

Exercises

E8.e.14 [2DK] Let (X, τ_X) be a topological space, $Y \subseteq X$ the topological space with the induced topology

$$\tau_Y = \{A \cap Y : A \in \tau_X\}.$$

Fix $E \subseteq Y$, consider these statements.

(cX) E is a connected set in the topological space (X, τ_X) ;

(cY) E is a connected set in the topological space (Y, τ_Y) .

Are the two statements equivalent?

Solution 1. [113]