

Math 325, Spring 2001

Assignment 3, due February 16

Read Boyce and DiPrima, Sections 7.3-7.4 and the subsection on *Diagonalizable Matrices*, pp. 397-398, through Example 3 on p. 398.

Do p. 344 #5,15,16, p. 355 #21,24,25, p. 366 #12-16, 26, 31-33. For the matrix A of p. 366 #15 find T such that $T^{-1}AT = D$ where D is a diagonal matrix. Confirm your choice of T by calculating $T^{-1}AT$.

Suggested problems—these problems should not be turned in, but are good problems for refreshing your linear algebra—p. 355 #1-4,8-10,14,18, p. 366 #1-3,6,7

You may want to start learning the Maple linear algebra commands. You can find descriptions of the ones you will need in the web page “Linear algebra in Maple,” which is available from the Maple/Hints web page, and in Chapter 12 of *Differential Equations with Maple*.

Extra credit: For extra credit, you may do any of the assigned problems using Maple, in addition to doing them by hand.