2018. The Debut Album

Time limit: 2.0 second
Memory limit: 64 MB

Pop-group “Pink elephant” entered on recording their debut album. In fact they have only two songs: “My love” and “I miss you”, but each of them has a large number of remixes.

The producer of the group said that the album should consist of n remixes. On second thoughts the musicians decided that the album will be of interest only if there are no more than a remixes on “My love” in a row and no more than b remixes on “I miss you” in a row. Otherwise, there is a risk that even the most devoted fans won’t listen to the disk up to the end.

How many different variants to record the album of interest from n remixes exist? A variant is a sequence of integers 1 and 2, where ones denote remixes on “My love” and twos denote remixes on “I miss you”. Two variants are considered different if for some i in one variant at i-th place stands one and in another variant at the same place stands two.

Input

The only line contains integers n, a, b ($1 \le a, b \le 300$; $max(a,b) + 1 \le n \le 50\,000$).

Output

Output the number of different record variants modulo 10^9+7.

Sample

input	output
3 2 1	4

Notes

In the example there are the following record variants: 112, 121, 211, 212.

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