Info

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Covering compactness in a metric space

Definition. Covering and subcovering

A collection $\{U_i\}_{i\in I} \subseteq 2^M$ of a metric space M **covers** $A \subseteq M$ if

$$A \subseteq \bigcup_{i\in I} U_i$$

If U_i is open for all $i \in I$, then it is an **open covering**.
If $\{V_j\}_{j\in J}$ also covers A and $\{V_j\}_{j\in J} \subset \{U_i\}_{i\in I}$, then $\{V_j\}_{j\in J}$ is a **subcovering** of A.

Definition. Covering compactness in a metric space

If every open covering of $A \subseteq M$ has a *finite subcovering* of A then A is **covering compact**.

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    - Metric spaces
      - Compact subsets of a metric space
        - Covering compactness in a metric space

And it has 2 siblings.

- structures based on sets
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