

## Problem C: Carlos the Card Collector

Carlos collects trading cards. He loves collecting as many as he can. He doesn't really care about a particular kind of trading card. He loves them all. Sports cards, comic cards, game cards, whatever; he just wants *lots* of cards.

Carlos attends a trading card show where vendors are selling all sorts of cards and he wants to buy exactly  $N$  cards. He doesn't have a lot of money, so he's only interested in buying as many cards as he can with the money he has.

Given the int  $N$  and a list of `int[] cardPrices`, determine the smallest amount that Carlos can spend to buy  $N$  cards.

Constraints:

- **cardPrices** will contain between 1 and 1,000 elements, inclusive.
- Each element of **cardPrices** will be between 1 and 1,000, inclusive.
- **N** will be between 1 and the number of elements in **cardPrices**, inclusive

Input will come in the form of a series of single lines, each starting with an integer, the number of cards requested, and then an array of the form {element1, element2, ... elementLast}

**Single Line Examples (Your program should be able to handle an arbitrary number of input lines and produce the same number of output integers, each on its own line)**

0) 2, {1, 5, 3, 4}

Returns: 4

Carlos must pay for exactly two out of the four trading cards. The cheapest possibility is to pay 1 for one card and then 3 for another. The total cost is  $1+3 = 4$ .

1) 3, {1, 5, 4}

Returns: 10

Carlos has no choice here. He has to pay for all three cards, which costs  $1+5+4 = 10$ .

2) 1, {2, 2, 4, 5, 3}

Returns: 2

Among all 5 possible cards he can buy, the cheapest one is either the card #0 or card #1 (0-based).

3) 39, {973, 793, 722, 573, 521, 568, 845, 674, 595, 310, 284, 794, 913, 93, 129, 758, 108, 433, 181, 163, 96, 932, 703, 989, 884, 420, 615, 991, 364, 657, 421, 336, 801, 142, 908, 321, 709, 752, 346, 656, 413, 629, 801}

Returns: 20431

The appearance of line wrapping on the input is purely for readability. The input will always be one or more single lines.