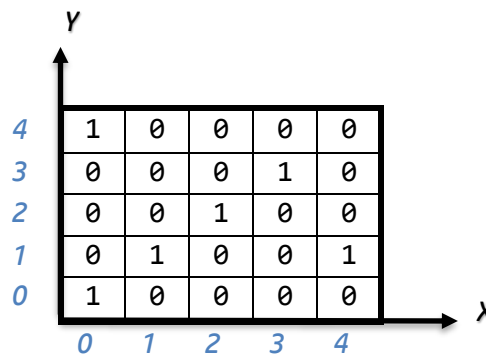# 18 Space battleship
10 points

Introduction
A long time ago in a galaxy far, far away…. the Rebel and Imperial fleets are fighting against each other in the final battle near Coruscant. Princess Leia has ordered you to provide the total amount of hits against the Imperial forces. To ease your job you are given an square matrix representing the battle scenario with the X/Y coordinates where the imperial ships are present. You are also provided with the X/Y coordinates of the shots fired by the rebels.

Sometimes the rebels fire more than once to the same objective. Beware of not double counting these shots. Can you develop a program to provide this data as soon as possible? Remember you are her last hope.

Input
The first value of the input will be an integer number representing the size of the square matrix. It will be followed by the matrix where 1 means an imperial spaceship is present and 0 is just empty space.
Then the number of shots is reported followed by the coordinates of every shot.

Output
Print out the number of successful hits on the Imperial fleet.

Example

Input

```
5
1 0 0 0 0
0 0 0 1 0
0 0 1 0 0
0 1 0 0 1
1 0 0 0 0
5
1 1
4 4
1 1
4 1
0 4
```

Output
3