

generalized continuum hypothesis

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Related topic AlephNumbers
Related topic BethNumbers

Related topic ContinuumHypothesis

Related topic Cardinality

Related topic CardinalExponentiationUnderGCH

Related topic ZermeloFraenkelAxioms

The generalized continuum hypothesis states that for any infinite cardinal

 λ there is no cardinal κ such that $\lambda < \kappa < 2^{\lambda}$.

An equivalent condition is that $\aleph_{\alpha+1} = 2^{\aleph_{\alpha}}$ for every ordinal α . Another equivalent condition is that $\aleph_{\alpha} = \beth_{\alpha}$ for every ordinal α .

Like the continuum hypothesis, the generalized continuum hypothesis is known to be independent of the axioms of ZFC.