UIT-ALGOBOOTCAMP

DECORATIVE LIGHT

DECORATIVE LIGHTING (1s, 512M)

To celebrate the end of COVID lockdown, the city commitee installs a system of **n** decorative LED(s) in the walking street. Each LED can be put into one of three modes: "green light", "red light" or "off". In the morning, all LEDs are off. At night fall, there will be t times, when the system switching the LEDs' mode, at time **k** (**k** = 1, 2, 3,... t) every LED with the ID from a_k to b_k will change mode. The rule for changing mode is as follow:

If the LED is off, it will turn to green light. If it is in green light mode, it will turn to red light. Finally, if it is in red light, it will turn off.

For example, given a system of 5 LEDs. There are 3 times when they change mode. First, LED with ID from 2 to 4 change, then LED with ID from 3 to 5 will change and finally, LED with ID from 3 to 5 will change again. Afterwards, the mode for each LED in the order of ID is: `off, green light, off, off, red light`.

In the next morning, the committee will have to turn off all the LED, they want to know how man LED is already in the mode: 'off' after the lighting show in the night.

INPUT

The first line contains two integers, **n** and **t f** ($n <= 10^9$, $t <= 10^5$)

The kth line in the next **t** lines each contains two integers a_k and b_k ($1 \leq a_k$, $b_k \leq n$) .

OUTPUT

The number of LEDs that are currently in the mode off after the show.

EXAMPLE

INPUT	OUTPUT		INPUT	OUTPUT
5 3	3		1000 1	2

3 5

3 5

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