Problem D: Cut the stick

Time Limit: 1 Sec Memory Limit: 128 MB
Submit: 556 Solved: 218
[Submit (submitpage.php?cid=1058&pid=3&langmask=0)][Status (problemstatus.php?id=1280)][Web Board (bbs.php?pid=1280&cid=1058)]

Description

Lanran wants to cut one stick with length L into exactly N sticks with length $L_i (i = 1, 2...N)$, so $L = \sum L_i$. However, the cost to cut one stick in to two pieces is the length of the stick, that means cutting a stick with length x will cost x. Now he wants to know the minimal cost if he cuts stick optimally to get N sticks.

Input

The first line will be an integer $T (1 \le T \le 100)$, which is the number of test cases.
For each test data:
The first line contains an integer N ($1 \le N \le 10^3$) — the number of sticks Lanran needs to get.
Then the next one line contains N integers, the i-th integer $L_i (1 \le p_i \le 10^5)$ indicates the length of N sticks Lanran wants to get.

Output

For each case, contains one line, print the minimal minimal cost.

Sample Input

```
1
4
1 4 2 6
```

Sample Output

```
23
```

HINT

[Submit (submitpage.php?cid=1058&pid=3&langmask=0)][Status (problemstatus.php?id=1280)]