Physics 116A **Homework Set #2** **Winter 2010**

DUE: TUESDAY JANUARY 19, 2010

To receive full credit, you must exhibit the intermediate steps that lead you to your final results. The nth problem in Boas from section $a.b$ is designated by $a.b$–n.

1. Boas, p. 29, problem 1.13–4.

2. Boas, p. 32, problem 1.13–18. The computer analysis is optional.

3. Boas, p. 36, problem 1.14–6.

4. Boas, p. 40, problem 1.15–2. Compare your results with a calculation performed either with a computer (e.g. Mathematica) or a calculator.

5. Boas, p. 41, problem 1.15–15.

6. Boas, p. 41, problem 1.15–18.

7. Boas, p. 41, problem 1.15–23 (a) and (b). The computer comparison is optional. In addition, find the *behavior* of the given functions as $x \to 0$. Although Boas suggests that you should first combine the fractions, this hint is less useful for determining the behavior as $x \to 0$.

8. Boas, p. 45, problem 1.16–23.

9. Boas, p. 552, problem 10.10–5 (b). The function $E_1(x)$ is defined in problem 10.10–4.

10. Boas, p. 51, problem 2.4–4

11. Boas, p. 52, problem 2.5–7

12. Boas, p. 53, problem 2.5–28

13. Boas, p. 54, problem 2.5–47.

14. Boas, p. 55, problem 2.5–57.