

Problem 0(a)**Remark** (Contrapositive of ??). *The statement*

$$x \in \{x' | \exists A \in \mathcal{A} : x' \notin A\} \implies x \notin \bigcap_{A \in \mathcal{A}} A$$

is the contrapositive of the statement

$$x \in \bigcap_{A \in \mathcal{A}} A \implies x \in \{x' | \forall A \in \mathcal{A}, x' \in A\}$$