

$$= f_v R =$$

$$f_d R = f_c R . )$$

== Quotient groups ==

In some situations the set of cosets of a subgroup can be endowed with a group law , giving a quotient group or factor group . For this to be possible , the subgroup has to be normal . Given any normal subgroup  $N$  , the quotient group is defined by

$$G / N$$

$$= \{ gN , g \in G \} , \text{ " } G \text{ modulo } N \text{ " } .$$

This set inherits a group operation ( sometimes called coset multiplication , or coset addition ) from the original group  $G$  :  $( gN ) ( hN ) =$