Assignment 7 – MA 142

Due in class: Friday, Nov. 6, 2009

All exercises are taken from the textbook (Lay's *Linear Algebra and its Applications*, Third Edition) except exercise (†).

Section 5.3: 2, 6, 8, 10, 12, 20, 22, 24, 32 and the following:

(†): For each of the following matrices, diagonalize it if possible. If not, explain why it is not diagonalizable.

(a) $A = \begin{pmatrix} 0 & 0 & -1 \\ 0 & 1 & 0 \\ -1 & 2 & 0 \end{pmatrix}$

(b) $B = \begin{pmatrix} 0 & 1 & -1 \\ 0 & 1 & 0 \\ -1 & 1 & 0 \end{pmatrix}$

Section 5.5: 2, 4, 14, 16, 18