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## Problem A. Line Counting

Input file: *standard input*  
Output file: *standard output*  
Time limit: 2 seconds  
Memory limit: 512 mebibytes

Bobo has a set  $P$  of  $\frac{n(n+1)}{2}$  points:  $\{(x, y) : 1 \leq x \leq y \leq n, x, y \in \mathbb{Z}\}$ . He would like to know the number of distinct lines passing through at least two points in  $P$ , taken modulo  $(10^9 + 7)$ .

### Input

The input contains zero or more test cases, and is terminated by end-of-file.

Each test case is a single line containing an integer  $n$  ( $2 \leq n \leq 2 \cdot 10^9$ ).

It is guaranteed that the number of test cases does not exceed  $10^5$ , and the sum of all  $n$  does not exceed  $2 \cdot 10^9$ .

### Output

For each test case, output an integer which denotes the number of distinct lines.

### Example

standard input	standard output
2	3
3	9
5	51