

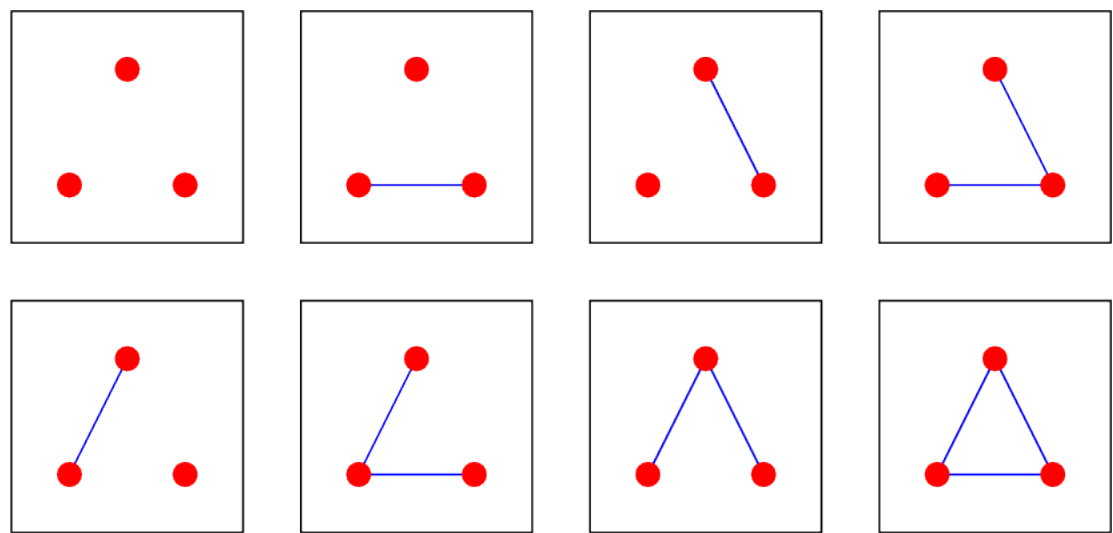
Problem A. How Many Graphs ?

Input file: standard input
Output file: standard output
Time limit: 1 second
Memory limit: 256 megabytes

You are given the number of vertices N . Count the number of ways to construct a simple graph with N labeled vertices.

Recall: a simple graph is an unweighted, undirected graph containing no graph loops or multiple edges.

The number of simple graphs that can be made with 3 vertices is shown in the picture below.



Input

One line contains one integer n ($1 \leq n \leq 10^9$) - the number of vertices.

Output

Print the answer to the problem modulo $10^9 + 7$

Example

standard input	standard output
3	8