DMPG '15 S2 - MMORPG

Neptune is questing in a certain online role-playing game. The game is played on a tiled plane where each tile is a square of unit dimensions and $(0, 0)$ is defined as the top-left corner of the plane. This game has theme music that is unlocked when visiting the interior of any of the R rectangular regions in the game (one song per region). A region is defined by an (x, y) pair, the top left corner of a rectangle that is $w - 1$ units wide and $l - 1$ units long. Being on the edge of a rectangular region counts as visiting it. Each song may only be unlocked once.

This game also has the concept of magic, so Neptune will teleport N times to a given set of (x, y) coordinates.

How many songs will he unlock?

Input Specification

The first line will contain 2 space-separated integers R $(0 \leq R \leq 10^3)$ and N $(1 \leq N \leq 10^3)$. The next R lines will each define a region where music may be unlocked as 4 space-separated integers x, y, w, and l $(0 \leq x, y; 1 \leq x + w, y + lFinally, thenext$N $lineswilleachcontainapairof$(x, y)~ coordinates: the locations Neptune will teleport to in chronological order.

Output Specification

The number of songs Neptune will unlock, on one line.

Sample Input

```
2 1
0 0 100 100
0 0 50 50
60 60
```

Sample Output

```
1
```