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There is an $n \times n$ chessboard in which each square has some non-negative amount of coins placed on it. More precisely, the square at coordinates (i, j) with $i, j \in \{1, \dots, n\}$ has $c_{i,j} \in \mathbb{N}$ one-dollar coins placed on it.

Design an algorithm that, given n and the amount of coins $c_{i,j}$ on each square (i,j) , returns the maximum amount of dollars that you can collect.

Output. The output consists of T lines. The i -th line is the answer to the i -th test-case and contains an integer corresponding to the maximum amount of dollars that can be collected.

Example.

Instance

2	1	0	5
0	0	3	0
6	0	8	0
0	4	2	1

Solution



1				
4				
2	1	0	5	
0	0	3	0	
6	0	8	0	
0	4	2	1	

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1