

Problem C

Voting

The High Table is electing their new leaders. The current leaders decided that the standard voting procedure is not bureaucratic enough, so they came up with a great new idea: only the High Table leaders are allowed to vote!

Each leader on the High Table will write down the name of M distinct candidates who are not currently on the High Table on their secret ballot. The candidates whose names appear on all the ballots will become the new leaders. Otherwise, the current leaders remain in power.

Rowhn Jick suspects the current leaders are just trying to remain in power forever. He wants to know the number of distinct ballot configurations such that the current leaders remain in power. Ballot configuration A is different from B if at least one of the High Table member's ballot from A contains a name which doesn't exist in their ballot from B .

Input

The only line of the input contains three integers, M , the number of candidates names members must write on their ballot, K , the number of High Table members, and N , the number of candidates. It is guaranteed that $1 \leq K, M \leq 5\,000$, and $\max(K, M) \leq N \leq 100\,000$

Output

Output a single integer representing the number of distinct ballot configurations in which the current leaders remains leaders. Since this number may be very large, print the number modulo $10^9 + 7$.

Sample Input

2 2 3

Sample Output

0

Sample Input

2 2 4

Sample Output

6