Here Comes John

The city of toyland can be represented as a N*M matrix. Our beloved john rides his car around the town. He starts at (0,0), then goes towards right. Upon reaching a dead end he will always take a right turn. John will never visit a block that he has already visited before. Upon returning home John has forgotten everything that he saw during his drive. Help him by printing the numbers on the blocks of the town in the order that Akhil visited.

But his father decided to teach him lesson because he is forgetting everything. So he asked to print the rotated path instead of direct path.

Input Format

First line contains two integers, N and M. Next N lines contain M integers each, collectively they denote the N*M matrix. Second line contains no.of rotations K

Constraints

1 <= N,M <= 10000

1<=k<=10^9

Output Format

Output N*M rotated integers on one line with a space between every two consecutive integers. These must be the numbers written on the blocks of toyland in order that Noddy visited.

Sample Input 0

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

Sample Output 0

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

Explanation 0

The Question is Self Explanatory