
Rectangle inclusion**X42222_en**

Write a program that reads a sequence of rectangle pairs, and for each pair, states whether one rectangle fits inside the other. A rectangle $R1$ fits inside another $R2$ if the width of $R1$ is smaller or equal than the width of $R2$, and the same happens with its height. A rectangle $R1$ also may fit inside another $R2$ after rotating $R1$ 90 degrees (i.e. exchanging its width and height)

Input

The input is a sequence of pairs of rectangles. Each rectangle in a pair is given as two integer numbers w,h corresponding to its width and height.

Output

The output is, for each pair of rectangles, whether the first rectangle fits inside the second, the second inside the first, or no fitting is possible. Follow the format of the examples.

Sample input 1

```
2 8 7 1
5 2 3 6
4 5 5 3
2 9 6 1
3 7 6 2
5 3 9 1
3 8 8 3
1 5 6 4
7 1 6 2
```

Sample output 1

```
second inside first
first inside second
second inside first
second inside first
second inside first
no fitting
first inside second
first inside second
no fitting
```

Problem information

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