

1. Record Nr.	UNINA9910786846203321
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Titolo	Which numbers are real? // Michael Henle [[electronic resource]]
Pubbl/distr/stampa	Washington : , : Mathematical Association of America, , 2012
ISBN	1-61444-107-3
Descrizione fisica	1 online resource (x, 219 pages) : digital, PDF file(s)
Collana	Classroom resource materials
Disciplina	512.786
Soggetti	Numbers, Real Numbers, Complex Number theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 02 Oct 2015).
Nota di bibliografia	Includes bibliographical references (p. 205-208) and index.
Nota di contenuto	[Pt.] I. The reals. Axioms for the reals -- Construction of the reals -- [pt.] II. Multi-dimensional numbers. The complex numbers -- The quaternions -- [pt.] III. Alternative lines. The constructive reals -- The hyperreals -- The surreals.
Sommario/riassunto	Which Numbers are Real? surveys alternative real number systems: systems that generalize and extend the real numbers while staying close to the properties that make the reals central to mathematics. These systems include, for example, multi-dimensional numbers (the complex numbers, the quaternions, and others), systems that include infinitely small and infinitely large numbers (the hyperreal numbers and the surreal numbers), and numbers that represent positions in games (the surreal numbers). All the systems presented have applications and several are the subject of current mathematical research. Which Numbers are Real? will be of interest to anyone who likes numbers, but particularly upper-level undergraduates, graduate students, and mathematics teachers at all levels.