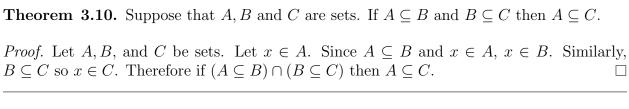
Writing Assignment 5

Clark Saben Foundations of Mathematics

March 6, 2023



Theorem 3.21b. If A and B are sets, then $(A \cap B)^c = A^c \cup B^c$.

Proof. Let A and B be sets. To show $(A \cap B)^c = A^c \cup B^c$, we must show that $(A \cap B)^c \subseteq A^c \cup B^c$ and $A^c \cup B^c \subseteq (A \cap B)^c$. Firstly, Let $x \in (A \cap B)^c$. It follows that $x \in A^c \cup B^c$ by definition 3.14. Secondly, let $x \in A^c \cup B^c$. It follows that $x \in (A \cap B)^c$ by definition 3.14. \square

clearly my 3.21 edits are lacking a connection between "firstly" and "it follows" so ask jeb after classification of the properties of t