

# Solving Problems

**Gib Problem (Tell me the problem in [Dudu of English](#))** - Dudu 2014, 2015, 2016, 2017 (and certainly 2018, ...)

Dudu is an avid competitive programmer. In several competitions the sum of the cumulative times it takes a team to solve the problems is used as a tie breaking rule.

To be precise, suppose that Dudu's team solves their first problem **25** minutes after the beginning of the contest, and their second problem **10** minutes later (i.e. **35** minutes after the beginning of the contest). Their total cumulative time so far is **25 + 35 = 60**.

Dudu will face several contests in the future. Given the number of members in Dudu's team and the time it takes for each problem to be solved, you should help Dudu's team to solve all the problems while minimizing the total sum of cumulative times.



^^Dudu solving problems in Marrakesh^^

## Input Format

The input will start with **2** integers  $N$ ,  $M$  representing the number of members in Dudu's team and the number of problems to be solved respectively ( $N = 1$  means Dudu is competing by himself).

These two integers will be followed by  $M$  integers representing the time it takes a member of Dudu's team to solve each problem. You can assume the time it takes to solve one problem is positive and not more than **10000**.

## Constraints

$$1 \leq N \leq 10000$$
$$1 \leq M \leq 10000$$

## Output Format

The output should be formed by a single number: The minimum total cumulative time possible to solve all the problems.

**Sample Input**

2 5 4 2 6 1 7

**Sample Output**

28

**Explanation**

One optimal way is:

Dudu works on problems with duration 1, 4 and 6 in this order (cumulative time =  $1 + 5 + 11 = 17$ )

Dudu teammate works on problems with duration 2 and 7 (cumulative time =  $2 + 9 = 11$ )

The total cumulative time would be  $11 + 17 = 28$