

**STA Online Computer Programming Contest (DWITE)
December 2003**

Problem 3

MONEY PRIZE II

A local radio station, COOL-FM (that's Cool with a "C"), recently awarded to a lucky couple, the prize of walking through a giant-sized square chessboard with money prizes at each of the squares on the chessboard. The lucky couple, had to start at the lower left corner and move to the upper right corner, by taking steps either to the right or above (moving to the left, down or on a diagonal was not allowed). Each individual of the couple could take a different route through the chessboard. The lucky couple claimed each of the money prizes at each of the squares they stepped on. Of course, if the prize money was already taken by one of the individuals of the couple, it would not be available for the second individual.

Your job is to find the largest sum of money that the couple could win.

The size of the square chessboard for this problem need not be 8 by 8.

The input file (DATA3) will have 5 sets of data. The first line of each set will contain an integer, n , that represents the dimensions of the square chessboard, $2 \leq n \leq 10$. The next n lines will each contain n integers, A . Each integer A , represents the amount of money at that location on the chessboard, $0 \leq A \leq 1053$. There will be at least one $A > 0$. These integers will be separated by a single space. The first number in the n^{th} line would be the starting point for the lucky listener. The n^{th} number in the first line would be the ending point.

The output file (OUT3) will contain five lines of data, each representing the largest sum of money (as an integer) that would be obtained by the couple in each of the sets of data.

Sample Input (two sets of data only)

```
3
20 0 60
0 30 40
20 10 0
4
300 100 100 100
200 100 200 100
100 100 0 200
100 0 100 100
```

Sample Output

```
180
1500
```