Find the Point

by HackerRank

Problem Submissions Leaderboard Discussions Editorial

Consider two points, $p = (p_x, p_y)$ and $q = (q_x, q_y)$. We consider the inversion or point reflection, $r = (r_x, r_y)$, 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 r_x and r_y 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 p_x, p_y, q_x, and q_y defining points $p = (p_x, p_y)$ and $q = (q_x, q_y)$.

Constraints

- $1 \leq n \leq 15$
- $-100 \leq p_x, p_y, q_x, q_y \leq 100$

Output Format

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

Sample Input

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

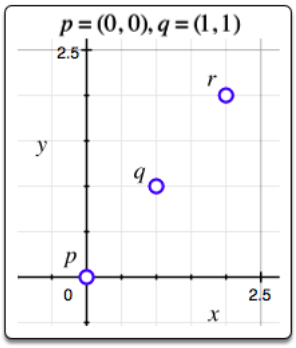
Sample Output

```
2 2
3 3
```

Explanation

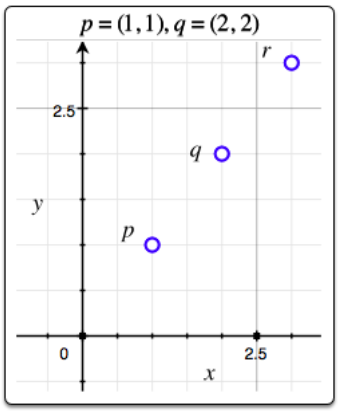
The graphs below depict points p, q, and r for the $n = 2$ points given as *Sample Input*:

1.



Thus, we print r_x and r_y as `2 2` on a new line.

2.



Thus, we print r_x and r_y as `3 3` on a new line.

Submissions: 31899
Max Score: 5
Difficulty: Easy

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More

Current Buffer (saved locally, editable) C#

```
using System;
using System.Collections.Generic;
using System.IO;
class Solution {
    static void Main(String[] args) {
        /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution
*/

        int n = int.Parse(Console.ReadLine());

            while (n-- > 0)
            {

                //int[] a = { 0, 0, 1, 1};
                //px py qx qy
                //int[] b = { 1, 1, 2, 2 };

                int[] a = Array.ConvertAll(Console.ReadLine().Split(' '), e => int.Parse(e));


                int px = a[0];
                int py = a[1];
```

```
22                int qx = a[2];
23                int qy = a[3];
24
25                int dif_x = qx - px;
26                int dif_y = qy - py;
27
28                Console.WriteLine((dif_x+qx) + " " + (dif_y + qy));
29
30
31            }
32
33    }
34 }
```

Line: 31 Col: 14

Upload Code as File Test against custom input Run Code Submit Code

Congrats, you solved this challenge!

✔ Test Case #0 ✔ Test Case #1

Next Challenge