

# Troubling Triangles

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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

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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

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

## Sample Input

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1
0 0 0 1 1 1
```

## Sample Output

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0.50 3.41
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