Symmetry of Molecules and Group Theory (Hagiwara)

Problem Set #1(For Chapter 1) 2019/10/2

- 1. Prove the theorem that in any Abelian group each element is in a class by itself.
- 2. Prove that for any group, if element *A* is conjugate with elements *B* and *C*, then *B* and *C* are conjugate with each other.
- 3. Identify the subgroups in the group shown in Table 1-4 in the text. Arrange the elements in the group into classes.
- 4. Prove that $S_6 = iC_3^2$