Mr. Ant & His Problem

Mr. Ant has **3** boxes and the infinite number of marbles. Now he wants to know the number of ways he can put marbles in these three boxes when the following conditions hold.

1) Each box must contain at least 1 marble.

2) The summation of marbles of the 3 boxes must be in between X and Y inclusive.

Now you are given X and Y. You have to find the number of ways Mr. Ant can put marbles in the 3 boxes.

Input

Input starts with an integer T, denoting the number of test cases. Each test case contains two integers **X** and **Y.**

Constraints

1<=T<=1000000

1<=X<= Y<=1000000

Output

For each test case, print the required answer modulo **1000000007**.

Sample Input	Sample Output
1 4 5	9

Explanation for the first test case

1	1	2

Way 01

1	1	3

Way 02

1	2	1

Way 03

1	3	1

Way 04

2	1	1

Way 05

3	1	1

Way 06

1	2	2

Way 07

2	1	2

Way 08

2	2	1

Way 09

Note: use faster i/o method.

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