Physics 255

Section 12.1. In #10, don't follow the instructions in the book. Proceed as follows:

- Use the method of series solution to find a recursion relation for the coefficients.
- Calculate the  $O(x^7)$  solution. That is, calculate the power series solution up to and including the  $x^7$  term. Your answer will depend on the coefficients  $a_0$  and  $a_1$ .
- What is the  $O(x^7)$  solution satisfying the initial conditions y(0) = 2, y'(0) = -1.