2.092/2.093

COMPUTER METHODS IN DYNAMICS

FALL 2006

Homework 10

Instructor:	Prof. K. J. Bathe	Assigned:	Thurs., Nov 30
TA:	Samar Malek	Due:	Tues., Dec 12

Problem 1 (10 points):

Exercise 10.9, textbook p. 879.

Problem 2 (10 points):

Exercise 11.1, textbook p. 910, but only do part (a).

Problem 3 (20 points):

Exercise 11.19, textbook p. 978, but for the problem:

$$\begin{bmatrix} 2 & -1 & 0 \\ -1 & 2 & -1 \\ 0 & -1 & 3 \end{bmatrix} \varphi = \lambda \begin{bmatrix} 1 & 0 & 0 \\ 0 & 2 & 0 \\ 0 & 0 & {}^{3}/_{2} \end{bmatrix} \varphi$$

Calculate the required two eigenvalues to 4 digits accuracy.