

EXP

1 second 256 MB

You are playing an on-line game consecutively for N days. On the i -th day, you gain an EXP point of X_i units. The game has bonuses for hard-working players. For every 4 days of consecutive playing, the EXP that you get on the 4th day will be doubled, i.e., if you gain an EXP of 150, you will get 300 on that day.

For example of you play the game for 9 days gaining the following EXP points (* indicate the days with bonuses):

1, 2, 3, 4*, 5, 6, 7, 8*, 9

You total EXP is $1 + 2 + 3 + 8 + 5 + 6 + 7 + 16 + 9 = 57$.

Write a program that reads daily EXP and output the total EXP.

Input

The first line of the input contains an integer N ($1 \leq N \leq 1,000$). Each of the next N lines contains an EXP point gain for each day. The total EXP will not exceed 1,000,000,000.

Output

Your program should output the total EXP.

Example 1

Input	Output
9 1 2 3 4 5 6 7 8 9	57

Example 2

Input	Output
4 1 1 1 1	5