Technische Hochschule Rosenheim
Fakultät ANG
Prof. Dr. André Herzwurm

SoSe 2022
16.03.2022

Exercise Sheet 0

Linear Algebra (AAI)

Exercise 0.1 (H)

Verify that $G = \{0, 1\}$ together with

$*$	0	1
0	0	1
1	1	0

is a commutative group, see Example 3(iii) in Section I.1.

Exercise 0.2 (H)

Prove Proposition 10 from Section I.1.

Exercise 0.3 (H)

Prove Lemma 12 from Section I.1.

Exercise 0.4 (H)

Let G_1 and G_2 be subgroups of a group G. Show that $G_1 \cup G_2$ is not a subgroup in general.
Hint: Cf. Example 18 from Section I.1.