FLAG HOISTING

Problem:

Consider two large towers of the same height, each having same number of floors in it, each floor of one building being connected to the same floor of another building via a pathway. Travelling from one floor to another in each respective building takes **A[i]** and **B[i]** time respectively, but travelling from one building to another through the small pathway takes no time.

On the occasion of the 70^{th} Republic Day the owner of these two buildings wants to hoist the flag on the top of any one of the two buildings. Being a busy person he wants to get to the rooftop of any one building in the minimum time possible.

He is currently on the ground floor. Help him to the find the minimum possible time in which he can reach the top of any one building.

Input:

The first line of the input contains a single integer **T** denoting the number of test cases.

The first line of each test case contains a single integer N denoting the length of the two buildings.

The next two lines of the test case contains time it takes to get from one floor to another in each building **A[i], B[i]** respectively.

Output:

Print the minimum possible time required to reach the top of any one building in order to hoist the flag.

Constraints:

$1 \leq T \leq 100$

$1 \leq N \leq 10^3$

$1 \leq A[i], B[i] \leq 100$

Time Limit:

1 sec

Example:

Input:

2
1 2 3
1 2 3

Output:-

7

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