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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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