expected number of days Aniswar needs to stalk to find Shriram starting the day with code for k consecutive days) in a separate line.

**Constraints :**

1 <= T <= 10^5

1 <= k <= 10^9

**Sample Input :**

1

1

**Sample Output :**

3