

MATH 314 ASSIGNMENT 2, SPRING 2016

Due in class on Friday, January 29

Part 1. Read Chap. 1 and 2.1–2.2 of Hoffman–Kunze. You have seen the material in Chapter 1 before, in the case when the field is \mathbb{R} or \mathbb{C} . However it is profitable to read through the whole chapter, and please pay special attention to proofs.

Note on notation. The standard notation for the field of all complex numbers is \mathbb{R} , and the standard notation for the field of complex numbers is \mathbb{C} . In Hoffman–Kunze, these fields are denoted by R and C respectively. (In the 1960's, \mathbb{R} and \mathbb{C} were not standard notations, but things have changed.)

Part 2. Do and hand in the following problems.

- §1.2, problem 6 (This problem is a bit more challenging than others in §2.1. Later we will use a star sign to indicate such problems.)
- §1.3, problem 6.
- §1.4, problem 10.
- §1.5, problem 4.
- §1.6, problem 7.
- §2.1, problem 6.
- §2.2, problems 7, 8.

Part 3. Challenge problem: §1.6, problem 12.