时间限制：C/C++/Rust/Pascal 8秒，其他语言16秒
空间限制：C/C++/Rust/Pascal 1024 M，其他语言2048 M
Special Judge, 64bit IO Format: %lld

题目描述

There is a grid with n rows and n columns ($3 \le n \le 200$). For $1 \le i, j \le n$, there is an undirected edge between the cell in the i-th row and j-th column and the cell in the i-th row and $(j+1)$-th column (the $(n+1)$-th column is considered as the 1-st column), with a weight of either 1 or 2. For $1 \le i < n$ and $1 \le j \le n$, there is an undirected edge between the cell in the i-th row and j-th column and the cell in the $(i+1)$-th row and j-th column, also with a weight of either 1 or 2.

For $1 \le i \le n$, find the shortest path length from the cell in the 1-st row and i-th column to the cell in the n-th row and i-th column, passing through each column at least once.

输入描述:

The first line contains a positive integer T representing the number of test cases. The sum of n across all test cases does not exceed 200.

For each test case, the first line contains a positive integer n.

The next n lines each contain n integers, where the j-th integer of the i-th line represents the weight of the edge between the cell in the i-th row and j-th column and the cell in the i-th row and $(j+1)$-th column.

The following $n-1$ lines each contain n integers, where the j-th integer of the i-th line represents the weight of the edge between the cell in the i-th row and j-th column and the cell in the $(i+1)$-th row and j-th column.

输出描述:

For each test, output a total of n lines, where the i-th line contains a single integer representing the shortest path length from the cell in the 1-st row and i-th column to the cell in the n-th row and i-th column, passing through each column at least once.

示例1

输入 复制

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2
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C++（clang++18）

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ACM模
请通过
入输出
出描述

运行结果 自测