

A. Parallelepiped

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

You've got a rectangular parallelepiped with integer edge lengths. You know the areas of its three faces that have a common vertex. Your task is to find the sum of lengths of all 12 edges of this parallelepiped.

Input

The first and the single line contains three space-separated integers — the areas of the parallelepiped's faces. The area's values are positive (> 0) and do not exceed 10^4 . It is guaranteed that there exists at least one parallelepiped that satisfies the problem statement.

Output

Print a single number — the sum of all edges of the parallelepiped.

Examples

input
1 1 1
output
12
input
4 6 6
output
28

Note

In the first sample the parallelepiped has sizes $1 \times 1 \times 1$, in the second one — $2 \times 2 \times 3$.

→ Attention

Package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then value 800 ms will be displayed and used to determine the verdict.

Codeforces Round #138 (Div. 2)

Finished

→ Virtual participation

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