The Grid Search

Given an array of strings of digits, try to find the occurrence of a given pattern of digits. In the grid and pattern arrays, each string represents a row in the grid. For example, consider the following grid:

```
1234567890
0987654321
1111111111
1111111111
2222222222
```

The pattern array is:

```
876543
111111
111111
```

The pattern begins at the second row and the third column of the grid and continues in the following two rows. The pattern is said to be *present* in the grid. The return value should be `YES` or `NO`, depending on whether the pattern is found. In this case, return `YES`.

Function Description

Complete the *gridSearch* function in the editor below. It should return `YES` if the pattern exists in the grid, or `NO` otherwise.

gridSearch has the following parameter(s):

- *string G[R]:* the grid to search
- *string P[r]:* the pattern to search for

Input Format

The first line contains an integer t, the number of test cases.

Each of the t test cases is represented as follows:
The first line contains two space-separated integers R and C, the number of rows in the search grid G and the length of each row string.
This is followed by R lines, each with a string of C digits that represent the grid G.
The following line contains two space-separated integers, r and c, the number of rows in the pattern grid P and the length of each pattern row string.
This is followed by r lines, each with a string of c digits that represent the pattern grid P.

Returns

- *string:* either `YES` or `NO`

Constraints

$$1 \le t \le 5$$
$$1 \le R, r, C, c \le 1000$$
$$1 \le r \le R$$
$$1 \le c \le C$$

Sample Input

```
2
10 10
7283455864
6731158619
8988242643
3830589324
2229505813
5633845374
6473530293
7053106601
0834282956
4607924137
3 4
9505
3845
3530
15 15
400453592126560
114213133098692
474386082879648
522356951189169
887109450487496
252802633388782
502771484966748
075975207693780
511799789562806
404007454272504
549043809916080
962410809534811
445893523733475
768705303214174
650629270887160
2 2
99
99
```

Sample Output

```
YES
NO
```

Explanation

The first test in the input file is:

```
10 10
7283455864
6731158619
8988242643
3830589324
2229505813
5633845374
6473530293
7053106601
0834282956
4607924137
```

```
3 4
9505
3845
3530
```

The pattern is present in the larger grid as marked in bold below.

```
7283455864
6731158619
8988242643
3830589324
2229505813
5633845374
6473530293
7053106601
0834282956
4607924137
```

The second test in the input file is:

```
15 15
400453592126560
114213133098692
474386082879648
522356951189169
887109450487496
252802633388782
502771484966748
075975207693780
511799789562806
404007454272504
549043809916080
962410809534811
445893523733475
768705303214174
650629270887160
2 2
99
99
```

The search pattern is:

```
99
99
```

This pattern is not found in the larger grid.