

An organization called “Memo” wanted to encourage university students to read English novels. They decided to distribute, for free, novels for each student so that he/she can read them during his/her free time. However, Memo had to respect certain rules.

- The university has N different classes, each having a certain number of students.
- Memo has to allot the same number of novels for each class.
- The number of books given for a certain class must be divisible by the number of students in that class in order to ensure that all students of the same class get the same number of novels.
- All classes must receive the same number of novels.
- Surprisingly, Memo has to pay 1\$ for each single novel distributed in the university.

For example, suppose that the university has 2 classes, the first class has 20 students and the second class has 30 students. Memo can thus choose to give each class 120 books since 120 is divisible by both 20 and 30. Doing so, Memo has to pay 120\$.

Help Memo find out the minimum amount of money to be paid so that novels can be distributed respecting the given list of rules.

Input format:

- An integer N that is inclusively between 1 and 18
- A list of integers where the ith integer represents the number of students in the ith class. It's guaranteed that no class is empty, and that no class contains more than 20 students.

Output format:

Print a single number representing the required answer. It's easy to see that the solution always exists.

Sample Input:

10

1 3 5 7 9 10 1 1 1 1

Sample Output:

6300

Explanation: The smallest number of books that can be given to each class equally such that it's divisible by the number of students in each class is 630. Since we have 10 classes, we will have to distribute in total 6300 books and thus pay 6300 \$.