$(A \cap B) \cap (A \cap B^c) = \emptyset$ $B \cap (A \cap B^c) = \emptyset$ $A \subset B \Rightarrow B = A \cup (B \cap A^c)$ $A \cap (B \cap A^c) = \emptyset$ $A = (A \cap B) \cup (A \cap B^c)$ $A \cup B = B \cup (A \cap B^c)$

