Rivals

Mohamed Yasser (AKA *Abo-3obaida*) and Mohamed Ahmed (AKA *Nesr*) pretend to be rivals, the two clearly have a deep and understanding friendship.

One day they imagine that the city is a 2D plane with Cartesian coordinate system, the two rivals are located in point (0,0), and they are targeting point (X,Y).

They can make two moves only:
1) move right to the point (X + 1, Y).
2) move up to the point (X, Y + 1).

Nesr immediately said: "I've figured out how many ways are there to reach our target".
Abo-3obaida replied: "I'll not lose this challenge".

Could you help *Abo-3obaida* to figure out how many ways to the target?!

Since the required number may be very large, find its remainder of division by 1000000007 ($10^9 + 7$).

Input

The first line of input contains an integer **T** (1 <= **T** <= 1000) followed by T test cases.

Each case contains two space-separated integers **X**, **Y** (0 <= **X**, **Y** <= 10^6).

Output

For each test case, print a single integer the answer to the problem modulo 1000000007 ($10^9 + 7$).

Example

Input:
3
1 3
2 4
5 3

Output:
4
15
56