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special notations in algebra

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Synonym	notations in algebra

- $[G:H]$, <http://planetmath.org/Cosetindex> of a subgroup H in the group G
- $H \triangleleft G$, H is a normal subgroup of G
- G/H , quotient group of G with respect to the normal subgroup H
- R/I or $R-I$, quotient ring or difference ring of R with respect to the ideal I
- $Z(G)$, center of the group G
- $R[G]$, group ring of the group G over the ring R
- $R[\alpha]$, ring adjunction
- $K(\alpha)$, field adjunction
- $S^{-1}R$, localization of the ring R at S
- $R_{\mathfrak{p}}$, localization of the ring R at the complement of the prime ideal \mathfrak{p}
- (R, \mathfrak{m}) , local ring R with its maximal ideal \mathfrak{m}
- ${}_R M$, a left <http://planetmath.org/ModuleR-module> M
- M_R , a right <http://planetmath.org/ModuleR-module> M
- K/k , field extension where K is an extension field of k
- $[K:k]$, <http://planetmath.org/ExtensionFielddegree> of the field extension K/k
- \overline{K} , algebraic closure of a field K
- $R\alpha_1 + \dots + R\alpha_n$ or $\langle \alpha_1, \dots, \alpha_n \rangle$, left ideal of the ring R <http://planetmath.org/IdealGenerated> by $\alpha_1, \dots, \alpha_n$
- $A_1 \cong A_2$, <http://planetmath.org/Isomorphism> between the <http://planetmath.org/AlgebraicSystems> A_1 and A_2