

Overview: Add an integer to change the average value of a list of numbers

Description: Woohoo! After the Avengers' resounding success in preventing Loki from enslaving the human race, the government has decided to increase S.H.I.E.L.D.'s funding by Y . There are N S.H.I.E.L.D. agents, and director Nick Fury has been informed that with the new funds, S.H.I.E.L.D. can set aside money for one additional agent, *and* the average S.H.I.E.L.D. agent's salary (including for this new hypothetical agent) can now be X . Unfortunately, he is unable to understand the email that tells him what X is - apparently the email is missing lots of letters. How bizarre.

Fortunately, you are here to help him. Given a list of N integers representing current agent salaries, X , the new average for $N + 1$ agents, can you help Fury figure out what Y is?

Filename: nov23.{java, cpp, c, cc, py}

Input: The first line is an integer X . The second line is integer N . The rest of the lines are the integers in the list; one number per line.

Output: A single integer Y .

Assumptions: N will be less than or equal to 10,000.
 X will be a positive integer that is no larger than one billion.
All other integers will be positive and no larger than 10,000.

Sample
Input #1:

3
2
2
3

Sample
Output #1:

4

Sample
Input #2:

0
3
5
6
7

Sample
Output #2:

-18