## Exercises

E8.83 [OKS] Prerequisites: [OHO], [OKQ], [OKM]. Let $\mathcal{B}$ be a base for a topology $\tau$ on $X$. Show that, for any given $A \subseteq X$,

$$A^\circ = \underline{\bigcup}\{B \in \mathcal{B} : B \subseteq A\}$$

while

$$\overline{A} = \{x \in X : \forall B \in \mathcal{B}, x \in B \Rightarrow B \cap A \neq \emptyset\}$$

**Solution 1.** *[OKT]*