Amy would like to ask a favor from Captain Holt. She wants to find the ideal hour of the day to do it. So naturally, she observes the captain for n days and makes notes of whether the captain is in a good mood, at each hour of the work shift. (Don't ask how she can deduce the mood of the captain...) She wants to choose a time when the captain was in a good mood every day. Can you help her?

Input

The first line of the input contains n $(1 \le n \le 100)$ – the number of days, and h $(1 \le h \le 20)$ – the length of the captain's working shift in hours. The next n lines contain h numbers, each of which is 0 or 1, depending on whether the captain was in a good mood that hour. 1 means a good mood.

Output

Your program should print a single number, the index of the earliest hour when the captain was in a good mood every day. The hours are indexed from 1. If there is no such hour (for poor Amy), print a 0.

Example

input

```
4 6
0 1 1 0 0 1
1 1 1 0 1 1
1 0 1 0 0 1
1 0 1 1 1 1
```

output

```
3
```

Note

Explanation: the third number of every row is 1, which means the captain was always in a good mood in the 3rd hour. It is also true for the 6th hour, but the 3rd is the earliest one.