



## GROUPS

### Why

We generalize the algebraic structure of addition over the integers.

### Definition

A *group* is an *algebra* with: (1) an associative operation, (2) an identity element, and (3) an inverse for each element. We call the operation of the algebra *group addition*. A *commutative group* is a group whose operation commutes. A commutative group is also sometimes called an *Abelian group*.



