This assignment will not be collected. The purpose is to give you some problems on topics not covered in the earlier, collected, assignments.

Inhomogeneous boundary value problems:

Section 18.3:6 (a), (i), (l), (m)

The Fourier transform:

Section 17.10: 2, 3, 4 (c), (f), 6 (a), (c), (g), 11

Section 18.4: 1, 6

The wave equation:

Section 19.2: 5, 6, 8

Section 19.4: 4, 6 (a), (c)

Comments: 1. Concerning 18.3:6: we already did several parts of this problem in which the boundary conditions were homogeneous; the ones I have chosen here are inhomogeneous. You can use any method that you like, but I think that the clearest one is the method I outlined in class: Find the steady-state solution $v(x)$ of the equation and boundary conditions (the book usually calls this $u_s(x)$), so that $w(x,t) = u(x,t) - v(x)$ will satisfy a homogeneous boundary value problem which you already know how to solve.

2. As of 12/6 we have covered all this material except that of Chapter 19; we will do that on 12/11 and 12/13.