



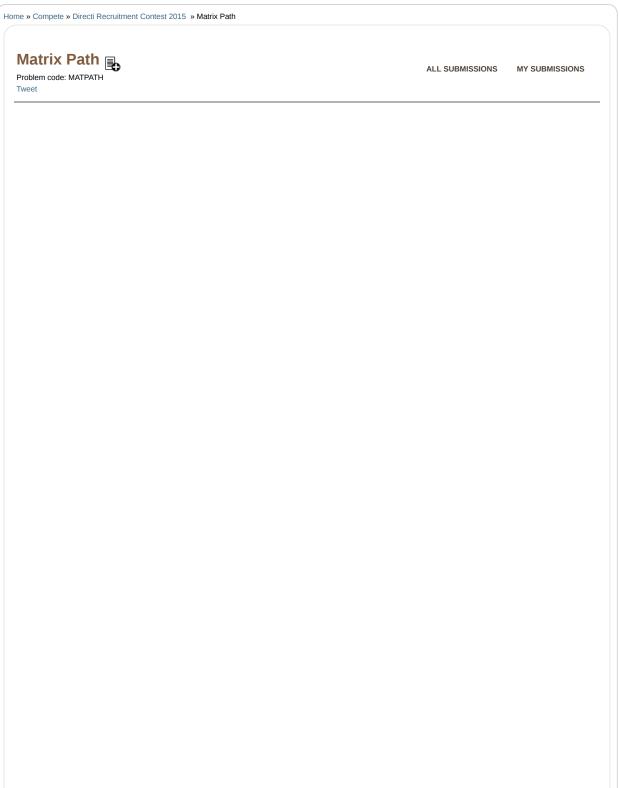








PRACTICE COMPETE DISCUSS COMMUNITY HELP ABOUT



You are given a square matrix of integers. The cost of travelling from a cell A to cell B is the sum of numbers in all the cells which lie on the path between A and B, inclusive.

You need to travel from the top left cell to the bottom right cell, and back, minimizing the total cost of travel, subject to the following conditions:

- 1) You cannot use squares on the leading diagonal of the matrix (Apart from the top left and the bottom right cells.)
- 2) When travelling to the bottom right corner, you may only move rightwards or downwards. Similarly, while travelling back to the top left corner, you may move only leftwards or upwards.
- 3) Your first move while going from top left to bottom right should be rightwards. Similarly, your first move while going from bottom right to top left should be leftwards.

Input

The first line of input consists of a single integer T, the number of test cases. T Test cases follow. Each test case contains a single integer N, the number of rows in the matrix, followed by N lines, each containing N integers.

Output

For each test case, output on a single line the minimum cost of travelling from the top left corner to the bottom right corner, and back, subject to the constraints mentioned in the problem statement.

Constraints

1<=T<=50 2<=N<=100

Each member of the matrix, as well as the solution, will fit in a 32 bit unsigned integer.

Sample Input

Sample Output

39 62

Explanation

In the first test case, there is exactly one path available. The solution is 4 + 10 + 6 + 5 + 8 + 6 - 5 + 1 + 4 = 39.

In the second case, we get 5->11->4->6->3->8->8->2->3->1->5, leading to a total of 62.

Note that you cannot use the cells of the leading diagonal in your path, apart from the top left and the bottom right cells.

Author:	directi_campus
Tags:	directi_campus
Date Added:	5-08-2012
Time Limit:	20 sec
Source Limit:	50000 Bytes
Languages:	ADA, ASM, BASH, BF, C, C99 strict, CAML, CLOJ, CLPS, CPP 4.3.2, CPP 4.9.2, CPP14, CS2, D, ERL, FORT, FS, GO, HASK, ICK, ICON, JAR, JAVA, JS, LISP clisp, LISP sbcl, LUA, NEM, NICE, NODEJS, PAS fpc, PAS gpc, PERL, PERL6, PHP, PIKE, PRLG, PYTH, PYTH 3.1.2, RUBY, SCALA, SCM guile, SCM qobi, ST, TCL, TEXT, WSPC

SUCCESSFUL SUBMISSIONS

±

Comments >

CodeChef is a non-commercial competitive programming community

About CodeChef | About Directi | CEO's Corner | C-Programming | Programming Languages | Contact Us

Directi

© 2009 Directi Group . All Rights Reserved. CodeChef uses SPOJ © by Sphere Research Labs In order to report copyright violations of any kind, send in an email to copyright@codechef.com

The time now is: 05:54:51 PM

CodeChef - A Platform for Aspiring Programmers

CodeChef was created as a platform to help programmers make it big in the world of algorithms, **computer programming** and **programming contests**. At CodeChef we work hard to revive the geek in you by hosting a **programming contest** at the start of the month and another smaller programming challenge in the middle of the month. We also aim to have training sessions and discussions related to **algorithms, binary search**, technicalities like **array size** and the likes. Apart from providing a platform for **programming competitions**, CodeChef also has various algorithm tutorials and forum discussions to help those who are new to the world of **computer programming**.

Practice Section - A Place to hone your 'Computer Programming Skills'

Try your hand at one of our many practice problems and submit your solution in a language of your choice. Our **programming contest** judge accepts solutions in over 35+ programming languages. Preparing for coding contests were never this much fun! Receive points, and move up through the CodeChef ranks. Use our practice section to better prepare yourself for the multiple **programming challenges** that take place through-out the month on CodeChef.

Compete - Monthly Programming Contests and Cook-offs

Here is where you can show off your **computer programming** skills. Take part in our 10 day long monthly **coding contest** and the shorter format Cook-off **coding contest**. Put yourself up for recognition and win great prizes. Our **programming contests** have prizes worth up to INR 20,000 (for Indian Community), \$700 (for Global Community) and lots more CodeChef goodies up for grabs.

Programming Tools	Practice Problems	<u>Initiatives</u>
Online IDE	Easy	Go for Gold
Upcoming Coding Contests	<u>Medium</u>	CodeChef for Schools
Contest Hosting	<u>Hard</u>	Campus Chapters
Problem Setting	<u>Challenge</u>	
CodeChef Tutorials	Peer	
CodeChef Wiki	School	
	FAQ's	