Project Euler #82: Path sum: three ways

Problem Statement

This problem is a programming version of Problem 82 from projecteuler.net

The minimal path sum in the 5×5 matrix below, by starting in any cell in the left column and finishing in any cell in the right column, and only moving up, down, and right, is indicated in bold the sum is equal to 994.

$$\begin{pmatrix} 131 & 673 & 234 & 103 & 18 \\ 201 & 96 & 342 & 965 & 150 \\ 630 & 803 & 746 & 422 & 111 \\ 537 & 699 & 497 & 121 & 956 \\ 805 & 732 & 524 & 37 & 331 \end{pmatrix}$$

Find the minimum path sum in given matrix.

Input Format

Each testcase begins with an integer N followed by N lines containing the description of the matrix.

Constraints

$1 \leq N \leq 1000$
$1 \leq values\ of\ elements\ in\ matrix \leq 10^9$

Output Format

A single line for each testcase containing the value of the minimal path sum.

Sample Input

```
5
131 673 234 103 18
201 96 342 965 150
630 803 746 422 111
537 699 497 121 956
805 732 524 37 331
```

Sample Output

```
994
```

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