

Exercises

E10.b.22 [OPR] Let $E \subseteq X$, then E is a metric space with the restricted distance $\tilde{d} = d|_{E \times E}$.

Show that $A \subseteq E$ is open in (E, \tilde{d}) (as defined at the beginning of this section) if and only there exists a set $V \subseteq X$ open in (X, d) such that $V \cap E = A$.

(The second way of defining "open" is used in topology.)

Solution 1. [2GD]