Good Point

The scoring system for this challenge is binary. Your score is zero unless you pass all tests.

Given n *strictly convex* simple polygons and m ellipses on a plane, find any point lying in their intersection. Then print two lines of output, where the first line contains the point's x coordinate and the second line contains its y coordinate. The point lying on the boundary of an ellipse or polygon is considered to be an *inner* point.

Input Format

The first line contains an integer, n, denoting the number of polygons.
The next set of lines defines n polygons, where each polygon i is described as follows:

- The first line contains an integer, v_i, denoting the number of vertices in polygon i.
- Each of the v_i subsequent lines contains two space-separated integers denoting the respective x and y coordinates for one of polygon i's vertices. The list of vertices is given in *counterclockwise* order.

The next line contains an integer, m, denoting the number of ellipses.
Each of the m subsequent lines contains five space-separated integers denoting the respective values of x_1, y_1, x_2, y_2, and a, which are the coordinates of the two focal points and the semi-major-axis for an Ellipse.

Constraints

- $1 \leq n \leq 500$
- $3 \leq v_i \leq 1500$
- $3 \leq \sum_{i=0}^{n-1} v_i \leq 1500$
- $1 \leq m \leq 1500$
- The coordinates of points are integers in the inclusive range $[-10^4, 10^4]$.
- All semi-major-axes are integers $\leq 10^4$.
- It's guaranteed that a solution exists.
- This challenge has binary scoring.

Output Format

Print two lines describing an (x, y) point inside the intersection. The first line must be a real number denoting the point's x coordinate, and the second line must be a real number denoting its y coordinate. Your answer is considered to be correct if there is a point, (x_0, y_0), inside the intersection such that the distance between (x, y) and (x_0, y_0) is *at most* 10^{-4}.

Sample Input

```
2
4
0 0
2 0
2 1
0 1
3
-1 -1
5 1
0 5
1
```

```
1 2 1 4 2
```

Sample Output

```
0.999998
1
```

Explanation

The intersection consists of only one point: $(1, 1)$. As its distance to $(0.999998, 1)$ is $\leq 10^{-4}$, this is a correct answer. Thus, we print the x coordinate, 0.999998, on the first line and the y coordinate, 1, on the second line.