Problem B
Happy Halloween
Time Limit: 1 second

Andy is very happy because he receives so many candies during Halloween.

He has two empty bags and n types of candies. The i^{th} candy type has a_i piece(s). The candies of the same type could be put into either the two bags (bag 1 or bag 2). If the number of candies of the one type is even, Andy can ***also*** split the candies of that type into two equal parts, and each part is put into one bag.

Let S_1 and S_2 be the total candies in bag 1 and bag 2 after Andy has put all of his candies inside. He wonders if there is a way to put those candies in these bags so that the difference of the number of candies among them is minimum, which means $|S_1 - S_2|$ is as small as possible.

Input

The first line contains an integer n – the number of candy types that Andy has ($1 \le n \le 1000$).

The second line contains n natural numbers $a_1, a_2, \ldots, a_n$ where a_i is the number of candies of the i^{th} type. The value of a_i does not exceed 10^5.

Output

Display one number - the value of $\max\{S_1, S_2\}$ when the absolute difference value between S_1 and S_2 is minimized.

Sample Input	Sample Output
3 12 5 3	11
4 1 2 3 4	5