**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.