

2b) for all integers a and b , $A \equiv a|b$ and $b|a$
 $B \equiv a \leq b$

Note that if $CA \Leftrightarrow B$ then $CA \Rightarrow B$ and $(B \Leftarrow A)$
 $\boxed{1}$ $\boxed{2}$

Case $\boxed{1}$ $A \Rightarrow B$

- Assume $a|b$ and $b|a$ then we could have $a=2, b=2$

\therefore Assume A is true (so $a|b$ and $b|a$ for all integers a, b)
 \Rightarrow integers a, b : Choose $a=2, b=2$

* Note that while $2|2$ and $2|2$ is true, $2 \neq -2$ and $2 \neq -2$ is false.

\therefore Case 1 is false

Case $\boxed{2}$ $B \Rightarrow A$

* No point in proving $\boxed{2}$ as $\boxed{1}$ is false

\therefore Since case $\boxed{1}$ is false $CA \Rightarrow B$ then $A \Leftrightarrow B$ can not be true.