Problem E: Easy Permutation Problem
Time Limit: 5 seconds

Description

Define an alternating permutation of the set {1, 2, 3, ..., n} to be an arrangement of those numbers such that the permutation $a_1...a_n$ satisfies ($a_{i-1} < a_i$ AND $a_i > a_{i+1}$) or ($a_{i-1} > a_i$ AND $a_i < a_{i+1}$) for all $1 < i < n$. In this problem, compute the number of alternating permutations for a given triple of (n, a_1, a_n).

Input

A number of of inputs (≤**1500**), each line with **n, a_1, a_n (2 ≤ n ≤ 2000, 1 ≤ a_1, a_n ≤ n).**

Output

For each input, output the total number of permutations modulo **1000000007** on one line.

Sample Input
2 1 2
4 2 3

Sample Output
1
2