## Turn in starred problems Wednesday 11/12/2014.

The second exam will be on Monday, November 17. A description of the coverage on the exam, and a set of review problems, will be posted on the web page early in the week of November 10. We will have a review/problem session on Friday, November 14, 1:40–3:00 PM, in SEC 210.

Section 17.4: 1 (b), 2 (c),  $(d)^*$ ,  $(e)^*$  (see comment 1 below!)

Section 18.3: 6 (k), (n) (see comments 2 and 3 below)

10.A\* Do problem 18.3.6(f) but change the boundary conditions to  $u(0,t) = u_x(2,t) = 0$ . Keep the same initial condition. See comments 2 and 3 below.

10.B\* Do problem 18.3.6(j) but change the boundary conditions to  $u_x(0,t) = u_x(5,t) = 0$ . Keep the same initial condition. See comments 2 and 3 below.

10.C\* Do problem 18.3.9 but change the initial condition to u(x, 0) = 16x(2 - x).

**Comments, hints, instructions:** 1. For 17.4:2(d), do only the part of the problem requiring the sketches; you are *not* required to compute the series for (d). For 17.4:2(e) do the entire problem.

2. Section 18.3: We have not covered all of this section, but in lecture Monday 11/03 and Wednesday 11/05 we discussed using Fourier series in solving the one-dimensional diffusion equation on an finite interval with homogeneous boundary conditions. The parts of 18.3:6 assigned are of this type. In approaching such a problem you must first decide what sort of series to use: half range? quarter range? sine? cosine?

3. Section 18.3: For the parts of problem 18.3:6 assigned you should *not* try to find the steady state solution, since we have not yet discussed this.