

Point in tetrahedron

There're given 5 points in 3D coordinates (integers $0 \leq x, y, z < 100$). Their order is arbitrary. 4 of them are the vertices of a tetrahedron whose edges can be of different size. One is lying in this tetrahedron. Find its index (1-5) in the array of points.

Input

In the first line the number T ($T < 100$) of test cases.

Then for each test case 5 lines with the space separated x -, y - and z -coordinates of the 5 points.

Output

For each test case a line with the index of that point which is lying in the tetrahedron formed of the 4 other points.

Example

Input:

```
1
5 72 66
92 23 68
60 60 49
74 78 33
67 76 27
```

Output:

```
3
```