

Compactness Worksheet

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Exercises

I. Determine whether or not the following subsets of real numbers are compact.

(a) $S = \{1, 2, 3\}$.

(b) $S = (0, 2)$

II. Let $S \subseteq \mathbb{R}$ be non-empty, closed, and bounded. Prove that $\inf S \in S$.