

Homework 3

Rudin, chapter 2 : 22, 29

1.- If $C \subset \mathbb{R}^k$ is connected and x is a limit point of C , then $C \cup \{x\}$ is connected.

2.- If A and B are connected subsets of \mathbb{R}^k , give examples to show that $A \cup B$, $A \cap B$, $A \setminus B$ can be either connected or disconnected.