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# Largest Common Submatrix

Input file:            **standard input**  
Output file:           **standard output**  
Time limit:            1 second  
Memory limit:         512 megabytes

You are given two  $n \times m$  matrices, and the elements of each matrix are ranged from 1 to  $n \times m$  and pairwise distinct. You need to find the common submatrix with the largest size between these two matrices.

Example:

Matrix A:

```
1 2 3
4 5 6
8 7 9
```

Matrix B:

```
5 6 1
7 9 3
2 4 8
```

Largest common submatrix:

```
5 6
7 9
```

## Input

The first line of input contains two integers  $n$  ( $1 \leq n \leq 1000$ ) and  $m$  ( $1 \leq m \leq 1000$ ), denoting the number of rows and columns of each matrix.

Each of the next  $n$  lines contain  $m$  integers per line, denoting the first matrix  $A = (a_{i,j})_{n \times m}$ . And again, each of the next  $n$  lines contains  $m$  integers per line, denoting the second matrix  $B = (b_{i,j})_{n \times m}$ .

It is guaranteed that  $1 \leq a_{i,j}, b_{i,j} \leq n \times m$ , and  $a_{i_1,j_1} \neq a_{i_2,j_2} \wedge b_{i_1,j_1} \neq b_{i_2,j_2}$  always holds for each pair of  $(i_1, j_1)$  and  $(i_2, j_2)$ , where  $i_1 \neq i_2 \vee j_1 \neq j_2$ .

## Output

Output an integer representing the size of the largest common submatrix.

## Example

standard input	standard output
3 4 5 6 7 8 1 2 3 4 9 10 11 12 5 6 8 7 1 2 4 3 12 11 10 9	4

## Note

Largest common submatrix in the sample test:

```
5 6
1 2
```