

Turn in starred problems Thursday 11/11/2010.

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), (9)*.

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.

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.

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 Tuesday 11/3 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 (including 10.A and 10.B) 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 (including 10.A and 10.B) you do *not* have to find the steady state solution, since we have not yet discussed this.