

Problem M

Mobile Communication in Flatland

Time limit: 1 second

Memory limit: 1024 megabytes

Problem Description

Our world is spherical, but the world of Flatland is flat! In Flatland, the ground is flat without any curvature, and everywhere has the same height. However, the mobile communication in Flatland and in our world are quite similar. The mobile phone must be in the signal coverage of some base station. Otherwise, the phone cannot communicate with the others.

Mark is a wise Flatlander living in the rural area. He knows there is only one base station in the area where he is living. One day, he finds that the shape of signal coverage of that base station is a ball! Such shape is unusual in Flatland, because a ball is perfectly spherical! Mark wants to figure out the boundary of the signal coverage, but he can only move on the ground. He first moves from his house to the east and finds that his mobile phone is out of service after E kilometers. Then, his mobile phone is also out of service after he moves from his house to the west and the south after W and S kilometers, respectively.

After learning the numbers E , W , and S , Mark says "Ahh! Now I know the signal coverage of the base station!" Mary, Mark's sister, wonders if Mark really knows. She asks Mark "If you move from your house to the north, after how many kilometers, your mobile phone will be out of service?"

Could you compute the answer for Mary to check whether her brother can answer her correctly?

Input Format

For each test case, there are three numbers E , W , and S separated by blanks.

Output Format

Print the answer in one line. The answer can be a fractional number. It is acceptable if the absolute error or the relative error is less than 10^{-6} .

Technical Specification

- $1 \leq E \leq 10^4$
- $1 \leq W \leq 10^4$
- $1 \leq S \leq 10^4$

Sample Input 1

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1 1 1
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Sample Output 1

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1
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