GG

Input file:	`standard input`
Output file:	`standard output`
Time limit:	3 seconds
Memory limit:	1024 megabytes

"If you can't solve a problem, just switch to another one. What if this one is the anti-AK task?"

Given three integers n, a, b.

Consider all intervals $[l, r]$ such that $1 \le l < r \le n$. You need to choose some of them (possibly none), satisfying:

- All chosen intervals are contained in $[1, n]$;
- All endpoints of the chosen intervals are pairwise distinct. In other words, if the chosen intervals are $[l_1, r_1], [l_2, r_2], \ldots, [l_k, r_k]$, then the $2k$ numbers $l_1, r_1, l_2, r_2, \ldots, l_k, r_k$ are pairwise distinct;
- There exist a chosen intervals $[l_1, r_1], [l_2, r_2], \ldots, [l_a, r_a]$ such that $l_1 < l_2 < \cdots < l_a$ and $r_a < r_{a-1} < \cdots < r_1$;
- There exist b chosen intervals $[l_1, r_1], [l_2, r_2], \ldots, [l_b, r_b]$ such that $l_1 < l_2 < \cdots < l_b$ and $r_1 < r_2 < \cdots < r_b$.

Find the number of valid ways to choose the intervals. Since the answer may be very large, output it modulo $10^9 + 7$.

"A wise decision"

Input

The input consists of a single line containing three integers n, a, b ($2 \le n \le 100$, $0 \le a, b \le n$).

Output

Output a single integer, the number of valid interval-selection schemes modulo $10^9 + 7$.

Examples

standard input	standard output
2 0 0	2
2 0 1	1
5 1 2	10
9 2 3	504
100 14 22	36993304