Diagonal sum

Given a square matrix of size $M \times M$. Your task is to calculate the sum of its diagonals.

Input:

The first line of input contains an integer T denoting the number of test cases. Then T test cases follow. First line of each test case contains a single integer M denoting the size of the square matrix. The next line contains M*M space separated values of the matrix A.

Output:

For each test case in a new line print the sum of diagonals of the matrix.

Constraints:

 $1 \le T \le 20$ $2 \le N \le 10$ $1 \le A[i] \le 20$

Example:

Input:

1 3 1 1 1 1 1 1 1 1 1

Output:

6