Latin squares X30739_en

Input

The first line is an array representation of a Latin square of order n, followed by other lines that represent nxn matrices with the same set of symbols.

Output

The output is the list of arrays being orthogonal Latin squares for the provided in the first line of the input. In this case, those in lines 2 and 3, since 4 is not a Latin square and 5 is not orthogonal.

Sample input 1

```
{(1,1,A),(1,2,B),(1,3,C),(2,1,C),(2,2,A),(2,3,B),(3,1,B),(3,2,C),(3,3,A)}
{ (1,1,A),(1,2,B),(1,3,C),(2,1,B),(2,2,C),(2,3,A),(3,1,C),(3,2,A),(3,3,B)}
{ (1,1,B),(1,2,C),(1,3,A),(2,1,C),(2,2,A),(2,3,B),(3,1,A),(3,2,B),(3,3,C) }
{ (1,1,A),(1,2,A),(1,3,A),(2,1,B),(2,2,C),(2,3,A),(3,1,C),(3,2,A),(3,3,B) }
{ (1,1,B),(1,2,A),(1,3,C),(2,1,C),(2,2,B),(2,3,A),(3,1,A),(3,2,C),(3,3,B) }
```

Sample output 1

```
(2,3,B),(3,1,A),(3,2,B),(3,3,C) }
(2,3,A),(3,1,C),(3,2,A),(3,3,B) }
(2,3,A),(3,1,A),(3,2,C),(3,3,B) }
```

Problem information

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