

Problem G. Make 2

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 512 megabytes

For a sequence a consisting of n positive integers, you can perform the following operation several times:

- Choose an index i which satisfies $1 < i < n$ and $a_i > 1$, then decrease a_i by 1, and add 1 to a_{i-1} and a_{i+1} .

A sequence consisting of n positive integers is considered good if it is possible to make $a_i = 2$ for each $1 \leq i \leq n$, by using several (possibly, zero) such operations.

Now you need to calculate the number of good sequences that satisfy m constraints, the i -th constraint can be represented as a pair (x_i, y_i) which requires $a_{x_i} = y_i$.

It can be proven that the answer is finite. Output the answer modulo $10^9 + 7$.

Input

The first line contains a single integer T ($1 \leq T \leq 10$), denoting the number of test cases.

For each test case, the first line contains two integers n, m ($1 \leq n \leq 10^{18}$, $0 \leq m \leq \min(n, 100)$).

The next m lines each contains two integers. The i -th line contains x_i, y_i ($1 \leq x_1 < x_2 < \dots < x_m \leq n$, $1 \leq y_i \leq 10^9$).

Output

For each test case, output one line with an integer denoting the answer modulo $10^9 + 7$.

Example

standard input	standard output
3	1
3 1	2
2 2	158552999
5 2	
1 2	
5 1	
114514 0	