Theorem (2.2.10b)**.** *Let A be a set. $\emptyset - A = \emptyset$.*

Proof. Let x be an element in $\emptyset - A \equiv \emptyset \cap \overline{A}$. Because this expression is defined as $(x \in \emptyset) \wedge (x \notin A)$ the supposition $\exists x(x \in (\emptyset - A))$ immediately contradicts $x \in \emptyset$. Meaning that no such x could possibly exist. It follows that $(\emptyset - A)$ must be empty. Hence, $\emptyset - A = \emptyset$ ■