Math 8202 **Homework 2** **PJW**

Date due: February 10, 2003. There will be a quiz on this date.

Hand in only the starred questions.

Section 9.5, page 316 nos. 3, 4.

Section 10.1, page 324 nos. 5, 7, 8, 12*, 13, 16*, 18, 21.

Section 10.2, page 331 nos. 3, 4, 5, 6*, 8, 9, 10*, 13*.

Section 10.3, page 336 nos. 3, 5*, 7, 8, 9, 10*, 11, 12, 15.

In Chapter 10 we start on modules, and at this point we will only do the first three sections from this chapter. Section 10.4 is about tensor products, which are not on the syllabus. Section 10.5 is about projective and injective modules, which are on the syllabus, but I propose to move straight on Section 12.1 after 10.3 and come back to 10.5 later. I will assume that you know the linear algebra in Chapter 11, and intend to test you on this in next week's homework. If you are rusty on this, reading Chapter 11 is a good way to brush up.