Physics 3180 (Schroeder)
Spring 2026

Recommended Problems for Week 6

1. Problem 3.18, page 103. (I hope you've already done this one, while reading Section 3.3.)
2. Problem 3.19, page 107. (This is the analytic version of the previous problem.)
3. Problem 3.24, pages 107–108. (We'll do most of this one in class.)
4. Problem 3.25, page 108. (This is the analytic version of the previous problem. Part f is extra credit.)
5. Problem 3.31, page 114. (The main point of this problem, after you've already worked Problem 3.14, is that you can calculate entropy from an empirical formula for C_P, not just C_V.)
6. Problem 3.32, page 114. (This is an important conceptual problem to make the point that the thermodynamic identity is not the same thing as the first law of thermodynamics.)
7. Problem 3.35, page 119. (Take this toy example with a large grain of salt.)
8. Problem 3.37, pages 119-120. (Providing a *valid* argument here can be challenging. Since you get no credit for a valid *or* an invalid argument, this is an opportunity for you to be brutally honest with yourself about whether you think your argument is valid.)