Problem E: Boxes of Foxes

In a large, rectangular field you spot a horde of foxes. Just tons of them. To your amazement, the foxes are clearly distinguishable into two categories. One type of fox likes math, and such foxes are coloured blue and yellow. The other type of fox likes music, and these are coloured red and white.

You don't like either math or music; instead, you like counting foxes. So here's what you're going to do: first, you construct a region (out of the union of several rectangles) upon which you will count the foxes. Then, perhaps unsurprisingly, you will count how many foxes of each type are in the region.

Input Specification:

The input begins with a single integer $T \leq 25$ on its own line, the number of test cases. Each test case begins with three positive integers $M \leq 500$, $N \leq 500$, and $K \leq 13370$: the number of rows and columns in the grid, and the number of rectangles that your region is made out of. Following this are M lines of N characters each: the characters will either be a B , denoting a blue and yellow fox, or a R , denoting a red and white fox. Next come K lines of four integers each, which represent the rectangles your region is made out of. The first two integers represent the (x,y) coordinates of the lower left corner, and the last two integers represent the (x,y) coordinates of the top right of the box.

The diagram given is a picture of the sample input. Java coders should use `BufferedReader` to read the large input file.

Output Specification:

Output one line per test case with two space separated integers: the number of foxes that like math (represented in the input by B), and then the number of foxes that like music (represented by R).

Sample Input:

```
1
6 4 3
BRBR
RBBR
BBBR
RBBB
RRRR
RBRB
2 1 3 2
3 1 4 4
1 4 3 6
```

Sample Output:

```
11 7
```

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