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## Intervals (1)

P51126\_en

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Write a program that, given two intervals, computes the interval corresponding to their intersection, or tells that it is empty.

### Input

Input consists of four integer numbers  $a_1, b_1, a_2, b_2$  that represent the intervals  $[a_1, b_1]$  and  $[a_2, b_2]$ . Assume  $a_1 \leq b_1$  and  $a_2 \leq b_2$ .

### Output

Print “[]” if their intersection is empty, or “[ $x, y$ ]” if this is their non-empty intersection.

#### Sample input 1

20 30 10 40

#### Sample output 1

[20, 30]

#### Sample input 2

10 20 10 20

#### Sample output 2

[10, 20]

#### Sample input 3

20 30 10 20

#### Sample output 3

[20, 20]

#### Sample input 4

10 20 30 40

#### Sample output 4

[]

### Problem information

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