



planetmath.org

Math for the people, by the people.

unit disk

Canonical name	UnitDisk
Date of creation	2013-03-22 13:37:45
Last modified on	2013-03-22 13:37:45
Owner	brianbirgen (2180)
Last modified by	brianbirgen (2180)
Numerical id	8
Author	brianbirgen (2180)
Entry type	Definition
Classification	msc 30A99
Synonym	unit disc
Related topic	ConformalMobiusCircleMapTheorem
Related topic	SchwarzLemma
Related topic	Complex
Related topic	UpperHalfPlane
Related topic	UnitDiskUpperHalfPlaneConformalEquivalenceTheorem
Related topic	UnitDisc2
Defines	unit circle

The unit disk in the complex plane, denoted Δ , is defined as $\{z \in \mathbb{C} : |z| < 1\}$. The unit circle, denoted $\partial\Delta$ or S^1 is the boundary $\{z \in \mathbb{C} : |z| = 1\}$ of the unit disk Δ . Every element $z \in \partial\Delta$ can be written as $z = e^{i\theta}$ for some real value of θ .