MTH 203: Groups and Symmetry

Homework I

(Due 08/08)

1. Prove the assertions in 1.1 (ii) of the Lesson Plan.
2. Show that each of the examples in 1.1 (iii) of the Lesson Plan are groups.
3. Explain why $\mathbb{Z}_n$ and C_n are analogous as groups.
4. Is the group of symmetries of a circle a finite or an infinite group? Explain.
5. How can you realize $(\mathbb{Z}, +)$ as a group of symmetries of some object?