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null semigroup

Canonical name	NullSemigroup
Date of creation	2013-03-22 13:02:22
Last modified on	2013-03-22 13:02:22
Owner	mclase (549)
Last modified by	mclase (549)
Numerical id	4
Author	mclase (549)
Entry type	Definition
Classification	msc 20M99
Related topic	Semigroup
Related topic	ZeroElements
Defines	null semigroup
Defines	left zero semigroup
Defines	right zero semigroup

A *left zero semigroup* is a semigroup in which every element is a left zero element. In other words, it is a set  $S$  with a product defined as  $xy = x$  for all  $x, y \in S$ .

A *right zero semigroup* is defined similarly.

Let  $S$  be a semigroup. Then  $S$  is a *null semigroup* if it has a zero element and if the product of any two elements is zero. In other words, there is an element  $\theta \in S$  such that  $xy = \theta$  for all  $x, y \in S$ .