Cards

Maricruz have a lot of cards, she always uses her cards to build pyramids as shown in the following image:

A pyramid card of 3 levels. She always wonder how many cards does she need to make a pyramid card of **N** levels. Your task is to answer that question.

Input

The first line of the input contains an integer 1 <= **T** <= 1,000. Each of the following **T** lines will have an integer 1 <= **N** <= 1,000,000.

Output

For each case, output a single line consisting of the number of cards needed to build a pyramid card of level **N** modulo 1,000,007.

Example

Input Example
2
3
7

Output Example
15
77