Latin square P91748_en

A latin square of order n is a matrix $n \times n$ such that in each row and column appears all the numbers between 1 and n. For instance,

$$\begin{pmatrix} 2 & 3 & 1 \\ 1 & 2 & 3 \\ 3 & 1 & 2 \end{pmatrix} \quad \text{and} \quad \begin{pmatrix} 1 & 2 & 3 & 4 \\ 2 & 1 & 4 & 3 \\ 3 & 4 & 1 & 2 \\ 4 & 3 & 2 & 1 \end{pmatrix}$$

are respectively latin squares of order 3 and 4.

Using the declarations

```
typedef vector<int> Row;
typedef vector<Row> Square;
```

write a function

```
bool is_latin (const Square& q);
```

that prints if |q| is a latin square or not.

Precondition

|q| is not empty and really squared. All its numbers are natural.

Observation

You only need to submit the required procedure; your main program will be ignored.

Problem information

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