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countably infinite

Canonical name	CountablyInfinite
Date of creation	2013-03-22 11:59:05
Last modified on	2013-03-22 11:59:05
Owner	vampyr (22)
Last modified by	vampyr (22)
Numerical id	7
Author	vampyr (22)
Entry type	Definition
Classification	msc 03E10
Synonym	denumerable
Related topic	NumerableSet

A set  $S$  is countably infinite if there is a bijection between  $S$  and  $\mathbb{N}$ .

As the name implies, any countably infinite set is both countable and infinite.

Countably infinite sets are also sometimes called *denumerable*.