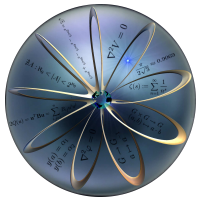

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Lebesgue number lemma

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Lebesgue number lemma: For every open cover $\mathcal{U}$ of a compact metric space X, there exists a real number $\delta > 0$ such that every open ball in X of radius δ is contained in some element of $\mathcal{U}$.

Any number δ satisfying the property above is called a *Lebesgue number* for the covering $\mathcal{U}$ in X.