Point in rectangle X53379_en

Using the definitions

```
class Point:
  """attributes: x, y"""

class Rectangle:
  """attributes: width, height, corner"""
```

write a function

point_in_rectangle(*p*, *r*)

that returns *inside* if a point p is inside a rectangle r, *border* if p lies on the boundary of r, and *outside* if p is outside r. For example, the point $(50, 100)$ is inside a rectangle of width 100, height 200, and lower-left corner $(0, 0)$, the point $(100, 200)$ lies on the boundary of the rectangle, and the point $(200, 300)$ is outside the rectangle.

Input

The input consists of several rectangles (four non-negative integer numbers: the width, the height, and the coordinates of the lower-left corner), each followed by a point (two non-negative integer numbers).

Output

For each rectangle and point, print *inside*, *border*, or *outside* according to the point being inside, on the boundary of, or outside the rectangle.

Sample input

```
100 200 0 0 50 100
100 200 0 0 0 0
100 200 0 0 100 0
100 200 0 0 0 200
100 200 0 0 100 200
100 200 0 0 200 0
100 200 0 0 0 300
100 200 0 0 200 300
```

Sample output

```
inside
border
border
border
border
outside
outside
outside
```

Problem information

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