COCI '16 Contest 7 #1 Baza

Time limit: 1.0s **Memory limit:** 64M

Mirko got a summer internship in a big IT company. This company builds a large database consisting of N rows and M columns.

On his first day, Mirko received a total of Q queries. Each query consists of M numbers. However, some numbers got lost during transition, so they are denoted with `-1`. Mirko wants to know how many rows of the database correspond to the query, i.e., how many rows of the database have identical numbers as the query, excluding `-1`.

For example, if the query is in the form of `-1 3 2`, then we need to count the rows of the database that have **any number** in the **first** column, have **the number 3** in the **second** column, and have **the number 2** in the **third** column.

Since he just started with his internship, Mirko needs your help. Help him and answer the queries!

Input Specification

The first line of input contains N $(1 \leq N \leq 10^3)$ and M $(1 \leq M \leq 10^3)$, the size of the database.

Each of the following N lines contains M numbers A_{ij} $(1 \leq A_{ij} \leq 10^6)$, the content of the database.

The following line contains Q $(1 \leq Q \leq 50)$, the number of queries.

Each of the following Q lines contains M numbers B_{ij} $(B_{ij} = -1$ or $1 \leq B_{ij} \leq 10^6)$, the description of the ith query.

Output Specification

The output must contain Q lines, each line containing X, the answer to the ith query from the task.

Sample Input 1

```
4 3
1 5 2
2 3 4
4 3 2
5 4 6
3
-1 -1 2
-1 3 2
-1 -1 -1
```

Sample Output 1

```
2
1
4
```

Explanation of Sample Output 1

The first query asks how many rows have the number 2 in the third column. These are rows number 1 `(1 5 2)` and number 3 `(4 3 2)`.

The second query asks how many rows have the numbers 3 and 2 in the second and third column. This is only row number 3 `(4 3 2)`.

The third query asks how many rows are there in total, and the answer is obviously 4.

Sample Input 2

```
3 8
6 5 97 99 82 50 95 1
85 62 11 64 94 84 88 19
43 99 11 64 94 84 31 19
3
-1 -1 11 64 94 84 -1 19
-1 -1 -1 99 -1 -1 -1 1
95 -1 -1 -1 -1 80 -1 -1
```

Sample Output 2

```
2
1
0
```