# Problem A

## A Powerful Tower

Time limit: 2 seconds

Marcell has built a grid of blocks with $R$ rows and $C$ columns. Every block has a lowercase letter written on it.

A contiguous subrectangle of the grid is called a *tower* if it includes all rows of the grid and the letters read left-to-right in each row are the same as the other rows. The *power* of a tower is the number of columns it spans.

What is the maximum power of all towers in the grid?

### Input

The first line of input contains two integers, $R$ ($1 \leq R \leq 2\,000$), which is the number of rows, and $C$ ($1 \leq C \leq 2\,000$), which is the number of columns.

The next $R$ lines of input each contain $C$ lowercase letters. The $j$th letter on the $i$th line is letter at location $(i, j)$ in the grid of blocks.

### Output

If there are no towers, display 0. Otherwise, display the maximum power of all towers in the grid.

| Sample Input 1 | Sample Output 1 |
|---|---|
| 2 3<br>abc<br>xbc | 2 |

| Sample Input 2 | Sample Output 2 |
|---|---|
| 2 3<br>abc<br>xcb | 0 |

| Sample Input 3 | Sample Output 3 |
|---|---|
| 1 4<br>xyfh | 4 |

| Sample Input 4 | Sample Output 4 |
|---|---|
| 3 3<br>abc<br>efg<br>hij | 0 |