Set operation vs logical Connectives

Complement A^c $\longleftrightarrow$ negation $\neg$: $\forall x \quad x \in A^c \iff \neg\, x \in A$ or $x \notin A$

intersection $A \cap B$ $\longleftrightarrow$ $\wedge$ (and, Conjunction) : $\forall x \quad x \in A \cap B \iff x \in A \wedge x \in B$

union $A \cup B$ $\longleftrightarrow$ $\vee$ (or, disjunction) : $\forall x \quad x \in A \cup B \iff x \in A \vee x \in B$

inclusion $A \subseteq B$ $\longleftrightarrow$ $\Rightarrow$ implication : $A \subseteq B \iff \forall x \quad x \in A \Rightarrow x \in B$