Kamehameha

You are Kamehameha, emperor of an island kingdom in the Pacific. As you are getting older and older you want to make a will: As you have two children, your kingdom should be split up into two most equal parts. This shall be done by distributing the islands between the two children without splitting an island into two. You know that it is a difficult task to compute the most equal split possible. So instead you are willing to settle for a roughly equal distribution of your kingdom to your children.

Input: The input is specified as follows: The first line contains the number n of islands. Then, each of the following n lines contains an integer a_i, which denotes the area of the i-th island.

Output: Output an integer, which is the larger total area of the islands assigned to one of your children in your solution. This area should not deviate by more than a factor of 1.05 from the larger number in an optimal split.

Sample Input:

```
7
25
25
30
25
25
30
40
```

Sample Output:

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105
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In this example, 100 *is the optimum output (split in* $25 + 25 + 25 + 25$ *and* $30 + 30 + 40$*). The split* $25 + 25 + 25 + 30 = 105$ *vs.* $25 + 30 + 40 = 95$ *would also be allowed because* $1.05 \cdot 100 = 105$*.*