

Matrix

Jojo has a matrix n x n. He wants to know what is the largest number for every row and column.

Format Input

The input begins with a single positive integer T on a line by itself indicating the number of test cases. In each test case, there is a positive integer N indicating the size of the matrix. This is followed by N^2 integers separated by white-space (newlines and spaces). These N^2 integers make up the array in row-major order(i.e., all numbers on the first row, left-to-right, then all numbers on the second row, left-to-right, etc). N may be as large as 100. The numbers in the array will be in the range [-127,127].

Format Output

For each test case, you should output the case number starting from 1. The next line should be "Row:" followed by the largest number for every row, then "Col:" followed by the largest number for every column.

Constraints

1 <= N <= 100 -127 <= A_{ii} <= 127

Sample Input 1	Sample Output 1
2	Case #1:
3	Row: 3 6 8
1 2 3	Col : 8 6 4
5 6 4	Case #2:
8 1 3	Row : 1 1
2	Col : 1 1
1 1	
1 1	