

**This homework will not be collected.**

Turn in starred problems Tuesday 10/16/2007. **Be sure to read the instructions below.**

Section 7.2: 1; 4 (a), (b)\*; 5 (a) (c) (f); 10

Section 7.3: 1 (a), (c)\*, (h); 9 (a), (g), (h)\*, (j)\*; 11 (a)\*, (d)\*

**Instructions:** In Section 7.3, problems 9 and 11, first **find the general solution of the equations by matrix methods**—that is, using eigenvalues and eigenvectors—as we did in class. Then complete the instructions in the text. Finally, in problem 11 (as well as problem 9), **sketch some trajectories in the phase plane.**

**Hint:** In Section 7.2 problems 4 and 5, you can often find a conserved quantity by the method indicated at the bottom of page 338 (equations (4) and (5)).