1330 – Binary Matrix

A binary matrix is an **m x n** matrix consisting of only zeroes and ones. Now you are given **m** integers, **i**th integer indicating the summation of the values of cells in **i**th row. You are also given **n** integers, **i**th integer indicating the summation of the values of cells in **j**th column.

Your task is to generate the binary matrix. As there can be multiple solutions, we want the solution which is lexicographically smallest. To compare two solutions, we first find the cell (topmost, then leftmost) where the solutions differ; then the solution which contains 0 in that cell is lexicographically smaller. So,

001		**001**
010	**<**	**100**
100		**010**

Input

Input starts with an integer **T (≤ 125)**, denoting the number of test cases.

Each case starts with a line containing two integers: **m** and **n (1 ≤ m, n ≤ 50)**. The next line contains **m** integers, separated by a single space, denoting the row sums. The next line contains n integers, separated by spaces, denoting the column sum. All the integers will be between **0** and **50** (inclusive).

Output

For each case, print the case number first. Then if there is no solution, then print **'impossible'** on the same line. Otherwise, from the next line, print **m** lines each having **n** characters denoting the binary matrix as stated above.

Sample Input	Output for Sample Input
5 3 3 1 1 1 1 1 1 3 3 1 1 2 2 2 1 2 3 30 30 30 20 10 2 9 5 5 1 1 2 1 1 1 1 1 1 3 3 1 2 3 3 2 1	Case 1: 001 010 100 Case 2: impossible Case 3: impossible Case 4: 001001111 111110000 Case 5: 100 110 111