

# Bonding Value

## Assignment 3

Computer Programming

Due date: \_\_\_\_\_

**Problem:** Manchit Sir and Bond Ma'am have one array of size  $n$  each. After a-lot of talks they decided to find their "Bonding Value". We find the bonding value by doing the following things -

Choose a sub-array from the first array and replace it with corresponding sub-array from the second array. Now find the maximum consecutive sub-array sum in the modified sub-array. The maximum such value is known as the Bonding value. Help them in finding their bonding value and output it.

**Note** - You can only chose and replace at max once.

### Input

First line of input contains an integer  $n$ , size of array. Second line contains  $n$  integers  $A_1, A_2 \dots A_n$ . Manchit's array. Third line also contains  $n$  integers  $B_1, B_2 \dots B_n$ . Bond Ma'am's array.

### Output

Single integer which is the bonding value of two array.

### Constraints

$1 \leq n \leq 100000$

$0 \leq |A_i|, |B_i| \leq 1000000$

### Sample Test Case

Input	Output
2 4 -2 1 2	6

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Input	Output
8 -2 2 -3 1 -1 -1 1 0 4 -3 3 3 2 -5 3 4	12

### Explanation

<Take 2nd element from first array and 3rd,4th,5th,6th,7th and 8th element from 2nd array ,  $2 + 3 + 3 + 2 - 5 + 3 + 4 = 12$

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