Multiple-page homework must be STAPLED when handed in.

Turn in starred problems Tuesday 12/9/2008.

Due to the football game on Thursday, December 4, I am making the due date for this assignment Tuesday, December 9. If there is any chance you will not make that deadline, however, you can turn it in 12/4. NO LATE ASSIGNMENTS WILL BE ACCEPTED FOR ANY REASON.

Therre will be one more assignment, which will not be collected.

Section 17.10: 2, 3*, 4 (c), (f), 6 (a), (c), (g)*

Section 18.3: 14, 15, 19*, 29*

Section 18.4: 1, 6, 8(a,b)*

12.A* Here is a variant of the periodic boundary condition problem of Section 17.8:

Find the eigenvalues and eigenfunctions for

$$y'' + \lambda y = 0, \quad y(0) = -y(1), \quad y'(0) = -y'(1).$$

Find also the eigenfunction expansion of $f(x) = 1$.

Comments, hints, instructions: (a) Problems 14 and 29 of Section 18.3 give two different approaches to the same problem. Only 29 is to be turned in, but you may find it useful to look at both of them.

(b) I started both 18.3:15 and 18.3:19 in class (November 20).

(c) In 18.4:8(b) one should use the Laplace transform (in the variable t), not the Fourier transform, although in fact one can guess the form of the solution, and then find it completely, by elementary reasoning.