Security System

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

Meow is being tasked with creating a brand new password security system. It is mainly used to overcome weak password storage solution in today's market. His system works in this way:

1. There are n memory storage areas.

2. Each storage area can hold any number of signals, including no signal – **NULL**

3. There are 2 different signals – "0"and "1"

4. There exists a "0" signal and b "1" signals.

5. Meow will place these signals into the memory storage areas. Meow can choose to place **some or all or none** of those "0"and "1"signals.

6. The order of signals inside a specific memory storage area does not matter, but order matters across different memory storage areas.

7. A new password is generated by having a unique combination of storing the signals.

Meow would like to know how many different password can the system have?

Input

The input contains 3 integers n, a, b $(0 \le a, b \le 500), (1 \le n + a, n + b \le 500)$ – the number of memory storage, the number of "0"signal available, and the number of "1"signal available.

Output

Print a single integer – the number of passwords the system can have modulo $10^9 + 7$ (1000000007).

Example

standard input	standard output
2 1 1	9

Note

There are two memory storage area, and Meow has only one "0"signal and one "1"signal to work with. The 9 possible storage options are listed below:

	Memory 1	Memory 2
1	NULL	NULL
2	0	NULL
3	1	NULL
4	NULL	0
5	NULL	1
6	01	NULL
7	NULL	01
8	1	0
9	0	1

Note that the order inside a memory storage area does not matter, for the 6th and 7th storage option, 01 and 10 are considered similar.