7024   Accommodating tribal clans

The capital city of the kingdom of France has a lot of tribal clans living in the outskirts. Farming and hunting are the two major occupations of these people. These clans keep moving around the kingdom and make their homes using wood and leaves. Each clan has a different culture and in general people of one clan do not like people from the other clans. They live separately and have intra-clan weddings only.

With the advent of the new season, there are floods coming in from the Seine River. As these people don't have proper houses to live in, they have requested the King to provide shelter in the well protected capital city. The King has decided to construct temporary houses for these clans in the Great Royal Circle which is a circle in shape. As these clans do not like each other, they can't live together and would need some kind of a boundary to separate their shelters.

The King has come up with a plan to do so. He decided that a number of bamboo sticks will be placed on the boundary of the Great Royal Circle. Then for every pair of bamboo sticks a wired fence will be used to connect them and create partitions of the circle. The bamboo sticks will be placed such that no three fences cross at the same point within the circle. Proper joints are placed at locations where two fences cross each other. In this way, the Great Royal Circle is divided into a number of regions each of which will be given to a clan to live in temporarily.

As there is a shortage of dry bamboo sticks, the King's soldiers could only manage N bamboo sticks to be placed on the boundary of the Great Royal Circle. What is the maximum number of different clans the King can provide shelter to?

Input

The first line of the input contains an integer T which is the number of test cases. Next follow T lines each containing an integer N, the number of bamboo sticks available.
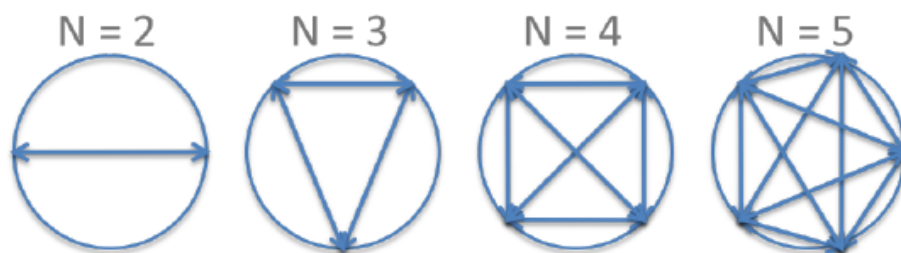
Output

For each test case, output in a separate line the maximum number of clans which can be provided shelter from the floods. Since this number can be very big, output it *modulo* 1000000007.

Constraints:

- $1 \le T \le 30000$

- $1 \le N \le 10^9$

Explanation: The below image explains the sample input output for different values of N. The lines in the circles represent the fences and the arrowheads represent represent the banboo sticks.

Sample Input

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4
2
3
4
5
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Sample Output

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2
4
8
16
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