

A. Gerald's Hexagon

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Gerald got a very curious hexagon for his birthday. The boy found out that all the angles of the hexagon are equal to 120° . Then he measured the length of its sides, and found that each of them is equal to an integer number of centimeters. There the properties of the hexagon ended and Gerald decided to draw on it.

He painted a few lines, parallel to the sides of the hexagon. The lines split the hexagon into regular triangles with sides of 1 centimeter. Now Gerald wonders how many triangles he has got. But there were so many of them that Gerald lost the track of his counting. Help the boy count the triangles.

Input

The first and the single line of the input contains 6 space-separated integers

a_1, a_2, a_3, a_4, a_5 and a_6 ($1 \leq a_i \leq 1000$) — the lengths of the sides of the hexagons in centimeters in the clockwise order. It is guaranteed that the hexagon with the indicated properties and the exactly such sides exists.

Output

Print a single integer — the number of triangles with the sides of one 1 centimeter, into which the hexagon is split.

Examples

input
1 1 1 1 1 1
output
6
input
1 2 1 2 1 2
output
13

Note

This is what Gerald's hexagon looks like in the first sample:

And that's what it looks like in the second sample:

Codeforces Round #313 (Div. 1)

Finished

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.



Start virtual contest

→ Problem tags

brute force geometry math

No tag edit access

→ Contest materials

- Announcement #1 
- Announcement #2 
- Tutorial 