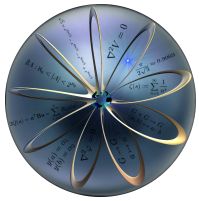

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comodule coalgebra

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Let H be a bialgebra. A **right H-comodule coalgebra** is a coalgebra A which is a right H-comodule satisfying

$$(\Delta \otimes \mathrm{id})t(a) = \sum a_{(1)(1)} \otimes a_{(2)(1)} \otimes a_{(1)(2)} a_{(2)(2)}, \quad (\varepsilon \otimes \mathrm{id})t(a) = \varepsilon(a) 1\!\!1_H, \ (1)$$

for all $h \in H$ and $a \in A$.

There is a dual notion of a H-module algebra.

Example 1
Let H be a Hopf algebra. Then H is itself a H-comodule coalgebra for the adjoint coaction $t(h) = h_{(2)} \otimes S(h_{(1)})h_{(3)}$.