Abstract

In group theory, a branch of mathematics, given a group G under a binary operation $*$, a subset H of G is called a subgroup of G if H also forms a group under the operation $*$. The trivial subgroup of any group is the subgroup {e} consisting of just the identity element.

A proper subgroup of a group G is a subgroup H which is a proper subset of G (that is, $H \neq G$). Some authors also exclude the trivial group from being proper (that is, $H \neq \{e\}$).

In this work, we introduce the subgroup and cyclic group with some properties of them. Also, a few theorems and examples are discussed.