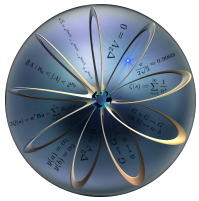

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algebraically closed

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Defines	algebraic closure

A field K is *algebraically closed* if every non-constant polynomial in $K[X]$ has a root in K.

An extension field L of K is an *algebraic closure* of K if L is algebraically closed and every element of L is algebraic over K. Using the axiom of choice, one can show that any field has an algebraic closure. Moreover, any two algebraic closures of a field are isomorphic as fields, but not necessarily canonically isomorphic.