Prove that $(A|B) \subseteq A$. (1)

Proof: Let $x \in A|B$ be an arbitrary element.

$x \in (A|B)$

$\Rightarrow x \in A$.

Hence $A|B \subseteq A$.

Prove $A = A \cup A$

Proof: Let $x \in A$ be arbitrary. Then $x \in A \cup A$.

$A \subseteq (A \cup A)$

Let $y \in A \cup A$ _____. Hence $y \in A$

$(A \cup A) \subseteq A$

$\Rightarrow A = A \cup A$

■