

# Pyramid

Time limit: 1000 ms  
Memory limit: 128 MB

A pyramid of numbers can be represented as a matrix  $a$  of  $n$  rows, where the  $i^{th}$  row has elements only on the first  $i$  columns. In addition,  $a_{i,j} = a_{i+1,j} + a_{i+1,j+1}$ , for the first  $n - 1$  rows. For the bottom row this doesn't apply, those numbers can be any **strictly positive** integers.

Given an integer  $s$ , count the number of pyramids where  $a_{1,1} = s$ , for all possible values of  $n$ .

## Standard input

The first line contains integer  $s$ .

## Standard output

Print the number of pyramids with the given property. As this number can be very large, output its value modulo  $10^9 + 7$ .

## Constraints and notes

- $1 \leq s \leq 10^5$

Input	Output	Explanation
4	5	There are 5 distinct pyramids with $A_{1,1} = 4$ <div><div><div>4</div><div>22</div><div>111</div></div><div><div>4</div><div>13</div></div><div><div>4</div><div>31</div></div><div><div>4</div><div>22</div></div><div><div>4</div></div></div>