## Sphere in a tetrahedron

Of course a Sphere Online Judge System is bound to have some tasks about spheres. So here is one. Given the lengths of the edges of a tetrahedron calculate the radius of a sphere inscribed in that tetrahedron (i.e. a sphere tangent to all the faces).

## Input

Number $N$ of test cases in a single line. ( $N<=30$ ) Each of the next $N$ lines consists of 6 integer numbers -- the lengths of the edges of a tetrahedron separated by single spaces. The edges are not longer than 1000 and for the tetrahedron WXYZ , the order of the edges is: $\mathrm{WX}, \mathrm{WY}, \mathrm{WZ}, \mathrm{XY}$, XZ, YZ.

## Output

$N$ lines, each consisting of a real number given with four digits decimal precision equal to the radius of a sphere inscribed in the given tetrahedron.

## Example

## Input:

2
111111
1000999998556

Output:
0.2041
1.4189

