existence of nth root

Canonical name	ExistenceOfNthRoot1
Date of creation	2013-03-22 16:08:38
Last modified on	2013-03-22 16:08:38
Owner	Mathprof (13753)
Last modified by	Mathprof (13753)
Numerical id	10
Author	Mathprof (13753)
Entry type	Proof
Classification	msc 26C10
Classification	msc 12D99
Classification	msc 26A06
Related topic	ExistenceOfRoot
Related topic	ExistenceOfSquareRootsOfNonNegativeRealNumbers

If n is a positive integer and $a > 0$ then the polynomial $x^n - a \in \mathbb{R}[x]$ has one sign change so by Descartes's Rule of Signs has a unique positive real root.