```
import java.util.ArrayList;
import java.util.List;
import java.util.Scanner;

public class HexagonalGrid {
    static class Hex {
        int q;
        int r;

        public Hex(int q, int r) {
            this.q = q;
            this.r = r;
        }

        public int distanceTo(Hex other) {
            return (Math.abs(this.q - other.q) + Math.abs(this.r - other.r)) / 2;
        }

        @Override
        public String toString() {
            return "Hex{" + "q=" + q + ", r=" + r + '}';
        }
    }

    static class HexMap {
        List<Hex> hexes;
```

```
    public HexMap() {
        this.hexes = new ArrayList<>();
    }

    public void addHex(Hex hex) {
        hexes.add(hex);
    }

    public List<Hex> findIntersection(List<Hex> region1, List<Hex> region2) {
        List<Hex> intersection = new ArrayList<>();
        for (Hex hex1 : region1) {
            for (Hex hex2 : region2) {
                if (hex1.q == hex2.q && hex1.r == hex2.r) {
                    intersection.add(hex1);
                }
            }
        }
        return intersection;
    }
}

public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);

    System.out.println("Enter the number of hexes in the map:");
    int mapSize = scanner.nextInt();
```

```
HexMap map = new HexMap();

System.out.println("Enter the number of cells with radar responses:");
int radarCount = scanner.nextInt();

List<Hex> radarRegions = new ArrayList<>();
System.out.println("Enter the coordinates (q, r) for radar responses:");
for (int i = 0; i < radarCount; i++) {
   int q = scanner.nextInt();
   int r = scanner.nextInt();
   radarRegions.add(new Hex(q, r));
}

System.out.println("Enter the number of cells in another region for intersection:");
int otherRegionCount = scanner.nextInt();
List<Hex> otherRegion = new ArrayList<>();
System.out.println("Enter the coordinates (q, r) for the other region:");
for (int i = 0; i < otherRegionCount; i++) {
   int q = scanner.nextInt();
   int r = scanner.nextInt();
   otherRegion.add(new Hex(q, r));
}

List<Hex> intersection = map.findIntersection(radarRegions, otherRegion);

System.out.println("Number of cells in the intersection: " + intersection.size());
System.out.println("Coordinates of the intersection:");
```

```
        for (Hex hex : intersection) {
            System.out.println(hex);
        }

        scanner.close();
    }
}
```