

Homework 1 for MATH 435

Due: Friday Sep 3

Problem 1

Book, p. 146, Exercise 2.36, (i)-(v)

(The answers are in the back of the book, but give the reasons.)

Problem 2

Let G be a group. Assume that for any $a \in G$, $aa = e$. Show that G is abelian.

Problem 3

Let S be a set with a binary operation $*$. S is a *monoid* if it satisfies the first two group axioms, i.e. $*$ is associative and there exists a neutral element.

Give three different examples of monoids that are not groups. Justify.

Problem 4

Book, p. 105, Exercise 2.14

Problem 5

Book, p. 104, Exercise 2.4