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concepts in abstract algebra

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The aim of this entry is to present a list of the key operators used in abstract algebra. Each entry in the list (or will in the future) to the corresponding PlanetMath entry where the object is presented in greater detail. For convenience, this list also presents the encouraged notation to use (at PlanetMath) for these objects.

- G group, subgroup

- normal subgroup

- cyclic group

- group algebra

- Galois group

- Polish group

- http://planetmath.org/G-SetG-Set

- groupoid group

- $\mathcal{G}$ groupoid

- semigroup

- monoid

- generator, generate

- $[a, b]$ http://planetmath.org/DerivedSubgroupcommutator

- $\langle g \rangle$ cyclic group generated by an element

- R ring, subring

- polynomial ring

- I, $\mathfrak{a}$ ideal

- R/I quotient ring

- $S^{-1}R$ localization of R at S

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- D integral domain

- division ring

- ring group

- F, K field

- $N_G(H)$ normalizer of a subgroup

- $C(a)$ centralizer of an element

- $Z(G)$ center of a group (or centre of a group)

- $H \triangleleft G$ normal subgroup

- $H \operatorname{char} G$ characteristic subgroup

- G/H quotient group

- $\langle S^G \rangle$ normal closure

- aH, Ha `http://planetmath.org/Coset`left coset and right coset respectively

- element, unit, unity, inverse, identity

- nilpotent

- idempotent

- M module, submodule

- homomorphism, homomorphy

- isomorphism, isomorphy, isomorphic

- monomorphism, epimorphism

- endomorphism

- automorphism

General Algebras and Algebroids

- Universal algebras

- superalgerbas

- F-algebras

- double algebras

- Quantum Operator algebras

- general algebras

- higher dimensional algebras

- logic algebras

- quantum logic algebras