**Trees**

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| **Time Limit:** 1000MS |  | **Memory Limit:** 65536K |
|  |  |  |

**Description**

The road off the east gate of Peking University used to be decorated with a lot of trees. However, because of the construction of a subway, a lot of them are cut down or moved away. Now please help to count how many trees are left.   
  
Let's only consider one side of the road. Assume that trees were planted every 1m (meter) from the beginning of the road. Now some sections of the road are assigned for subway station, crossover or other buildings, so trees in those sections will be moved away or cut down. Your job is to give the number of trees left.   
  
For example, the road is 300m long and trees are planted every 1m from the beginning of the road (0m). That's to say that there used to be 301 trees on the road. Now the section from 100m to 200m is assigned for subway station, so 101 trees need to be moved away and only 200 trees are left.

**Input**

There are several test cases in the input. Each case starts with an integer L (1 <= L < 2000000000) representing the length of the road and M (1 <= M <= 5000) representing the number of sections that are assigned for other use.   
  
The following M lines each describes a section. A line is in such format:   
  
Start End   
  
Here Start and End (0 <= Start <= End <= L) are both non-negative integers representing the start point and the end point of the section. It is confirmed that these sections do not overlap with each other.   
  
A case with L = 0 and M = 0 ends the input.

**Output**

Output the number of trees left in one line for each test case.

**Sample Input**

300 1

100 200

500 2

100 200

201 300

0 0

**Sample Output**

200

300