Problem I. Intersecting edges

Source file name:	`I.c, I.cpp, I.java`
Input:	`Standard`
Output:	`Standard`
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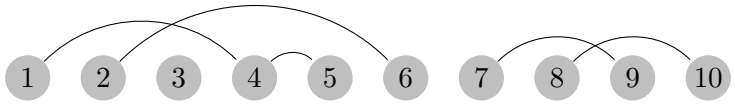
Last data structures lecture was about graphs, now you can't stop seeing a graph on everything. You say everything is a graph and maybe there is some of true on it, however your obsession with graphs has taken you to imagine some scenarios, one of those scenarios you are interesting about is the number of edges that intersect when drawing a specific type of graph.

You take a graph with N nodes and draw all the nodes on a line numbered from 1 to N. Next you will draw M edges selecting two nodes from the graph a and b and draw the edge starting in a and finishing in b drawing it above all nodes between a and b. The following is an example of the graph where $N = 10$.



As you can see this graph has two intersections.

- The edge that goes from 1 to 4 intersects with the edge that goes from 2 to 6.
- The edge that goes from 8 to 10 intersects with the edge that goes from 7 to 9.

Given a specific graph, can you determine how many intersections will be in the drawing?

Input

The first line of input contains a number T, the number of test cases. Each test case will begin with two numbers separated by a space N and M the following M lines of the test case will contain two integers separated by a space a and b representing the edges that will be drawn. No pair of edges will start or end on the same node.

- $1 \leq N \leq 10^9$
- $1 \leq M \leq 10^5$
- $1 \leq a < b \leq N$

Output

For each test case your program must output a line with a single number, the number of intersections that the drawing will have.

Example

Input	Output
2 10 5 4 5 1 4 2 6 7 9 8 10 10 5 1 2 2 3 3 4 4 5 5 6	2 0

Explanation

The input contains two test cases. The first test case is the case for the image shown above. In the second test case even when some pairs share a node no edges intersect.