Aronszajn tree

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Related topic	TreeSetTheoretic
Related topic	Antichain
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Related topic	WeaklyCompactCardinalsAndTheTreeProperty
Defines	Aronszajn tree
Defines	κ-Aronszajn tree
Defines	tree property

A κ-`http://planetmath.org/TreeSetTheoretic`tree T for which $|T_\alpha| < \kappa$ for all $\alpha < \kappa$ and which has no cofinal branches is called a κ-*Aronszajn tree*. If $\kappa = \omega_1$ then it is referred to simply as an Aronszajn tree.

If there are no κ-Aronszajn trees for some κ then we say κ has the *tree property*. ω has the tree property, but no singular cardinal has the tree property.