Math 4140. Homework 5
due Wednesday, March 3

Note: All numbered sections, exercises, theorems and definitions are from Erdmann–Holm.

(1) Read Sections 2.5, 3.1 and 3.2 (but skip Subsection 2.5.2 for now).

(2) Exercise 2.14.

(3) Exercise 3.1.

(4) Exercise 3.3.

(5) Exercise 3.6.

(6) Exercise 3.19.

(7) Let $A = k$ be a field and let V be a finite dimensional k-vector space. Show that the length of V as an A-module equals $\dim_k V$.