Integral Points

Problem Statement

You are given a triangle where the vertices are $A(x_1, y_1), B(x_2, y_2)$ and $C(x_3, y_3)$. All three vertices have integral coordinates. An integral point is defined as the point with both X and Y coordinates as integers. Cay you find the number of integral points inside the triangle using Pick's theorem?

Input Format

The first line of input contains T i.e. number of test cases.
The next T lines will contain 6 integers $x_1, y_1, x_2, y_2, x_3, y_3$.

Constraints

$1 \leqslant T \leqslant 100$
$0 \leqslant x_1, y_1, x_2, y_2, x_3, y_3 \leqslant 10^9$

Output Format

Print T lines each containing the number of integral points in that triangle.

Sample Input

```
2
0 0 0 2 2 0
0 0 3 0 0 3
```

Sample Output

```
0
1
```

Explanation

In the second test case, $(1, 1)$ is the only integral point inside the triangle.