

Contest Duration: 2025-04-19(Sat) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250419T2100&p1=248>) - 2025-04-19(Sat) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250419T2240&p1=248>) (local time) (100 minutes)

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F - Path to Integer

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Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 525 points

Problem Statement

There is an $N \times N$ grid. Let cell (i, j) denote the cell in the i -th row from the top and j -th column from the left. Each cell contains a digit from 1 to 9; cell (i, j) contains $A_{i,j}$.

Initially, a token is on cell $(1, 1)$. Let S be an empty string. Repeat the following operation $2N - 1$ times:

- Append to the end of S the digit in the current cell.
- Move the token one cell down or one cell to the right. However, do not move it in the $(2N - 1)$ -th operation.

After $2N - 1$ operations, the token is on cell (N, N) and the length of S is $2N - 1$.

Interpret S as an integer. The score is the remainder when this integer is divided by M .

Find the maximum achievable score.

Constraints

- $1 \leq N \leq 20$
- $2 \leq M \leq 10^9$
- $1 \leq A_{i,j} \leq 9$
- All input values are integers.

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Input

The input is given from Standard Input in the following format:

```
N M
A1,1 A1,2 ... A1,N
A2,1 A2,2 ... A2,N
:
AN,1 AN,2 ... AN,N
```

Output

Print the answer.

Sample Input 1

Copy

```
2 7
1 2
3 1
```

Copy

Sample Output 1

Copy

```
5
```

Copy

There are two ways to move the token:

- Move through $(1, 1), (1, 2), (2, 2)$. Then $S = 121$, and the score is the remainder when 121 is divided by 7 , which is 2 .
- Move through $(1, 1), (2, 1), (2, 2)$. Then $S = 131$, and the score is the remainder when 131 is divided by 7 , which is 5 .

The maximum score is 5 , so print 5 .

Sample Input 2

Copy

```
3 100000
1 2 3
3 5 8
7 1 2
```

Copy

Sample Output 2

Copy

13712

Copy

Sample Input 3

Copy

```
5 402
8 1 3 8 9
8 2 4 1 8
4 1 8 5 9
6 2 1 6 7
6 6 7 7 6
```

Copy

Sample Output 3

Copy

384

Copy

/#telegram)

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