

PHYS 331 — Problem Set #2

Reading: Taylor 4.1–4.4

Reading Journal due via email by 8:00 a.m. Friday: I am again assuming that most of the assigned reading is review. Please let me know if I am correct; specifically,

- which sections, if any, have not been covered in previous classes, and
- which sections, if any, merit further discussion.

Problems to be handed in Friday August 30:

1. Taylor 2.8
2. Taylor 2.13
3. Taylor 2.33
4. In class we worked on a falling object with quadratic air drag, and found the function $v(t)$ giving the speed as a function of time. Now consider the same ball, but it starts on the ground with initial upward speed v_0 . Find expressions for the integrals that must be evaluated to find the maximum height of the ball. Hint: Use what I'll call Trick 2, which is the first half of Eq. (2.86) on p. 74 of Taylor. (We'll do the integrations in class.)