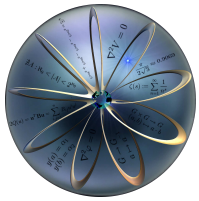

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monoid

Canonical name	Monoid
Date of creation	2013-03-22 11:50:15
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Classification	msc 20M99
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Synonym	homomorphism
Related topic	Semigroup
Defines	monoid homomorphism

A monoid is a semigroup G which contains an identity element; that is, there exists an element $e \in G$ such that $e \cdot a = a \cdot e = a$ for all $a \in G$.

If e and f are identity elements of a monoid G, then $e = e \cdot f = f \cdot e = f$, so we may speak of "the" identity element of G.

A *monoid homomorphism* from monoids G to H is a semigroup homomorphism $f : G \to H$ such that $f(e_G) = e_H$, where e_G, e_H are identity elements of G and H respectively.