**Problem 4. Robots**

Ivancho is located on a deserted island, and has **K** robots and a map, on which there are **N** boxes shown, numbered from **1** to **N,** containing treasures and keys**.** The information on the map can be interpreted as a coordinate system in which the robots are located on **(0;0)**, Ivancho on **(M;M),** the **i-**th box on **(Ai;Bi)**.

In order to open the **i**-th (**i > 1)** box, Ivancho needs the key placed in box **i-1,** and the first box can be opened without keys.

Ivancho’s robots are quite simple - they can move only in directions parallel to the axes. If at any given moment a robot is placed on point **(x; y),**  it can move to point **(x; y+ 1)** or point **(x + 1;y).**

Ivancho can’t leave his shelter (the island is full of predators) placed on point **(M;M).** Nevertheless, he can program his robots from a distance, making them do some number of moves leading to his shelter. The robots collect a box if they pass through its coordinates. This way Ivancho can open the boxes he has keys to.

Write a program **robots**, which says what is the largest number of boxes that Ivancho can open.

 **Input**

On the first line of the input file **robots.in** there are three integers **N, M** and **K. N** lines follow with two numbers on each - **Ai** and **Bi**, the coordinates of box **i.**

**Output**

The output file **robots.out** contains one integer - the largest number of boxes Ivancho can open.

**Constraints:**

1 **N**  20,000

1 **M**  1,000,000,000

1 **Ai;Bi**  **M**

All numbers in the input file are integers.

All points have different coordinates.

**Time Limit: 0.5s**

**Example:**

|  |  |
| --- | --- |
| **robots.in** | **robots.out** |
| 6 4 14 31 22 22 11 13 2  | 3 |