

Jumping Machine

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 512 megabytes

Young inventor has created a new jumping machine. In order to test it, he brought it to the testing polygon. The polygon is an infinite square grid.

Initially, the machine is located in the cell $(0, 0)$. The machine has n springs, the i -th spring has the force of l_i and allows the machine to jump l_i cells up or l_i cells to the right. Therefore this spring allows the machine to get from cell (x, y) either to cell $(x + l_i, y)$, or to cell $(x, y + l_i)$. After jumping, the spring is thrown back and cannot be reused. The machine can use the springs in any order.

During the tests the cells, that the machine will fly over, will be stained with machine oil. In order not to clean the grid after himself, the inventor has decided to put a protective mat on each cell the machine could potentially fly over.

Now the inventor is wondering how many protective mats he needs to bring to the test with him.

Input

The first line of input contains n — the number of springs that the machine has ($1 \leq n \leq 100$). The second line contains n integers l_i — the springs forces ($l_i \geq 1$; $1 \leq l_1 + l_2 + \dots + l_n \leq 10^6$).

Output

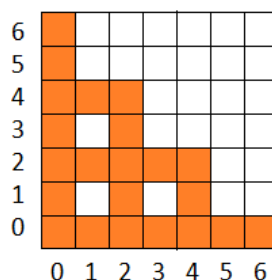
Output a single integer: the number of mats that inventor needs to bring.

Example

standard input	standard output
2 4 2	22

Explanation

All the cells that can get dirty when the machine jumps in the example test are colored orange one the figure below.



Cells that the machine can stain.