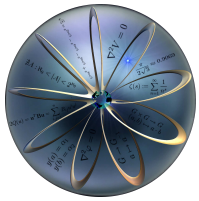

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semigroup

Canonical name	Semigroup
Date of creation	2013-03-22 11:50:08
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Owner	djao (24)
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Numerical id	11
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Entry type	Definition
Classification	msc 20M99
Synonym	homomorphism
Related topic	groupoid
Related topic	Band2
Related topic	SubmonoidSubsemigroup
Related topic	NullSemigroup
Related topic	ZeroElements
Related topic	Monoid
Defines	semigroup homomorphism

A *semigroup* G is a set together with a binary operation $\cdot : G \times G \longrightarrow G$ which satisfies the associative property: $(a \cdot b) \cdot c = a \cdot (b \cdot c)$ for all $a, b, c \in G$.

The set G is not required to be nonempty.

Let G, H be two semigroups. A *semigroup homomorphism* from G to H is a function $f : G \to H$ such that $f(ab) = f(a)f(b)$.