

S2

DSA section

Section Test 2025 - SA030825803

Q21 >

Q22

Covid - 20?

Problem Description

A lab was trying to synthesize a new virus. They had 1 cell of that virus in a vial on day 1. The virus starts giving birth to a new cell every day after B days and it also dies after C days. On a new day, the cell will die (if it is supposed to die) before it gives birth to new cells. Find the number of virus cells in the vial after A days.

Note : Since, the answer can be very large, output the answer modulo 10^9+7 .

Problem Constraints

$$1 \leq A \leq 10^5$$

$$1 \leq B \leq A$$

$$B < C \leq A$$

Input Format

The first argument is the integer A.
The second argument is the integer B.
The third argument is the integer C.