



Problem E

Grid Triangle

Time Limit: 0.5 Seconds

A *grid triangle* in the 3-dimensional grid system is a triangle of three integral points including the origin $(0,0,0)$ that satisfy the following property:

There exist three different positive integers X, Y, Z such that for every pair of the three points of the triangle, you can rotate and translate the cuboid of size $X \times Y \times Z$ in parallel with the grid system so that the pair are diagonally opposite (and so the farthest way) vertices of the cuboid.

For instance, the triangle of the three points $(0,0,0), (1,2,3), (-2,3,1)$ is a grid triangle with the cuboid of size $1 \times 2 \times 3$. More specifically, the two points $(1,2,3), (-2,3,1)$ are the diagonally opposite vertices of the cuboid $\{(x, y, z) \mid -2 \leq x \leq 1, 2 \leq y \leq 3, 1 \leq z \leq 3\}$ of size $3 \times 1 \times 2$; the two points $(0,0,0), (1,2,3)$ are the diagonally opposite vertices of the cuboid $\{(x, y, z) \mid 0 \leq x \leq 1, 0 \leq y \leq 2, 0 \leq z \leq 3\}$ of size $1 \times 2 \times 3$; and the two points $(0,0,0), (-2,3,1)$ are the diagonally opposite vertices of the cuboid $\{(x, y, z) \mid -2 \leq x \leq 0, 0 \leq y \leq 3, 0 \leq z \leq 1\}$ of size $2 \times 3 \times 1$. Further, all three cuboids are parallel with the grid system.

Write a program to output the number of grid triangles within a bounded 3-dimensional grid system. The grid system is bounded by three given positive integers, A, B, C , in such a way that all points of grid triangles should be within $\{(x, y, z) \mid -A \leq x \leq A, -B \leq y \leq B, -C \leq z \leq C\}$.

Input

Your program is to read from standard input. The input is exactly one line containing three integers, A, B, C ($1 \leq A, B, C \leq 10,000,000$).

Output

Your program is to write to standard output. Print exactly one line. The line should contain the number of grid triangles in the 3-dimensional grid system bounded by A, B, C .

The following shows sample input and output for three test cases.

Sample Input 1	Output for the Sample Input 1
3 3 3	48
Sample Input 2	Output for the Sample Input 2
3 3 2	16
Sample Input 3	Output for the Sample Input 3
3 2 2	0