

★ Rating changes for the last round are temporarily rolled back. They will be returned soon.

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C. Triangle Pendant

time limit per test: 1 second
 memory limit per test: 256 megabytes
 input: standard input
 output: standard output



Given a point D at height zero and a triangle $\triangle ABC$ with uniform mass, we use three ropes with length x , y , and z to connect AD , BD , and CD respectively. The mass of the ropes can be ignored. Let the triangle fall naturally and stabilize at the lowest position of the center of gravity. Find the final heights of points A , B , and C .

Input

There are multiple test cases. The first line of the input contains an integer T (about 10^4) indicating the number of test cases. For each test case:

The first and only line contains six integers x , y , z , a , b and c ($1 \leq x, y, z, a, b, c \leq 1000$, $a + b > c$, $a + c > b$, $b + c > a$) indicating the length of three ropes and the length of BC , AC and AB .

You can assume that the solution always exists.

Output

For each test case output one line containing three real numbers indicating the height of points A , B and C .

Your answer will be considered correct if and only if the absolute or relative error does not exceed 10^{-4} .

Example

input	Copy
2	
1 1 1 1 1 1	
2 3 3 1 1 1	
output	Copy
-0.816496580927726 -0.816496580927726 -0.816496580927726	
-2.000000000000000 -2.866025403784439 -2.866025403784439	

The 2021 Sichuan Provincial Collegiate Programming Contest

Finished

Practice



→ About Contest

This contest is prepared by SUA Problem Setter Team (<https://sua.ac/>). The competition is hosted and authorized by Southwest Minzu University.

→ 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 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.

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You can clone this contest to a mashup.

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→ Submit?

Language: GNU G++ 11 5.1.0

Choose file: [浏览...](#) 未选择文件。

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