

$$\boxed{6.2.3} \quad (a) \quad x \notin A^c \iff x \in A^c$$

$$\iff x \in A^c$$

$$\iff d(x, A^c) = 0$$

(b)

$$x \in A^c \iff x \in A^c$$

$$\iff x \notin A^c$$

$$\iff d(x, A^c) > 0$$

(c)

$$x \in A^c$$

$$\iff x \in A^c \iff x \in A^c$$

$$\iff d(x, A) = 0 \iff d(x, A^c) = 0$$