Troubling Triangles

Time limit: 0.6s **Memory limit:** 64M

Having covered addition, Xyene's teacher moves on to something much more challenging - analytical geometry. Once again out of his depth, Xyene approaches you for help with his homework.

For today's homework, Xyene has N ($1 \leq N \leq 200$) triangles. Each triangle is defined by the points X, Y, Z ($0 \leq X \leq Y \leq Z \leq 2^{16}$). His task is to calculate both the area (A) and perimeter (P) of the triangle XYZ. A difficult task indeed, but thankfully he has you to help! Do Xyene's homework for him so he doesn't have to.

Input Specification

One line containing N, the number of triangles to follow. The next N lines contain 6 integers separated by single spaces: x, y of each X, Y, Z.

Output Specification

N lines, containing A and P to at least 2 decimal places separated by a single space.

Sample Input

```
1
0 0 0 1 1 1
```

Sample Output

```
0.50 3.41
```