

Project Euler #181: Investigating in how many ways objects of two different colours can be grouped.

This problem is a programming version of Problem 181 from projecteuler.net

Having three black objects B and one white object W they can be grouped in T ways like this: $\{(BBBW), (B, BBW), (B, B, BW), (B, B, B, W), (B, BB, W), (BBB, W), (BB, BW)\}$.

In how many ways can n black objects B and m white objects W be thus grouped? Print the answer after taking modulo by $(10^9 + 7)$.

Input Format

The first line of each testcase contains an integer q. Each of following q lines contain two integers n and m which is the number of black and white objects respectively.

Constraints

- $1 \le q \le 30000$
- $0 \le n, m \le 160$
- $1 \le n + m$

Output Format

Print exactly q lines, each containing a single integer which is the answer to the corresponding test modulo $10^9 + 7$.

Sample Input 0

1 31

Sample Output 0

7