Good Matrix

Description

Given a $N \times M$ binary matrix. Please output the size of second large (not strictly) rectangle containing all `"1"`.

By the way, if there exists a second large rectangle containing all `"1"` in a matrix, then we call the matrix `"Good Matrix"`!

Input

The first line of input contains two space-separated integers N and M. Following N lines each contains M characters c_{ij}.

- $1 \leq N, M \leq 1000$
- $N \times M \geq 2$
- $c_{ij} \in$ `"01"`

Output

Output one line containing an integer representing the answer. If there are less than 2 rectangles containning all `"1"`, output `"0"`.

Sample Input 1

```
1 2
01
```

Sample Output 1

```
0
```

Sample Input 2

```
1 3
101
```

Sample Output 2

```
1
```