



Math for the people, by the people.

compactness

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Owner	Aatu (2569)
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A logic is said to be (κ, λ) -compact, if the following holds

If Φ is a set of sentences of cardinality less than or equal to κ and all subsets of Φ of cardinality less than λ are consistent, then Φ is consistent.

For example, first order logic is (ω, ω) -compact, for if all finite subsets of some class of sentences are consistent, so is the class itself.