Dogecoin

Submit solution

All submissions
Best submissions

Points: 100 (partial)
Time limit: 0.2s
Java 9: 0.5s
Memory limit: 32M
Java 9: 32M
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Tags
Dynamic Programming
Difficulty
Easy

DogeCoin

Description

Many coins, how much money, such currency, so crypto. Wow.

Doge is a very popular dog. It's so popular that there is a virtual currency in its name. The virtual currency is called DogeCoin. Doge loves his DogeCoins and wants to collect as much as possible.

Help the poor animal!

Doge and DogeCoins are placed on a grid containing **NxM cells** (**N lines** numbered 0 to N-1 and **M columns** numbered 0 to M-1). Doge is always in position **[0; 0]**. Doge can only jump in two directions - **right and down**. There are K coins on the grid. Two or more coins may be in one cell. There may also be coins where Doge starts (0, 0) and he automatically collects them.

Find **the largest possible number of coins** that Doge can collect by moving only down and right.

Wow.

Input data

Input data will be read from the console.

- The first line will contain the numbers **N** and **M** , separated by Space
- On the second line will be the number **K** - the number of coins on the grid
- The following **K** lines will contain the coordinates **X** and **Y** on each coin separated by a space. **X** is the row number, and **Y** - the number of the column where the coin is located

Input data will always be valid in the format described. They do not have to be explicitly checked.

Output data

The output data will be printed on the console.

"On the one line of the exit, print the largest possible number of coins that Doge can collect, moving only down and right.

Limits

- **N** and **M** will be between **1** and **2000** inclusive.
- **K** will be between **0** and **100000** inclusive. Coin coins will always be within the grid.

Sample Tests

Input	Output
4 5 7 1 4 0 3 1 2 2 1 3 1 1 2 2 4	4
10 10 11 11 0 0 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 8 9 9 9	
4 4 11 1 1 2 1 1 2 2 1 3 3 0 3 3 0 3 1 3 3 1 1 1 0	8