## 0.1 Generating sets

We can define a group through a generating set and an operation.

And define the group as  $G = \langle S \rangle$ 

## 0.2 Finite groups

Consider the set of natural numbers and addition modulo 4. This forms a group containing:

 $\{0,1,2,3\}$ 

This can be written as  $\mathbb{Z}_4$  or more generally as  $\mathbb{Z}_n$ , or  $\mathbb{Z}/n\mathbb{Z}$ .