PROBLEM D: COUNTING THE DRAGONFLY

Tung feeds **N** dragonflies, because he was mischievous, so he attached each dragonfly an integer X ($1 \leq X \leq 3$). After finishing the work, Tung wondered: "How many ways to assign the digits to the dragonflies so that the sum of the numbers is divisible by 3?".

Because there are so many dragonflies, Tung wants to write a program to determine how many ways can solve this problem?

Input: Include a single line containing the integer **N** ($1 \leq \mathbf{N} \leq 10^{18}$).

Output: Include a single integer as the result of the problem (The result is taken as a remainder for $10^9 + 7$) (module $10^9 + 7$).

Example:

COUNTING.INP	**COUNTING.OUT**
2	3

Explanation:

Ways to number dragonflies are: (1, 2), (2, 1), (3, 3).