

Problem A - Arya Stark's Final Assignment

Jagen H'ghar assigned the final assignment to Arya Stark to find reflected points! Arya was very good at math and successfully finished the assignment. Then Jagen H'ghar told her, "Finally a girl is no one". Arya replied, "A girl is Arya Stark of Winterfell and I'm going home." Do you think you are smarter than Arya? If you do, you have to solve the assignment.

Consider two points, $p = (Px, Py)$ and $q = (Qx, Qy)$. We consider the inversion or [point reflection](#), $r = (Rx, Ry)$, of point p across point q to be a 180° rotation of point p around q .

Given n sets of points p and q , find r for each pair of points and print two space-separated integers denoting the respective values of Rx and Ry on a new line.

Input Format

The first line contains an integer, n , denoting the number of sets of points.

Each of the n subsequent lines contains four space-separated integers describing the respective values of Px , Py , Qx and Qy defining points $p = (Px, Py)$ and $q = (Qx, Qy)$.

Constraints

- $1 \leq n \leq 15$
- $-100 \leq Px, Py, Qx, Qy \leq 100$

Output Format

For each pair of points p and q , print the corresponding respective values of Rx and Ry as two space-separated integers on a new line.

Sample Input

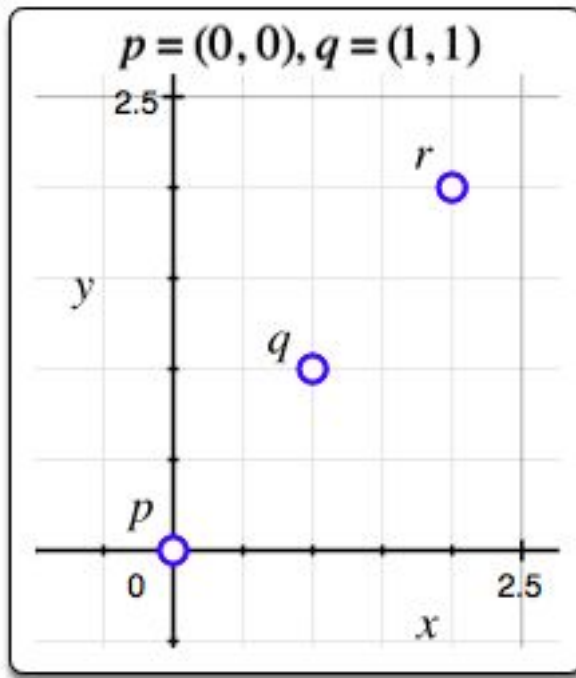
```
2
0 0 1 1
1 1 2 2
```

Sample Output

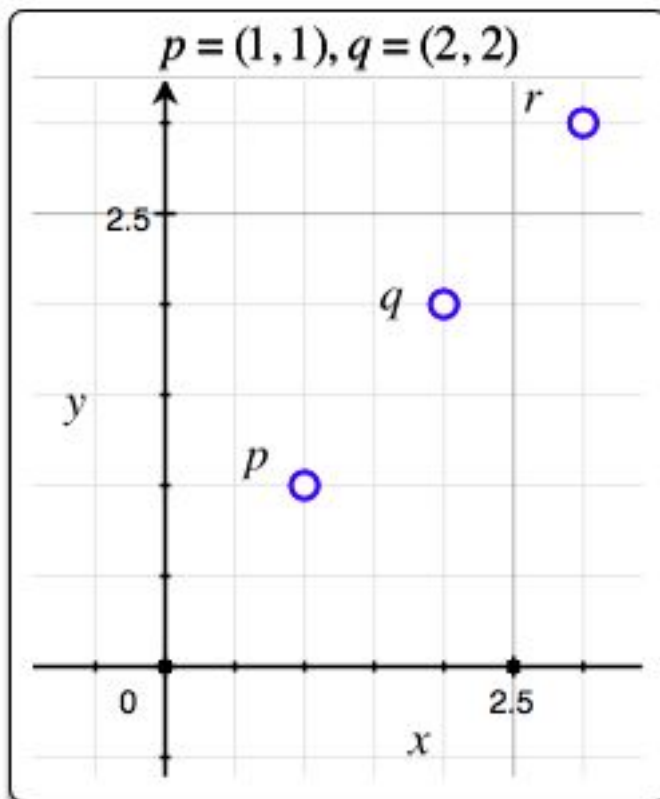
```
2 2
3 3
```

Explanation

The graphs below depict points p , q , and r for the $n = 2$ points given as *Sample Input*:



- 1.
2. Thus, we print **Rx** and **Ry** as 2 2 on a new line.



- 3.
4. Thus, we print **Rx** and **Ry** as 3 3 on a new line.