MATH 4140/5140. HOMEWORK 11
due Friday, April 29

Note: All numbered exercises are from Erdmann–Holm ([EH]).

(1) Read Section 3.4.3 of [EH], which explains why every simple module of a direct product of algebras is isomorphic to the inflation of a simple module of some factor in the product.

(2) Read Sections 6.1 and 6.2 of [EH].

(3) In the notes for Lecture 35 (April 15), we proved that the map Φ from the lecture is a surjective algebra homomorphism. Using the notation there, finish the proof that Φ is an algebra isomorphism.

(4) Exercise 5.4.

(5) Exercise 6.4.

(6) Exercise 6.9.