Physics 301-001

Reading Assignment:
During this week, you should be reading the following (in order):

1) Boas, ch.12

Practice Problems:
We have listed problems from the textbook that involve related skills and concepts; answers to these problems may be found in the back of the text. You should use these extra problems for practice and review, but they do *not* need to be turned in.
Selected Practice Problems from Boas: 12.3.3, 12.4.1, 12.5.5, 12.5.9, 12.5.11, 12.6.3, 12.9.1, 12.9.7

1. Series Solutions problems (16 pts): Find the series solutions for the following differential equations:

$$x^2y'' - 3xy' + 3y = 0$$

$$x^2y'' + xy' + (x^2 - m^2)y = 0$$

* Note: *m* is a constant

2. In book problems (40 pts)

12.3.2	12.4.3	12.5.1	12.5.4	12.5.8
12.5.12	12.6.2	12.7.4	12.9.1	12.9.7

3. Numerical Solutions [16 pts]: Solve those differential equations listed in problem 1 numerically use y(0)=0 and y'(0)=small value. Consider the 4-2 Pre-class video.