1.98: Subgroup

Let G be a group and H a non-empty subset of G. Then H is called a **subgroup** of G if the elements of H obey the group postulates, i.e. if

1. the identity element 1_G of G is contained in H;
2. H is closed under the group operation (inherited from G);
3. H is closed under taking inverses.

The subgroup H is called a **proper subgroup** of G if there are elements of G not contained in H.

A subgroup H of G is called a **maximal subgroup** of G if there is no proper subgroup M of G such that H is a proper subgroup of M.