MATH 6250: Assignment 1

Exercises from the book: 1.1, 1.2, 1.3, 1.4, 1.7, 1.8, 1.11, 1.20, 1.21.

Problems from the text:

1. Example 1.9, page 11, line -9. Prove that each of these two sets forms a basis.

2. Example 1.10, page 12, line 5. Prove that the algebra has dimension 2^n, as claimed.

3. Example 1.13, pages 15 and 16. Prove that the claimed map in (f) is an isomorphism. Also, check the details of parts (g) and (h).

4. Example 1.14, page 16, line -7. In the "routine check", prove that this defines an *associative* multiplication.