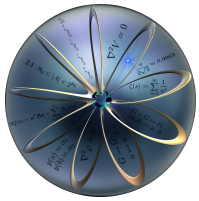

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compact

Canonical name	Compact
Date of creation	2013-03-22 11:53:35
Last modified on	2013-03-22 11:53:35
Owner	djao (24)
Last modified by	djao (24)
Numerical id	11
Author	djao (24)
Entry type	Definition
Classification	msc 54D30
Classification	msc 81-00
Classification	msc 83-00
Classification	msc 82-00
Classification	msc 46L05
Classification	msc 22A22
Related topic	QuasiCompact
Related topic	LocallyCompact
Related topic	HeineBorelTheorem
Related topic	TychonoffsTheorem
Related topic	Compactification
Related topic	SequentiallyCompact
Related topic	Lindelof
Related topic	NoetherianTopologicalSpace
Defines	compact set
Defines	compact subset

A topological space X is *compact* if, for every collection $\{U_i\}_{i \in I}$ of open sets in X whose union is X, there exists a finite subcollection $\{U_{i_j}\}_{j=1}^{n}$ whose union is also X.

A subset Y of a topological space X is said to be compact if Y with its subspace topology is a compact topological space.

Note: Some authors require that a compact topological space be Hausdorff as well, and use the term quasi-compact to refer to a non-Hausdorff compact space. The modern convention seems to be to use compact in the sense given here, but the old definition is still occasionally encountered (particularly in the French school).