



HOME TOP CATALOG CONTESTS GYM PROBLEMSET GROUPS RATING EDU API CALENDAR HELP

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS HACKS ROOM STANDINGS CUSTOM INVOCATION

## A. Diverse Game

time limit per test: 1 second memory limit per test: 256 megabytes

Petr, watching Sergey's stream, came up with a matrix a, consisting of n rows and m columns (the number in the i-th row and j-th column is denoted as  $a_{i,j}$ ), which contains all integers from 1 to  $n \cdot m$ . But he didn't like the arrangement of the numbers, and now he wants to come up with a new matrix b, consisting of n rows and m columns, which will also contain all integers from n to  $n \cdot m$ , such that for any  $1 \le i \le n$ , it holds that  $a_{i,j} \ne b_{i,j}$ .

You are given the matrix a, construct **any** matrix b that meets Petr's requirements, or determine that it is impossible.

Hurry up! Otherwise, he will donate all his money to the stream in search of an answer to his question.

#### Input

Each test consists of multiple test cases. The first line contains an integer t ( $1 \le t \le 10^3$ ) — the number of test cases. Then follows the description of the test cases.

The first line of each test case contains two integers n and m ( $1 \le n, m \le 10$ ) — the number of rows and columns of matrix a.

The next n lines contain m integers each, describing matrix a. The i-th of these lines contains the elements of matrix  $a_{i,1}, a_{i,2}, \dots, a_{i,m}$  .

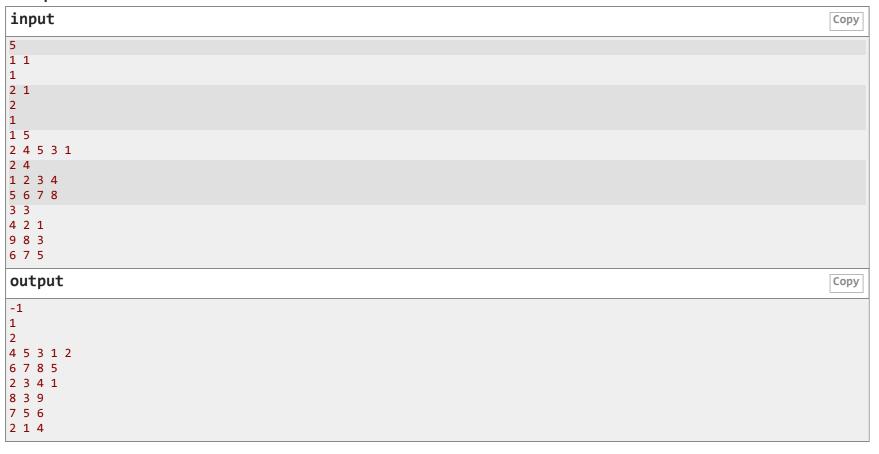
It is guaranteed that all numbers in matrix a are distinct and  $1 \leq a_{i,j} \leq n \cdot m$  .

It is guaranteed that the sum of  $n \cdot m$  over all test cases does not exceed  $5 \cdot 10^4$ .

#### Output

For each test case, output  $n \cdot m$  integers — any suitable matrix b, or -1 if such a matrix does not exist.

#### Example



# Note

In the first test case, there is only one element in the matrix, so matrix b is the only matrix and it does not fit.

In the second test case  $a_{1,1}=2 
eq 1=b_{1,1}$  ,  $a_{2,1}=1 
eq 2=b_{2,1}$  .

### <u>Codeforces Round 959 sponsored</u> <u>by NEAR (Div. 1 + Div. 2)</u>

P

Finished

#### → Practice?

Want to solve the contest problems after the official contest ends? Just register for practice and you will be able to submit solutions.

Register for practice

### → Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

# → Problem tags

constructive algorithms greedy implementation \*800

No tag edit access

 $\times$ 

×

## → Contest materials

- Announcement
- Video Tutorial (en)
- Editorial (en)

Codeforces (c) Copyright 2010-2024 Mike Mirzayanov The only programming contests Web 2.0 platform Server time: Aug/04/2024 05:49:56<sup>UTC</sup> (k2).

Desktop version, switch to mobile version.

Privacy Policy

Supported by



