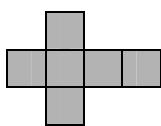


Cube

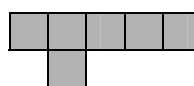
input file: cube.in

Freight in Transit (FIT) has ordered shipping cubes from Online Outrageous Printing Services (OOPS). OOPS takes a 10×10 sheet of cardboard, divided into one hundred 1×1 squares and prints exactly six red squares on the cardboard. Each of these six squares is connected to at least one other along one edge. The remaining 94 squares on the cardboard are colored white.

Unfortunately, OOPS had some quality control problems and not all configurations they deliver to FIT can be folded into a cube. Your job is to write a program to evaluate the red area of the cardboard (after it's been removed from the white sheet) and determine if it can be folded to form a red cube. For example,



Can be folded into a cube.



Cannot be folded into a cube.

Input

The input will consist of one or more data sets, each representing a piece of cardboard with a potential cube. Each piece of cardboard is represented by a 10×10 matrix of characters (10 rows of 10 characters), whose elements are 'R' and '.', which indicate the color of a square as being red or white respectively. Exactly 6 of the squares will be red and all the red squares will share at least one side with a neighboring red square. The end of file will indicate the end of input.

Output

For each piece of input set, print whether the red area can be folded into a red cube using the wording shown in the sample output.

Sample input

```
.....
....R....
....R....
...RRR...
....R....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
....R.....
....R.....
...RR.....
...R.....
...R.....
```

Output (corresponding to sample input)

```
Board 1: red squares can be folded into a cube
Board 2: impossible
```