



Math for the people, by the people.

finite

Canonical name	Finite
Date of creation	2013-03-22 11:53:25
Last modified on	2013-03-22 11:53:25
Owner	djao (24)
Last modified by	djao (24)
Numerical id	9
Author	djao (24)
Entry type	Definition
Classification	msc 03E10
Classification	msc 92C05
Classification	msc 92B05
Classification	msc 18-00
Classification	msc 92C40
Classification	msc 18-02
Related topic	Infinite
Defines	finite set

A set S is *finite* if there exists a natural number n and a bijection from S to n . Note that we are using the set theoretic definition of natural number, under which the natural number n equals the set $\{0, 1, 2, \dots, n-1\}$. If there exists such an n , then it is unique, and we call n the *cardinality* of S .

Equivalently, a set S is finite if and only if there is no bijection between S and any proper subset of S .