Sum or subtract numbers from an input list — X34211_en

Given a list of n integers $v_0, \ldots, v_{n-1}$, and a string s of length n and with characters '+' and '-', we need to print the result of summing or subtracting each v_i depending on whether the i'th character of s is '+' or '-'.

Input

The input begins with a positive natural number n on a first line. On a second line there are n integers $v_0, \ldots, v_n$. Afterwards, there's a sequence of lines, each with a string s of length n and characters '+' or '-'.

Output

For each string s, the program has to print $\left(\sum_{i \in \{0 \ldots n-1\} \wedge s[i]='+'} v_i\right) - \left(\sum_{i \in \{0 \ldots n-1\} \wedge s[i]='-'} v_i\right)$

Sample input

```
8
-15 16 -20 3 -13 -1 -14 12
++-+-++-
----+-++
---++++-
--+++-+-
++++-+--
+-+-+--+
---+++-+
-+-+++-+
-+-+--+-
+-----++
-+----+-
---++---
+++-+---
+--+++-+
-+++++++
+++-++-+
-++--+-+
++---+-+
-+-+-+++
+---+-+-
```

Sample output

```
10
2
-18
-56
-2
-40
34
66
42
-2
36
12
-32
4
-2
-10
46
56
64
-52
```

Problem information

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Generation : 2023-11-27 22:26:26

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