

HOMEWORK 2, MATH 114, SPRING 2003

DUE THURSDAY APRIL 17

- (1) Lax Chapter 3, #5
- (2) Show that for any projection P there is a basis in which looks like the projection of Example 11 (with the two possibly some other number).
- (3) Write out a careful proof that the span of the columns of a matrix has the same dimension as the span of the rows of the matrix. (Hint: One way to do this is in the theorems of Chapter 3 we skipped).
- (4) Go to the library and look at another book on linear algebra (Hint: Look up our text on Socrates and go to the place on the shelf where it would be if it were not on reserve - you will find dozens of relevant books there). Read their treatment of determinants, and write a short paragraph comparing it to the one in Lax, and giving bibliographic information. (This is partly a library exercise, so you cannot use a text you have had for a previous class - though you may also want to look at it).