
Intervals (1)**P51126_en**

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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