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Coding Arena

<C✶deVita/>
the TCS Coding Contest

Time Left

04 **54** **26**
hr   min   sec

| A | B | C | D | E | F | G | H |

Rules & Regulations

Launch Code Editor

Problem : Collecting Candies

Statement

Krishna loves candies a lot, so whenever he gets them, he stores them so that he can eat them later whenever he wants to.

He has recently received N boxes of candies each containing C_i candies where C_i represents the total number of candies in the ith box. Krishna wants to store them in a single box. The only constraint is that he can choose any two boxes and store their joint contents in an empty box only. Assume that there are infinite number of empty boxes available.

At a time he can pick up any two boxes for transferring and if both the boxes say contain X and Y number of candies respectively, then it takes him exactly X+Y seconds of time. As he is to eager to collect all of them he has approached you to tell him the minimum time in which all the candies can be collected.

Input Format:

1. First line of input is number of test case T
2. Each test case is comprised of two inputs
    a. First input of a test case is the number of boxes N
    b. Second input is N integers delimited by whitespace denoting number of candies in each box

Output Format:

Print minimum time required, in seconds, for each of the test case. Print each output on a new line.

Constraints:

1. $1 \leq T \leq 10$
2. $1 \leq N \leq 10000$
3. $1 \leq$ [Candies in each box] ≤ 100009

Sample Input and Output

SNo.	Input	Output	Explaination
1	1 4 1 2 3 4	19	4 boxes, each containing 1, 2, 3 and 4 candies respectively. Adding 1 + 2 in a new box takes 3 seconds Adding 3 + 3 in a new box takes 6 seconds Adding 4 + 6 in a new box takes 10 seconds Hence total time taken is 19 seconds. There could be other combinations also, but overall time does not go below 19 seconds.
2	1 5 1 2 3 4 5	33	5 boxes, each containing 1, 2, 3, 4 and 5 candies respectively. Adding 1 + 2 in a new box takes 3 seconds Adding 3 + 3 in a new box takes 6 seconds Adding 4 + 5 in a new box takes 9 seconds Adding 6 + 9 in a new box takes 15 seconds Hence total time taken is 33 seconds. There could be other combinations also, but overall time does not go below 33 seconds.

Note:

Please do not use package and namespace in your code. For object oriented languages your code should be written in one class.

Note:

Participants submitting solutions in C language should not use functions from <conio.h> / <process.h> as these files do not exist in gcc

Note:

For C and C++, return type of main() function should be int.

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Submit Answer

☐ I , **ABHISHEK TATIKELLA** confirm that the answer submitted is my own.

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