

# Ormuko Test

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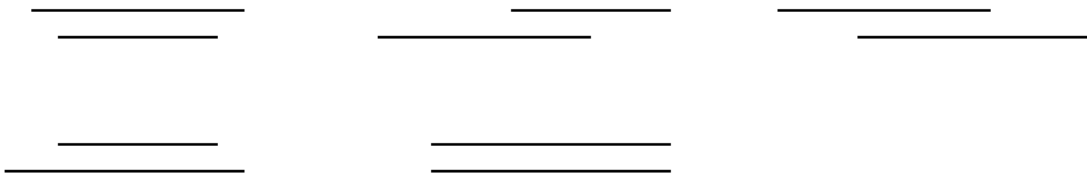
QA and QB in Python, QC in Java

A. Here are all the possible situations of 2 lines.

Not overlap:



Overlap:



It is easier to check the “not overlap” situation. If both endings of one line is smaller than the smaller ending of the other line or is bigger than the bigger ending of the other line, then they must not overlap. Otherwise, they must overlap

**Input:** one line a line, leaving a space between the endings. Press cmd+D in the **third** line to read the input

1 2

2 3

^D

Overlap

B. I used isclose() in math library of python to check whether 2 floating numbers are equal since binary pairs cannot express some numbers accurately. Then if they are not equal, compare them directly.

Test case 1: 0.0 and 0.0 equal

Test case 2: 0.0 and 1.1 less

Test case 3: 1.1 and 1.0 bigger

**Input:** one version number a line, and press cmd+D in the **third** line to read the input

0.0

1.3

^D

C. I used a hash map and a double linked to implement this problem. Since we can use garbage collection of JVM to clean expired data that is not referenced by any other

nodes, I choose Java. It can insert, replace and lookup the data in  $O(1)$ . And I did some test in main function.

